



Antenna Composite Gain Test Report

Equipment	Cisco Wireless 9172H Series Wi-Fi 7 Access Point
Brand Name	CISCO
Model Name	CW9172H
Applicant	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Standard	KDB 662911 D03 v01
Sample Received	Oct. 30, 2024
Start Test Date	Nov. 07, 2024
Final Test Date	Nov. 07, 2024

Approved by: Jackson Tsai

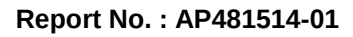
SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G5G Ant1	1	Sercomm	61720064WA	PIFA	I-Pex	2.4G+5G
2G5G Ant2	2	Sercomm	61720065WA	PIFA	I-Pex	2.4G+5G
6G Ant1	1	Sercomm	61720062WA	PIFA	I-Pex	6G
6G Ant2	2	Sercomm	61720063WA	PIFA	I-Pex	6G
Scan Ant1	1	Sercomm	61720067WA	PIFA	I-Pex	2.4G+5G+6G
BT Ant2	1	Sercomm	61720066WA	PIFA	I-Pex	BTLE

Note:

2.4GHz and 5GHz Operation Mode (1TX/1RX)

2G5G Ant1 could transmit/receive.

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

2G5G Ant1~2G5G Ant2 could transmit/receive simultaneously.

6GHz Operation Mode (1TX/1RX)

6G Ant1 could transmit/receive.

6GHz Operation Mode (2TX/2RX)

6G Ant1~6G Ant2 could transmit/receive simultaneously.

2.4GHz, 5GHz and 6GHz Operation Mode (1RX)

Scan Ant1 could receive.

BT Operation Mode (1TX/1RX)

BT Ant2 could transmit/receive.

2. Test Frequency

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

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



3. Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Wen 33rd.St.	ADD:	No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
	TEL: 886-3-318-0787	FAX: 886-3-318-0287		
Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rofy Chen	23.5~24.5°C / 45~55%	07/Nov/2025

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

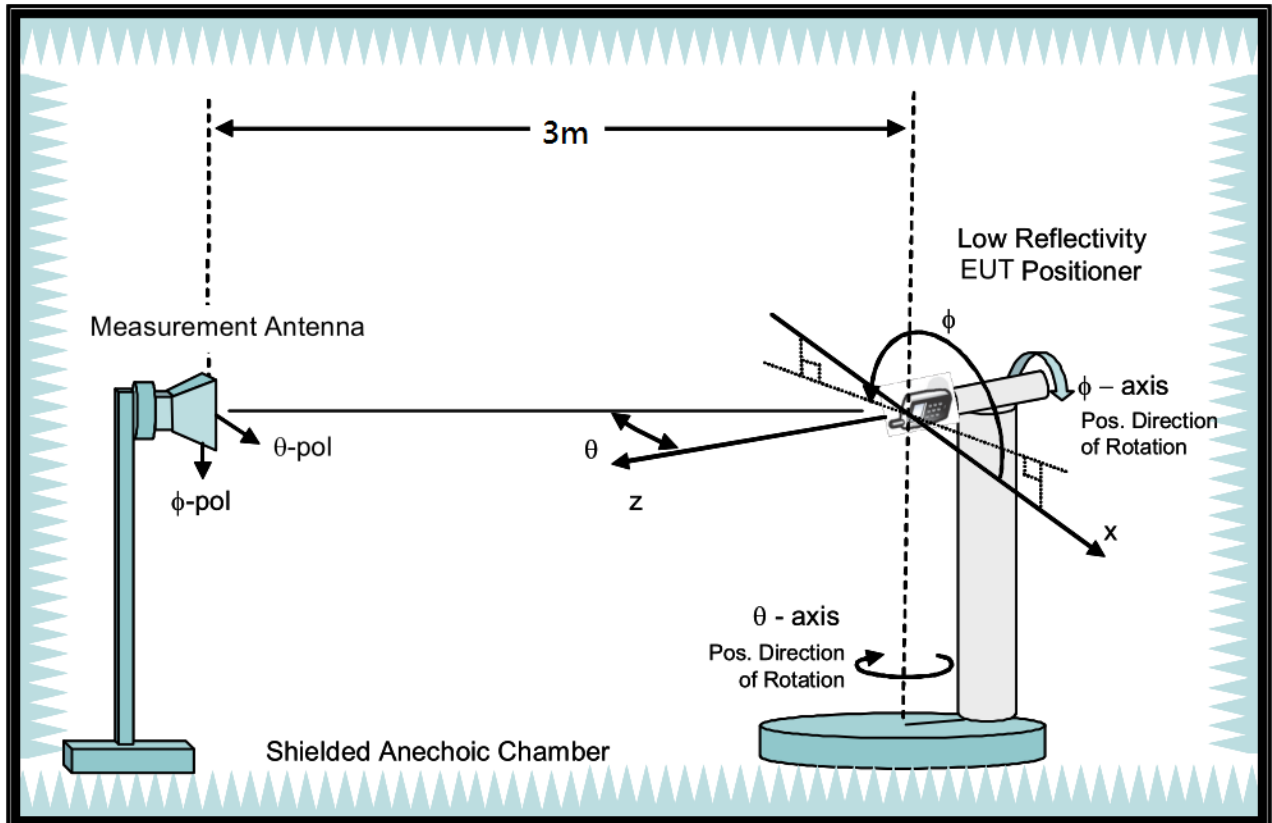
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

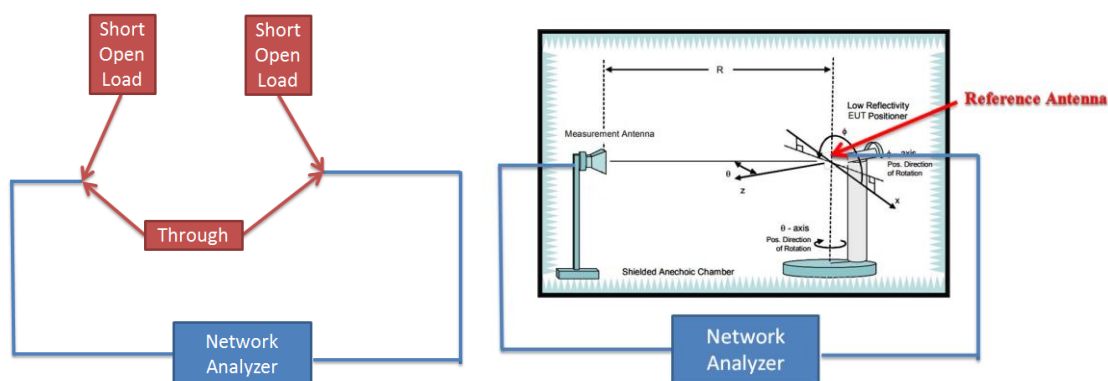
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



5. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.55	-33.38	-32.91	-32.29	-32.48	-32.25	-32.33	-32.85	-32.67	-33.37	-32.53	-33.75	-34.72	-35.33
G(phi) reading (dB)	-33.11	-32.68	-32.48	-32.45	-32.85	-31.35	-32.76	-32.68	-32.57	-32.81	-32.85	-33.62	-34.33	-35.29
Reference gain (dBi)	10.3	10.3	10.1	11.1	11.3	11.7	12.1	11.5	11.2	11.1	11.3	11	11.1	10.5
Factor(theta) (dB)	43.85	43.68	43.01	43.39	43.78	43.95	44.43	44.35	43.87	44.47	43.83	44.75	45.82	45.83
Factor(phi) (dB)	43.41	42.98	42.58	43.55	44.15	43.05	44.86	44.18	43.77	43.91	44.15	44.62	45.43	45.79

Note:

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

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

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

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



6. Test Method

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

DG steps:

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

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

7. Measured Values and Calculation of Maximum Gain Positions

<2G5G Ant1, 2G5G Ant2>

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	0.34	3.53	4.76	4.16	3.9
Ant. 2 (dBi)	-0.66	3.12	2.89	4.93	4.03
DG [1SS] (dBi)	2.86	6.34	6.89	7.56	6.98
Polarization	Theta	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	37.5	52.5	60	45	37.5
$\Phi(^{\circ})$	7.5	112.5	105	105	97.5

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

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(0.34/20)}$	$10^{(3.53/20)}$	$10^{(4.76/20)}$	$10^{(4.16/20)}$	$10^{(3.9/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(-0.66/20)}$	$10^{(3.12/20)}$	$10^{(2.89/20)}$	$10^{(4.93/20)}$	$10^{(4.03/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.04	1.501	1.73	1.614	1.567
Ant. 2 [$10^{(G/20)}$] value	0.927	1.432	1.395	1.764	1.59
Sum All Antenna [Amax]	1.967	2.934	3.125	3.378	3.157
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	2.86	6.34	6.89	7.56	6.98

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

<6G Ant1, 6G Ant2>

DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	1.66	3.72	4.45	4.2
Ant. 2 (dBi)	2.82	0.85	1.98	2.45
DG [1SS] (dBi)	5.27	5.41	6.31	6.38
Polarization	Phi	Theta	Theta	Theta
$\Theta(^{\circ})$	37.5	52.5	45	30
$\Phi(^{\circ})$	97.5	187.5	187.5	187.5

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

DG_1SS max value position calculation

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(1.66/20)}$	$10^{(3.72/20)}$	$10^{(4.45/20)}$	$10^{(4.2/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(2.82/20)}$	$10^{(0.85/20)}$	$10^{(1.98/20)}$	$10^{(2.45/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.211	1.535	1.669	1.622
Ant. 2 [$10^{(G/20)}$] value	1.384	1.103	1.256	1.326
Sum All Antenna [Amax]	2.594	2.637	2.925	2.948
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	5.27	5.41	6.31	6.38

Note:

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

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

8. Summary of Test Result

<2G5G Ant1, 2G5G Ant2>

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.68	4.35	5.91	5.86	5
Ant. 2 Max Gain (dBi)	2.04	3.5	3.74	5.92	4.6
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/22.5/17 2.5	Phi/52.5/97.5	Phi/60/97.5	Phi/82.5/97.5	Phi/67.5/97.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/67.5	Theta/45/172. 5	Theta/52.5/17 2.5	Phi/37.5/120	Phi/30/120
Max Gain (dBi)	2.68	4.35	5.91	5.92	5
DG [1SS] (dBi)	2.86	6.34	6.89	7.56	6.98
DG [2SS] (dBi)	2.68	4.35	5.91	5.92	5

<6G Ant1, 6G Ant2>

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	5.04	4.33	4.45	4.49
Ant. 2 Max Gain (dBi)	2.88	2.88	3.11	2.92
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/30/247.5	Phi/22.5/255	Theta/45/187.5	Phi/97.5/187.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/150	Phi/45/120	Theta/82.5/247.5	Phi/0/97.5
Max Gain (dBi)	5.04	4.33	4.45	4.49
DG [1SS] (dBi)	5.27	5.41	6.31	6.38
DG [2SS] (dBi)	5.04	4.33	4.45	4.49

< Scan Ant1, BT Ant2>

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	1.05	4.02	4.78	3.61	2.68
Ant. 2 Max Gain (dBi)	4.57	-	-	-	-
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/142.5/277.5	Phi/37.5/15	Phi/37.5/337.5	Phi/37.5/337.5	Theta/37.5/22.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/157.5/0	-	-	-	-

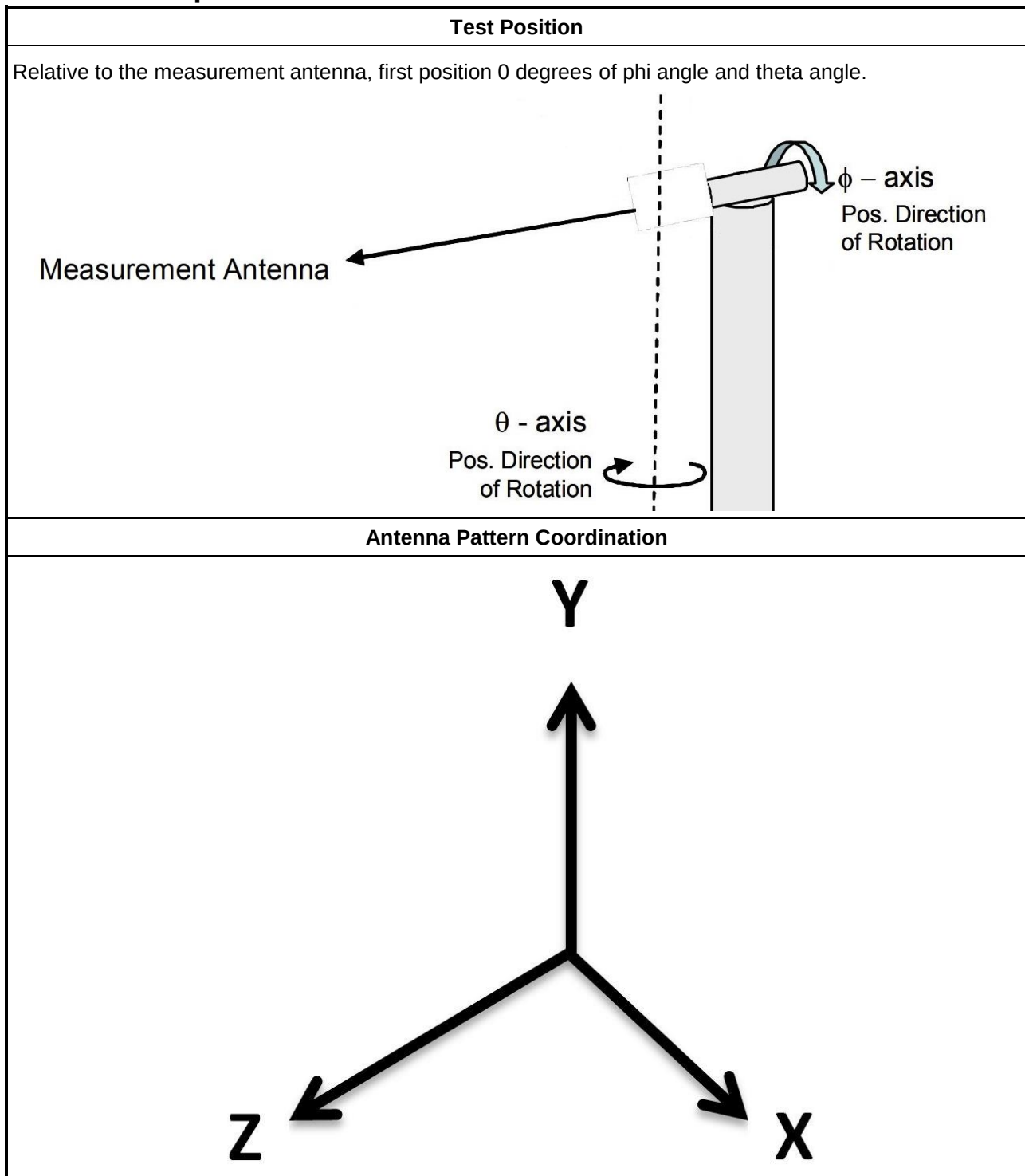
Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.33	2.51	1.64	1.01
Ant. 2 Max Gain (dBi)	-	-	-	-
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/75/7.5	Phi/82.5/15	Theta/52.5/37.5	Phi/15/90
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	-	-	-	-

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.

Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii).

9. Test Setup



Note:

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

**10. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1531	1GHz~18GHz	Dec. 20, 2023	Dec. 19, 2024
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Jul. 30, 2024	Jul. 29, 2025
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

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————THE END————



Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.68	4.35	5.91	5.86	5
Ant. 2 Max Gain (dBi)	2.04	3.5	3.74	5.92	4.6
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/22.5/172.5	Phi/52.5/97.5	Phi/60/97.5	Phi/82.5/97.5	Phi/67.5/97.5
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/75/67.5	Theta/45/172.5	Theta/52.5/172.5	Phi/37.5/120	Phi/30/120
Max Gain (dBi)	2.68	4.35	5.91	5.92	5
DG [1SS] (dBi)	2.86	6.34	6.89	7.56	6.98
DG [2SS] (dBi)	2.68	4.35	5.91	5.92	5



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

DG 1SS Result

Freq(Hz)	2.45G/Pol	Phi-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-1.46/-1.63	-1.67/-1.67	-1.7/-1.83	-2.02/-2.28	-2.46/-2.26	-2.78/-2.85	-2.65/-2.19	-1.5/-8.6	-0.43/-0.27	-0.32/-0.45	-0.62/-0.77	-1.1/-1.34	-1.81/-2.22	-2.47/-2.43	-2.42/-2.56	-2.89/-3.38	-3.27/-3.38	-3.88/-4.2	-4.44/-3.92	-3.01/-2.03	-1.19/-0.54	-0.21/-0.15	-0.26/-0.53	-0.93/-1.31
Θ(7.5°)	-1.47/-1.81	-2.26/-2.64	-2.91/-3.04	-3.18/-3.32	-3.47/-3.81	-4.44/-5.35	-4.86/-4.19	-2.52/-1.14	-0.19/0.25	0.29/0.05	-0.23/-0.58	-1.01/-1.47	-1.83/-1.95	-1.79/-1.52	-1.35/-1.46	-1.78/-2.07	-2.21/-1.97	-1.71/-1.79	-2.09/-2.22	-2.01/-1.58	-1.14/-0.77	-0.56/-0.5	-0.58/-0.74	-1.1/-1.24
Θ(15°)	-1.15/-1.61	-2.26/-2.73	-2.76/-2.78	-2.9/-3.09	-3.45/-4.01	-4.61/-4.99	-5.02/-4.57	-3.13/-1.35	0.10/0.96	1.31/1.25	0.92/0.35	-0.34/-1.07	-1.54/-1.65	-1.53/-1.31	-1.18/-1.26	-1.63/-1.47	-1.27/-0.33	0.24/0.29	-0.04/-0.46	-0.7/-0.67	-0.38/0.02	0.34/0.42	0.29/-0.01	-0.42/-0.81
Θ(22.5°)	-0.9/-0.99	-1.19/-1.33	-1.36/-1.39	-1.45/-1.65	-2.26/-3.34	-4.53/-5.03	-4.85/-4.37	-3.38/-1.72	-0.04/1.08	1.63/1.68	1.38/0.68	-0.25/-1.08	-1.45/-1.46	-1.39/-1.26	-1.13/-1.03	-0.98/-0.9	-0.65/-0.31	-0.04/0.07	-0.04/-0.38	-0.82/-1.02	-0.77/-0.15	0.49/0.83	-0.17/-0.72	-0.42/-0.81
Θ(30°)	-1.29/-0.91	-0.89/-0.96	-0.91/-0.82	-0.77/-0.9	-1.55/-2.82	-4.48/-5.84	-5.92/-5.03	-3.8/-2.08	-0.25/0.84	1.29/1.37	1.24/0.71	-0.23/-1.12	-1.3/-0.78	0.06/0.88	1.25/-0.02	0.35/-0.55	-1.39/-1.89	-1.83/-1.43	-1.05/-1.1	-1.66/-2.35	-2.3/-1.37	-0.33/0.34	0.55/0.33	-0.38/-1.43
Θ(37.5°)	-2.43/-1.63	-1.44/-1.46	-1.46/-1.39	-1.2/-1.2	-1.82/-3.1	-4.7/-6.29	-6.36/-4.75	-3.41/-2.09	-0.49/0.38	0.38/0.19	0.22/0.02	-0.6/-1.01	-0.62/0.43	1.47/1.95	1.74/0.95	-0.04/-0.74	-0.99/-0.74	-0.17/0.3	0.47/0.27	-0.18/-0.79	-1.37/-1.5	-0.94/-0.35	-0.11/-0.09	-0.51/-1.79
Θ(45°)	-3.06/-2.52	-2.46/-2.89	-3.44/-3.73	-3.46/-3.14	-3.42/-4.12	-4.96/-5.79	-5.74/-4.46	-3.37/-2.64	-1.5/-0.59	-0.45/-0.64	-0.49/-0.32	-0.48/-0.84	-0.87/-0.03	1.03/1.43	1.16/0.76	0.60/0.48	0.23/0.03	0.21/0.29	-0.12/-0.92	-1.66/-1.93	-1.69/-1.36	-1.06/-0.8	-1.03/-1.68	-1.98/-2.7
Θ(52.5°)	-3.45/-2.96	-3.32/-4.42	-5.84/-6.57	-6.35/-5.72	-5.38/-5.13	-5.22/-5.9	-6.19/-5.49	-4.3/-3.05	-0.24/-0.12	-0.44/-0.92	-1.43/-2.55	-2.78/-0.72	0.82/1.42	1.45/1.23	0.58/0.67	-2.27/-3.22	-2.75/-2.23	-2.26/-3.04	-4.11/-4.1	-2.86/-1.78	-1.45/-1.42	-1.78/-2.82	-3.75/-4.02	-3.93/-3.66
Θ(60°)	-4.44/-2.73	-3.24/-4.77	-7.05/-8.07	-7.7/-7.71	-7.36/-6.97	-7.34/-8.71	-9.27/-7.31	-4.33/-2.14	-0.89/-0.33	-0.13/-0.34	-1.51/-1.34	-4.32/-4.83	-2.41/-0.22	1.11/1.21	0.49/-0.87	-3.08/-5.39	-5.62/-4.87	-4.04/-3.29	-3.06/-3.39	-4.14/-4.65	-3.95/-2.42	-1.68/-2.05	-2.59/-3.29	-3.93/-3.66
Θ(67.5°)	-4.16/-3.62	-3.54/-4.84	-6.81/-7.65	-7.19/-6.36	-5.64/-5.27	-6.15/-8.41	-9.35/-6.68	-4.06/-2.48	-1.8/-1.71	-1.91/-2.73	-4.92/-6.88	-6.85/-4.5	-2.03/-0.31	-0.09/-1.2	-2.93/-3.65	-4.59/-3.95	-3.22/-4.3	-4.33/-4.48	-6.09/-6.5	-4.95/-4.6	-4.95/-4.24	-2.77/-2.47	-3.52/-5.34	-7.02/-6.14
Θ(75°)	-6.13/-5.44	-4.72/-5.32	-7.07/-8.28	-7.02/-6.08	-5.29/-4.54	-4.69/-5.92	-6.93/-6.24	-5.23/-4.76	-4.85/-4.63	-3.66/-3.61	-5.11/-7.67	-9.86/-7.24	-3.26/-1.38	-1.39/-2.6	-3.81/-4.54	-4.58/-3.19	-3.09/-2.94	-1.2/-0.78	-1.28/-1.69	-1.95/-2.56	-3.67/-4.79	-4.62/-4.03	-4.8/-4.68	-7.26/-6.76
Θ(82.5°)	-6.75/-6.1	-4.19/-4.34	-6.23/-8.01	-7.54/-6.09	-5.53/-5.2	-5.65/-6.94	-8.61/-8.3	-7.93/-6.79	-5.43/-4.01	-3.12/-3.56	-6.10/-9.5	-9.68/-4.09	-1.52/-1.17	-2.25/-4.41	-5.91/-5.52	-3.61/-1.79	-1.65/-2.83	-3.12/-2.73	-2.7/-2.58	-3.15/-4.53	-5.62/-6.04	-4.97/-3.84	-4.73/-8.53	-10.89/-7.85
Θ(90°)	-6.76/-10.01	-5.9/-3.24	-2.88/-3.87	-5.61/-4.28	-3/-2.63	-3.34/-5.24	-7.6/-8.13	-6.85/-5.01	-3.9/-3.41	-3.43/-4.63	-7.9/-14.1	-10.3/-4.88	-3.29/-4.16	-6.14/-7.36	-8.61/-6.01	-3.09/-1.84	-2.43/-4.86	-7.42/-5.71	-2.88/-1.46	-2.06/-4.67	-9.93/-11	-7.14/-4.87	-4.37/-5.5	-5.86/-5.52
Θ(97.5°)	-2.96/-5.78	-9.54/-6.27	-4.51/-3.81	-4.43/-5.74	-4.5/-3.3	-3.92/-6.49	-10.09/-8.72	-5.47/-3.35	-2.43/-2.53	-3.55/-4.73	-9.34/-13.2	-9.83/-6.47	-5.95/-6.23	-6.88/-9.82	-9.95/-6.02	-3.61/-2.72	-3.19/-4.44	-5.19/-3.44	-1.28/-0.41	-0.95/-2.73	-5.68/-7.41	-6.28/-5.7	-7.14/-7.56	-5.53/-3.28
Θ(105°)	-5.08/-5.84	-7.08/-5.6	-4.72/-4.58	-4.46/-5.8	-6.57/-4.18	-3/-3.31	-4.75/-5.9	-4.98/-3.88	-4.04/-5.48	-7.6/-9.96	-12.89/-15.45	-14.17/-10.95	-9.17/-11.24	-9.44/-5.58	-2.69/-1.59	-1.96/-2.62	-2.55/-1.5	-0.33/-0.1	-1.2/-3.32	-4.54/-5.69	-7.09/-6.07	-7.82/-8.44	-12.89/-7.85	-10.89/-7.85
Θ(112.5°)	-5.38/-5.44	-5.4/-4.59	4.56/-5.84	-6.3/-5.99	-6.58/-6.48	-6.02/-6.59	-7.65/-6.95	-4.93/-4.01	-4.59/-6.3	-6.98/-7.75	-10.54/-11.91	-10.25/-7.67	-5.68/-5.76	-9.1/-11.7	-7.43/-3.58	-1.35/-1.38	-3.28/-6.21	-9.6/-8.92	-4.65/-3	-3.66/-3.52	-1.14/-0.78	-2.5/-5.43	-9.06/-9.6	-5.35/-4.85
Θ(120°)	-6.47/-9.42	-7.45/-3.92	-1.68/-1.36	-2.72/-5.14	-5.29/-4.88	-4.61/-4.13	-3.45/-2.99	-2.93/-3.26	-4.03/-4.75	-5.82/-6.23	-9.45/-8.43	-7.24/-5.8	-5.12/-6.76	-10.75/-8.5	-6.33/-3.96	-2.59/-3.35	-4.65/-2.9	-1.38/-1.19	-2.82/-3.39	-3.99/-4.07	-1.35/-0.01	-0.96/-4.64	-8.61/-9.12	-4.63/-4.15
Θ(127.5°)	-1.44/-3.41	-7.13/-10.14	-6.9/-3.64	-2.45/-3.07	-4.95/-7.5	-4.82/-6.58	-4.97/-7.31	-2.73/-2.33	-2.11/-2.51	-4.38/-4.75	-12.58/-10.24	-7.99/-7.56	-9.21/-10.67	-8.31/-7.64	-6.94/-5.46	-3.76/-2.59	-1.2/-0.22	0.34/0.11	-1.27/-2.64	-4.37/-5.47	-2.67/-1.1	-1.81/-5.48	-12.89/-6.64	-2.3/-0.99
Θ(135°)	-1.47/-1.23	-1.78/-3.67	-6.95/-8.27	-8.21/-7.09	-5.78/-4.76	-4.37/-4.66	-5.18/-5.04	-3.8/-2.46	-2.02/-2.88	-5.08/-4.75	-6.37/-4.42	-4.13/-5.55	-7.48/-6.31	-5.83/-5.78	-5.32/-4.8	-3.77/-3.15	-2.66/-4.29	-2.82/-4.21	-6.09/-6.85	-6.42/-2.59	-0.50/-23	-0.42/-3.06	-8.87/-9.32	-5.01/-2.45
Θ(142.5°)	-5.73/-4.25	-3.49/-3.81	-5.22/-6.99	-8.08/-8.67	-7.54/-4.97	-2.79/-1.38	-0.37/0.42	0.99/1.14	0.62/-0.62	-2.28/-2.73	-2.23/-2.21	-2.9/-3.7	-2.92/-3.22	-3.99/-4.4	-3.97/-3.69	-3.97/-4.3	-4.53/-4.89	-5.76/-7.1	-10.92/-11.62	-6.14/-2.57	-0.86/-0.37	-1.01/-2.9	-6.81/-12.21	-10.79/-7.77
Θ(150°)	-10.79/-9.53	-9.05/-9.31	-10.28/-9.09	-9.19/-9.05	-10.01/-12.49	-11.66/-7.59	-4.91/-3.27	-2.08/-1.41	-1.13/-1.25	-1.5/-1.54	-1.18/-0.58	-0.32/-0.72	-1.89/-3.54	-4.72/-4.46	-3.94/-4.09	-4.86/-5.7	-5.68/-5.65	-5.68/-5.65	-4.77/-3.58	-2.22/-6.69	-3.22/-4.53	-6.83/-10.56	-14.53/-13.07	-14.53/-13.07
Θ(157.5°)	-14.26/-13.87	-13.84/-14.68	-15.6/-11.65	-7.36/-5.07	-4.22/-4.12	-4.26/-4.01	-3.36/-2.41	-1.36/-0.47	0.05/0.2	0.33/0.73	1.12/1.01	0.06/-1.88	-4.72/-7.79	-8.26/-6.81	-6.04/-6.03	-6.44/-6.66	-6.42/-5.94	-5.23/-4.56	-4.27/-4.32	-4.59/-4.97	-5.36/-5.7	-6.16/-6.83	-7.84/-9.33	-11.45/-13.01
Θ(165°)	-7.38/-12.44	-14.04/-14.1	-12.4/-9.37	-4.47/-4.35	-3.02/-2.12	-1.43/-0.69	0.14/0.95	1.55/-1.79	1.71/-45	1.27/1.13	0.76/0.11	-1.74/-1.9	-7.15/-8.2	-10.04/-9.17	-9.05/-8.64	-7.79/-8.61	-5.87/-5.25	-4.87/-4.81	-5.21/-5.98	-6.56/-6.54	-6.72/-7.16	-7.39/-7.24	-7.13/-7.23	-7.82/-9.03
Θ(172.5°)	-1.45/-8.58	-9.42/-9.71	-9.45/-8.74	-6.73/-4.34	-5.09/-3.96	-2.84/-1.79	-0.92/-0.37	-0.13/-0.94	-0.34/-0.92	-1.88/-3.25	-4.9/-6.3	-6.73/-6.93	-7.44/-8.31	-9.87/-9.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72	-6.87/-7.72
Θ(180°)	-5.71/-6.34	-6.83/-7.31	-7.89/-8.59	-8.14/-9.07	-8.88/-7.47	-6.26/-5.3	-4.71/-4.41	-4.08/-3.61	-3.22/-3.26	-3.84/-4.83	-5.84/-6.41	-6.48/-6.34	-6.26/-6.51	-7.23/-8.58	-10.44/-12.4	-12.84/-12.98	-13.02/-14.37	-15.18/-15.47	-12.9/-9.75	-8.29/-7.2	-6.53/-5.63	-4.81/-4.12	-3.76/-3.88	-4.4/-5.17
Freq(Hz)	2.45G/Pol	Theta-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-2.89/-2.51	-2.15/-1.83	-1.53/-1.29	-1.15/-1.09	-1.1/-1.22	-1.57/-2.2	-2.82/-2.98	-2.69/-2.74	-3.11/-3.66	-4.03/-4.05	-4.11/-4.53	-5.18/-5.62	-5.35/-4.51	-3.79/-3.22	-2.75/-2.34	-1.91/-1.47	-1.1/-0.99	-1.13/-1.39	-1.72/-2.08	-2.54/-3.07	-3.55/-3.93	-4/-3.9	-3.88/-3.91	-3.56/-3.33
Θ(7.5°)	-4.33/-4.19	-3.46/-2.77	-2.09/-1.52	-1.11/-0.88	-0.82/-0.84	-0.93/-1.12	-1.53/-2.26	-2.87/-2.82	-2.86/-3.11	-3.47/-3.49	-3.33/-3.23	-3.19/-2.76	-2.19/-1.8	-1.57/-1.51	-1.56/-1.69	-1.8/-1.92	-2.09/-2.37	-2.6/-2.66	-2.62/-2.67	-2.88/-3.2	-3.69/-4.33	-5.05/-5.61	-5.94/-6.03	-5.3/-4.71
Θ(15°)	-2.79/-2.16	-1.79/-1.56	-1.32/-1.07	-0.92/-0.95	-1.16/-1.54	-1.79/-1.76	-1.59/-1.75	-2.7/-3.8	-3.49/-3.16	-3.11/-3.12	-2.94/-2.67	-1.94/-0.77	-0.60/-0.22	0.23/0.01	-0.4/-0.95	-1.53/-2.04	-2.47/-2.75	-2.64/-2.82	-3.15/-3.53	-4.03/-4.72	-5.49/-6.07	-6.16/-6.53	-4.74/-3.63	-4.74/-3.63
Θ(22.5°)	0.09/0.51	0.58/0.41	0.24/0.1	-0.09/-0.44	-0.95/-1.59	-2.13/-2.24	-1.92/-1.84	-2.68/-4.68	-0.58/-0.24	-3.75/-3.33	-2.95/-2.05	-1.09/0.98	0.68/0.82	0.70/0.42	0.06/-0.31	-0.53/-0.88	-1.06/-1.14	-1.18/-1.3	-2.81/-3.39	-3.84/-4.17	-4.28/-4.04	-3.48/-2.66	-1.68/-0.66	-1.68/-0.66
Θ(30°)	1.94/2.24	2.11/74	1.39/1.11	0.81/0.39	-0.01/-0.36	-0.59/-0.74	-0.76/-0.49	-1.62/-3.34	-5.94/-6.12	-5.16/-4.46	-3.91/-2.7	-1.33/-0.02	0.62/0.69	0.44/0.13	-0.11/-0.33	-0.52/-0.67	-0.86/-1.06	-1.26/-1.47	-1.77/-2.17	-2.66/-3.15	-3.44/-3.42	-3.05/-2.43	-1.67/-0.81	0.21/26
Θ(37.5°)	2.61/2.86	2.61/2.3	1.78/1.57	1.35/1.01	0.75/0.7	0.97/0.76	0.55/0.2	-0.38/-1.58	-4.02/-6.53	-6.06/-5.5	-5.26/-3.48	-1.91/-3.03	0.26/0	-0.68/-1.1	-1.25/-1.37	-1.53/-1.6	-1.58/-1.57	-1.65/-1.74	-1.75/-1.78	-2.03/-2.48	-2.92/-3.07	-2.74/-2.03	-1.21/-0.38	0.65/1.81
Θ(45°)	2.38/2.51	2.03/1.51	1.33/1.44	1.42/1.15	0.99/1.17	1.42/1.45	1.20/81	0.4/-0.15	-1.46/-3.92	-5.78/-6.09	-6.76/-5.65	-3.69/-1.37	-0.41/-0.75</											



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

Θ (15°)	-1.94/-1.42	-0.87/-0.02	0.93/1.63	2.28/2.65	2.72/2.89	2.87/2.61	2.55/2.53	2.24/1.85	1.75/1.53	1.10/85	0.22/-0.94	-2.21/-3.12	-3.28/-2.7	-1.40/11	1.4/2.33	3.01/3.6	3.77/3.56	3.56/3.36	2.54/1.94	1.35/0.35	-0.69/-1.71	-2.65/-3.07	-3.17/-2.88	-2.72/-2.37
Θ (22.5°)	-2.68/-2.12	-1.37/-0.51	0.12/0.54	1.2/1.7	2.35/2.91	3.48/3.74	3.62/3.54	3.4/2.73	2.13/-1.75	1.72/2.05	1.72/0.91	-0.32/-1.28	-1.32/-0.63	0.54/1.63	2.19/2.54	2.81/3.1	3.21/2.94	2.29/1.9	1.47/0.47	0.19/0.01	-0.97/-1.9	-3.02/-3.38	-2.58/-2.35	-2.34/-2.67
Θ (30°)	-4.92/-4.26	-2.54/-1.29	-1.23/-0.76	0.52/1.73	2.69/3.25	3.66/4.03	4.69/5.04	5.01/4.84	4.07/2.69	0.96/1.12	1.31/0.7	0.54/-0.78	-1.31/-0.5	0.77/1.59	1.91/86	1.62/1.56	1.58/2.08	1.29/1.58	1.56/0.94	-0.4/-0.76	-1.24/-1.37	-2.04/-3.67	-3.17/-2.29	-2.74/-1.1
Θ (37.5°)	-5.4/-4.89	-3.6/-2.03	-1.45/-0.4	1.01/2.34	3.35/3.81	3.85/4.21	4.91/5.5	5.99/6.31	5.61/4.01	1.74/0.3	0.06/0.31	-0.38/-0.96	-1.41/-1.03	-0.01/0.37	0.04/0.34	0.87/1.32	1.61/1.48	0.69/-0.28	-0.57/-0.69	-1.07/-1.02	-0.88/-1.22	-2.08/-3.66	-3.44/-2.86	-3.13/-4.61
Θ (45°)	-4.29/-4.49	-4.71/-3.08	-0.95/-0.96	2.41/2.94	3.51/3.96	4.14/4.93	5.39/5.88	6.53/6.73	6.41/5.39	2.81/-1.13	-1.13/-0.48	-1.87/-3.44	-4.1/-3.05	-0.72/-0.38	-0.29/0.05	0.29/0.81	0.62/0.77	0.45/-0.54	-1.17/-1.37	-1.16/-0.48	-0.39/-0.47	-1.72/-4.62	-6.33/-4.94	-4.11/-4.37
Θ (52.5°)	-4.31/-3.83	-4.6/-3.99	-1.81/1.04	2.82/3.4	3.67/4.41	4.78/4.97	5.68/6.24	6.39/6.52	3.19/0.19	-0.58/-3.18	-6.25/-11.44	-8.11/-2.96	-0.34/-0.67	-1.28/0.83	1.13/0.15	-0.25/0.15	-0.44/-2.07	-2.99/-2.33	-1.82/-1.45	-0.60/-2.02	-1.09/-3.69	-5.87/-4.28	-5.32/-5.96	
Θ (60°)	-3.97/-3.25	-3.71/-4.05	-3.19/-0.08	2.31/3.42	4.07/4.88	5.17/5.29	5.98/6.79	6.89/6.45	5.95/5.11	4.44/2.07	-0.64/-2.21	-3.32/-9.34	-9.45/-5.3	-2.33/-2.41	-1.03/0.68	-0.31/-2.17	-2.37/-1.65	-2.08/-2.63	4.45/-4.88	-3.47/-2.63	-2.13/-2.44	-3.87/-6.98	-7.8/-5.02	-3.89/-5.99
Θ (67.5°)	-4.1/-2.95	-3.2/-3.59	-3.14/-1.44	1.04/2.52	4.17/4.83	4.83/5.05	5.82/6.56	6.54/8.22	5.56/4.85	3.72/2.46	0.1/-1.82	-2.89/-6.21	-9.5/-6.51	-4.71/-4.59	-2.83/-0.6	-1.05/-3.5	-1.67/-4.09	-6.25/-5.18	-4.46/-2.9	-3.96/-4.35	-5.65/-6.68	-6.82/-5.31	-4.72/-6.16	
Θ (75°)	-4.88/-3.26	-3.68/-4.01	-2.84/-2.58	-0.02/2.24	3.84/4.21	4.61/4.83	5.46/6.2	6.35/5.76	4.49/3.97	3.87/2.65	0.91/-1.23	-2.12/-3.38	-8.37/-6.97	-8.88/-7.56	-6.19/-3.28	-4.32/-7.18	-9.14/-4.13	-1.78/-5.63	-5.8/-3.48	-2.69/-3.1	-4.74/-6.84	-5.4/-5.47	-8.71/-8	-4.59/-7.0
Θ (82.5°)	-5.53/-3.92	-4.25/-4.16	-2.77/-2.81	-0.87/1.86	2.98/3.58	4.32/4.76	5.03/5.44	5.66/4.78	4.28/3.58	3.17/2.38	0.41/-1.07	-2.58/-2.91	-7.96/-6.3	-8.14/-11.4	-7.83/-3.65	-7.03/-7.57	-9.97/-3.89	-2.7/-6.79	-3.16/-1.59	4.36/-2.08	-5.27/-8.07	-6.79/-6.47	-8.92/-9.18	-7.01/-8.89
Θ (90°)	-5.64/-5.29	-5.25/-4.29	-2.86/-2.87	-2.19/0.7	1.77/2.3	3.41/4.47	4.75/4.7	4.99/4.05	3.12/2.55	2.54/2.13	-0.9/-1.26	-1.43/-3.13	-3.58/-4.49	-5.02/-6.62	-7.35/-10.34	-8.44/-10.48	-10.12/-7.93	-3.38/-8.84	-10.81/-9.11	-8.01/-7.38	-13.22/-10.24	-12.66/-10.7	-8.5/-13.04	
Θ (97.5°)	-6.34/-6.46	-6.12/-5.96	-3.33/-3.6	-2.67/-0.67	0.89/1.94	2.77/3.32	3.63/7.2	4.03/3.5	1.81/1.52	1.03/0.8	-0.54/-3.22	-2.07/-3.69	-8.69/-4.99	-7.33/-11.22	-12.39/-9.49	-8.79/-6.83	-9.59/-7.9	-6.53/-7.42	-9.52/-4.16	-11.75/-11.09	-9.07/-11.51	-13.49/-11.35	-9.72/-10.68	
Θ (105°)	-6.97/-6.51	-7.43/-6.37	-4.5/-4.34	-4.36/-1.66	-0.33/0.54	1.78/2.44	2.56/2.48	2.74/2.25	1.42/0.05	-0.24/-0.4	-1.69/-3.13	-5.3/-2.94	-7.57/-8.18	-5.33/-9.62	-13.14/-11.32	-10.97/-9.16	-14.53/-9.18	-8.57/-15.04	-3.88/-5.21	-11.22/-9.49	-14.62/-9.97	-11.81/-12.96	-15.85/-12.07	-11.05/-11.63
Θ (112.5°)	-6.73/-8.41	-8.78/-7.4	-5.75/-5.7	-4.84/-3.1	-1.46/-0.79	0.51/0.2	1.52/2.08	1.74/0.9	-0.9/-1.26	-1.43/-3.13	-3.58/-4.49	-5.02/-6.62	-7.35/-10.34	-8.44/-10.48	-14.06/-10.98	-9.32/-10.91	-10.47/-6.4	-10.81/-11.94	-15.24/-9.8	-9.81/-13.58	-12.8/-10.87	-12.66/-10.7	-8.5/-13.04	
Θ (120°)	-7.37/-7.95	-11.8/-7.7	-7.32/-6.61	-7.39/-5.22	-2.63/-2.42	-1.0/84	1.08/0.51	0.42/-0.26	-2.02/-4.05	-3.63/-2.27	-4.62/-6.02	-6.28/-6.64	-8.18/-13.05	-7.77/-9.45	-14.85/-10.82	-7.25/-13.42	-9.39/-6.22	-10.2/-10.58	-8.48/-8.4	-9.85/-9.51	-10.8/-7.82	-10.34/-12.01		
Θ (127.5°)	-8.03/-9.73	-12.74/-9.62	-8.63/-9.8	-8.71/-6.21	-4.65/-3.2	-2.41/-0.96	-0.11/0.31	-0.12/-1.49	-2.34/-3.49	-5.63/-6.7	-6.53/-5.8	-6.43/-6.2	-8.38/-9.37	-11.96/-12.61	-10.24/-8.78	-10.92/-13.29	-11.87/-8.07	-13.86/-11.83	-9.45/-12.82	-11.06/-13.32	-12.13/-14.19	-10.46/-9.43	-8.86/-8.96	-10.51/-10.42
Θ (135°)	-10.01/-13.04	-12.74/-10.41	-13.48/-11.13	-1.42/-9.73	-6.7/-5.46	-4.25/-3.2	-2.54/-2.1	-1.56/-2.27	-2.37/-2.81	-6.65/-8.03	-8.66/-4.82	-4.84/-7.57	-9.42/-7.1	-10.34/-13.88	-8.52/-10.23	-11.05/-11.98	-10.61/-9.18	-13.71/-14.45	-15.66/-13.77	-8.08/-7.65	-8.06/-9.76	-6.84/-9.59	-9.46/-9.32	-10.43/-8.66
Θ (142.5°)	-10.05/-14.74	-15.37/-13.34	-13.48/-12.39	-10.21/-9.27	-8.2/-7.08	-5.99/-5.25	-3.84/-2.88	-3.34/-3.65	-4.73/-5.83	-6.38/-8.45	-8.35/-10.14	-8.64/-5.73	-5.58/-6.23	-9.56/-9.34	-10.95/-13.1	-10.74/-12.33	-15/-13.67	-13.84/-11.21	-8.67/-7.82	-11.75/-5.57	-6.89/-8.21	-8.73/-9.33	-10.92/-8.5	
Θ (150°)	-12.56/-14.44	-15.16/-14.82	-13.72/-12.2	-10.96/-10.29	-8.1/-6.46	-6.05/-5.99	-6.84/-6.08	-5.14/-4.81	-4.82/-5.57	-8.34/-9.32	-9.86/-11.78	-10.48/-9.28	-9.26/-9.96	-12.29/-11.69	-10.42/-12.15	-11.27/-14.35	-13.96/-14.38	-14.62/-13.23	-12.52/-10.03	-8.5/-8.01	-8.56/-6.66	-5.88/-5.9	-7.37/-9.13	-12.08/-11.06
Θ (157.5°)	-11.19/-12.98	-14.07/-15.86	-15.96/-13.25	-11.79/-10.95	-10.48/-9.45	-8.39/-8.22	-7.03/-6.38	-7.04/-6.78	-6.1/-6.96	-7.28/-6.97	-8.36/-9.95	-11.65/-14.96	-14.35/-11.01	-9.58/-9.63	-10.92/-13.65	-14.75/-11.95	-10.74/-10.98	-12.41/-15.58	-14.27/-11.78	-10.04/-8.66	-7.96/-6.85	-6.57/-3.76	-9.21/-10.87	-12.59/-11.36
Θ (165°)	-12.38/-14.11	-15.13/-15.17	-14.11/-13.31	-11.65/-9.88	-10.73/-13.72	-14.16/-13.73	-11.86/-11.11	-11.22/-9.84	-9.75/-10.09	-10.08/-10.28	-11.44/-12.27	-10.57/-9	-8.1/-8.06	-9.15/-10.22	-11.89/-13.89	-14.19/-13.58	-13.06/-15.7	-14.49/-15.49	-15.08/-13.34	-13.44/-13.23	-12.56/-11.92	-11.09/-11.32	-11.44/-11.72	-12.41/-12.24
Θ (172.5°)	-9.04/-10	-12.09/-14.45	-14.94/-15.03	-14.27/-13.6	-11.84/-11.69	-11.46/-10.45	-9.39/-9.32	-8.77/-8.45	-7.99/-8.35	-8.47/-8.12	-8.97/-9.76	-11.13/-11.81	-11.63/-12	-12.5/-12.36	-13.4/-12.72	-15.74/-13.78	-14.67/-15.16	-15.68/-15.28	-15.66/-14.44	-15.45/-13.61	-12.34/-12.27	-11.08/-10.99	-10.67/-10.46	-11.3/-10.12
Θ (180°)	-10.12/-10.49	-11.5/-13.67	-14.7/-14.49	-13.36/-14.28	-15.88/-15.39	-15.12/-15.13	-15.65/-14.8	-13.93/-14.17	-14.44/-14.26	-13.74/-14.77	-15.6/-13.7	-15.87/-15.29	-14.87/-15.2	-15.06/-14.92	-14.42/-15	-15.15/-15.39	-15.62/-14.58	-15.68/-16.13	-16.1/-14.61	-12.16/-11.96	-12.51/-11.89	-10.31/-10.39	-11.12/-11.15	-11.13/-10.42
Freq(Hz)	5.3GPol.	Theta/-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	3.13/2.9	2.33/1.82	1.23/0.34	-1.2/-51	-3.25/-4.04	-3.75/-2.82	-3.31/-3.8	-3.29/-2.87	-1.56/-0.82	11/95	2.13/2.5	2.56/2.22	2.16/2.15	1.78/1.19	0.57/-0.49	-2.15/-2.63	-3.35/-2.89	-2.34/-2.5	-2.6/-2.32	-1.99/-1.07	-0.16/0.74	1.23/1.54	2.11/2.77	2.97/3
Θ (7.5°)	2.42/16	1.38/0.59	-0.28/-1.37	-2.38/-3.42	-3.08/-2.45	-2.47/-2.04	-1.44/-1.49	-0.92/-0.65	0.36/0.73	1.26/2.88	3.17/3.35	3.55/3.21	2.62/2.33	2.05/1.56	1.2/0.58	-0.87/-2.48	-3.54/-5.01	-4.9/-4.41	-4.55/-4.62	-4.22/-2.99	-1.35/-0.58	0.46/1.08	1.31/2.06	2.42/2.3
Θ (15°)	1.89/2.07	1.46/0.39	-0.94/-2.27	-3.1/-2.93	-2.63/-2.04	-2.01/-2.09	-1.38/-1.09	-0.13/0.77	0.82/1.29	1.65/2.41	3.13/2.28	3.37/3.11	2.78/2.69	2.16/1.48	1.05/0.21	-1.57/-4.36	-6.55/-9.02	-12.32/-9.39	-7.64/-5.41	-3.34/-1.96	-0.25/0.35	0.73/1.32	1.29/1.72	2.07/1.7
Θ (22.5°)	1.71/1.94	1.66/1.12	-0.03/-1.47	-1.79/-1.35	-1.1/-26	-1.64/-2.01	-2.31/-1.54	-0.01/1.29	1.69/1.7	1.57/1.88	2.57/2.5	2.37/2.49	2.64/2.3	1.58/0.63	-0.34/-1.6	-3.76/-7.49	-12.08/-14.87	-15.98/-11.23	-8.78/-6.34	-4.38/-3.47	-1.75/-0.33	0.69/1.35	0.77/0.82	1.22/1.28
Θ (30°)	1.27/1.94	1.74/1.78	1.66/1.07	0.08/-0.23	0.180/8.9	1.22/1.12	0.92/-0.3	-0.28/0.82	1.34/1.84	1.61/1.22	1.48/1.77	1.75/2.05	1.92/1.19	0.78/-0.3	-1.36/-2.59	-4.03/-4.16	-10.35/-11.59	-12.57/-11.45	-8.19/-7.37	-6.1/-5.11	-4/-2.04	-0.59/0.94	1.41/1.35	1.59/0.72
Θ (37.5°)	0.09/1.03	1.33/1.85	2.2/2	1.53/0.91	1.52/1.7	2.29/2.14	2.11/1.53	0.37/0.63	0.92/1.07	1.29/1.15	0.88/1.84	2.38/2.67	1.26/0.97	-0.08/-2.05	-2.98/-3.31	-5.03/-9.41	-15.65/-14.98	-14.65/-13.34	-9.83/-8	-6.13/-4.58	-4.4/-3.67	-1.52/0.56	1.33/0.45	0.31/-0.21
Θ (45°)	-2.42/-1.66	0.07/0.79	0.93/1.59	1.88/1.25	0.59/0.54	1.13/1.4	1.31/0.95	0.46/0.4	-0.95/-0.61	-0.11/-34	1.23/2.14	3.27/3.7	2.83/1.36	0.91/0.06	-1.86/-5.21	-7.03/-7.63	-12.24/-14.52	-11.44/-9.37	-8.89/-8.56	-7.45/-6.32	-3.89/-3.33	-2.55/-0.73	-0.26/-1.57	-2.26/-2.87
Θ (52.5°)	-5.85/-4.96	-2.83/-1.35	-0.11/0.38	-0.14/-0.65	-0.95/0.07	0.88/1.42	1.34/0.93	0.17/-0.92	-2.24/-2.6	-1.15/0.62	1.33/2.46	2.91/73	1.26/-0.83	-2.86/-4.22	-6.29/-9.81	-15.86/-11.45	-10.93/-10.45	-10.73/-10.14	-7.99/-4.74	-3.02/-3.34	-1.99/-2.39	-2.68/-4.1	-5.66/-6.57	
Θ (60°)	-7.1/-4.2	-3.75/-2.66	-1.1/-1.2	-1.61/-1.59	-1.11/-2.1	1.75/2.42	1.99/1.87	1.15/-0.9	-2.52/-4.94	-2.76/-0.66	0.16/1.18	2.08/2.2	2.70/6.66	1.03/0.07	-7.22/-7.18	-10.25/-11.83	-7.59/-11.26	-12.03/-7.57	-4.26/-2.7	-3.33/-3.97	-4.63/-5.21	-6.9/-6.15		
Θ (67.5°)	-4.59/-3.27	-1.42/-2	-1.46/-2.36	-3.09/-2.13	-1.30/-58	1.64/2	1.42/1.13	0.89/1.34	-3.83/-4.5	-3.34/-1.51	-1.49/-0.72	1.26/1.05	0.73/-0.09	-0.66/-3.04	-4.53/-6.69	-8.05/-7.7	-8.49/-11.41	-6.93/-3.96	-5.95/-13.41	-14.73/-9.81	-6.29/-6.53	-5.39/-6.54	-5.93/-5.38	-4.42/-6.66
Θ (75°)	-3.61/-1.76	-0.23/-1.2	-1.08/-1.27	-4.11/-2.64																				



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

Θ(67.5°)	-7.41/-5.86	-4.02/-3.35	-2.99/-1.04	1.41/2.38	1.66/2.41	3.96/4.75	5.49/6.3	6.38/5.97	5.16/4.55	3.28/0.95	-1.58/-3.47	-6.4/-9.98	-10.67/-6.01	-5.28/-4.53	-5.09/-5.52	-8.67/-8.33	-6.77/-5.03	-8.19/-8.88	-7.21/-6.29	-6.96/-7.5	-8.14/-9.11	-12.48/-14.88	-13.12/-8.5	-10.99/-7.74
Θ(75°)	-5.5/-4.97	-3.49/-2.9	-2.74/-1.73	0.59/1.96	1.74/2.22	3.29/4.29	4.9/-5.47	5.96/5.59	4.85/3.61	3.24/0.7	-1.3/-2.05	-6.49/-9.75	-12.25/-9.3	-8.4/-5.38	-6.37/-8.07	-10.58/-15.33	-9.43/-5.67	-7.25/-6.85	-11.12/-6.74	-4.81/-5.51	-8.79/-11.13	-12.33/-13.27	-11.07/-9.18	-8.15/-8.38
Θ(82.5°)	-5.28/-4.89	-2.28/-3.08	-2.7/-2.32	-0.14/1.13	1.53/2.32	3.11/3.98	4.47/4.83	5.17/4.7	3.95/3.37	2.61/0.95	-0.94/-1.48	-5.9/-6.66	-9.63/-8.73	-9.88/-5.83	-9.01/-7.48	-9.74/-14.38	-9.37/-6.45	-6.33/-5.47	-12.67/-3.78	-2.99/-5.09	-6.28/-11.83	-12.6/-10.75	-10.94/-8.1	-7.87/-6.98
Θ(90°)	-4.44/-4	-2.32/-3.11	-2.6/-3.59	-1.6/0.55	1.46/1.84	2.67/3.35	3.78/3.77	4.18/3.75	3.24/2.8	1.61/1.53	-0.27/-0.61	-4.4/-4.49	-7.31/-7.16	-12.32/-8.71	-12.6/-8.46	-10.44/-11.44	-9.98/-5.7	-7.8/-4.05	-7.34/-2.98	-1.79/-5.64	-6.6/-12.49	-12.37/-10.54	-10.81/-7.35	-9.08/-6.52
Θ(97.5°)	-4.08/-4.68	-2.25/-3.36	-2.91/-3.95	-2.65/-0.02	0.99/1.51	2.15/2.8	3.06/2.55	3.38/2.95	2.15/2.36	1.90/37	-0.35/0.06	-3.86/-3.43	-6.75/-7.48	-9.34/-12.03	-9.77/-10.24	-9.49/-7.45	-15.64/-6.86	-9.39/-4.62	-9.48/-4.38	-2.9/-8.59	-11.26/-13.07	-12.05/-9.9	-10.34/-8.95	-8.24/-6.96
Θ(105°)	-4.15/-3.99	-2.54/-3.95	-3.8/-4.67	-3.52/-0.54	0.85/-0.09	1.46/2.77	2.38/1.94	2.21/1.61	1.68/1.28	1.71/1.12	-0.51/-0.35	-2.65/-2.49	-7.31/-6.59	-10.18/-9.56	-14.94/-7.07	-10.83/-5.21	-12.87/-6.62	-6.58/-4.52	-9.04/-4.99	-4.3/-6.06	-8.55/-14.9	-10.64/-8.99	-10.45/-8.1	-9.41/-5.91
Θ(112.5°)	-4.75/-4.51	-3.9/-4.11	-4.89/-5.3	-3.62/-1.4	-0.19/-0.24	0.57/1.94	1.8/1.1	0.34/0.66	0.42/0.27	0.02/0.01	-0.41/-0.97	-3.2/-4.94	-4.88/-9.06	-11.96/-9.48	-9.25/-9.95	-9.95/-6.91	-13.15/-6.79	-7.53/-5.1	-7.7/-5.18	-6.36/-6.29	-12.59/-14.35	-8.44/-15.28	-11.29/-9.86	-9.86/-6.57
Θ(120°)	-4.67/-6.05	-3.53/-4.57	-5.62/-6	-4.11/-2.13	-1.7/-1.57	-0.7/0.71	0.3/-0.33	-0.66/-1.12	-0.45/-0.59	-0.96/-1.95	-1.12/-1.79	-4.53/-5.24	-6.58/-7.85	-11.85/-8.29	-12.91/-10.84	-8.28/-7.52	-8.33/-7.27	-8.56/-8.42	-9.94/-7.68	-6.34/-9.29	-11.17/-10.11	-10.62/-13.31	-15.21/-9.11	-10.94/-6.65
Θ(127.5°)	-6.24/-6.38	-6.71/-5.16	-6.92/-6.17	-4.82/-3.51	-2.25/-2.23	-3.11/-1.89	-0.61/-0.74	-2.09/-2.87	-3.27/-1.1	-1.03/-1.78	-4.55/-3.4	-2.54/-10.17	-5.6/-6.72	-11.43/-6.81	-14.36/-8.79	-8.19/-13.12	-16.02/-12.28	-13.41/-12.32	-13.33/-12.99	-10.92/-13.57	-12.94/-13.11	-11.3/-13.92	-15.65/-11.83	-13.4/-9.99
Θ(135°)	-8.37/-9.94	-8.45/-5.76	-5.79/-8.43	-5.77/-4.43	-6.04/-5.68	-3.11/-1.69	-1.02/-1.48	-2.23/-3.7	-4.39/-4.31	-3.01/-2.13	-3.21/-5.57	-6.64/-2.95	-5.52/-12.37	-5.64/-6.22	-11.95/-9.39	-16.09/-13.1	-13.85/-9.86	-15.5/-12.37	-15.09/-12.29	-8.85/-13.65	-16.05/-11.82	-13.06/-14.6	-14.7/-15.19	-12.89/-11.58
Θ(142.5°)	-8.85/-9.61	-10.36/-6.99	-3.39/-3.83	-7.27/-8.45	-7.29/-5.52	-3.62/-2.44	-2.04/-2.29	-2.92/-3.19	-3.33/-4.04	-6.04/-6.33	-3.82/-2.89	-3.73/-4.4	-9.43/-6.38	-5.05/-6.35	-13.37/-15.3	-13.56/-15.82	-8.12/-8.43	-12.36/-10.63	-12.33/-14.39	-8.31/-7.04	-6.88/-8.28	-14.02/-15.65	-14.51/-13.57	-12.38/-11.16
Θ(150°)	-11.7/-9.83	-7.73/-7.22	-7.57/-8.33	-8.5/-9.35	-9.96/-9.38	-6.84/-5.1	-3.94/-3.34	-3.74/-3.84	-4.4/-5.03	-5.77/-7.17	-7.1/-5.75	-4.32/-4.59	-8.57/-7.52	-7.12/-12.86	-15.63/-12.53	-11.03/-8.04	-8.14/-13.42	-14.89/-15.19	-14.69/-11.8	-8.96/-6.6	-5.07/-5.6	-7.75/-9.5	-10.5/-11.97	-13.78/-14.89
Θ(157.5°)	-12.69/-14.98	-12.38/-9.39	-7.2/-8	-10.9/-13.37	-13.38/-10.15	-7.85/-6.02	-4.69/-4.6	-5.35/-7.08	-7.48/-7.14	-6.19/-5.49	-6.7/-10.06	-12.2/-9.59	-7.29/-7.6	-10.01/-14.07	-14.64/-15.16	-12.03/-11.07	-13.1/-15.34	-15.17/-15.63	-10.84/-9.43	-8.52/-7.59	-7.09/-7.04	-7.22/-7.45	-8.26/-10.24	-11.84/-11.8
Θ(165°)	-13.78/-13.52	-13.25/-13.82	-15.44/-14.71	-14.73/-12.69	-10.85/-11.41	-10.65/-9.49	-7.22/-6.92	-7.06/-6	-6.23/-6.07	-5.66/-6.66	-6.77/-7.18	-7.44/-8.09	-8.36/-9.6	-11.67/-14.17	-15.3/-13.8	-12.32/-12.4	-12.06/-13.67	-15.78/-14.58	-13.62/-12.94	-12.2/-13.26	-12.41/-9.68	-8.93/-9.3	-10.35/-10.98	-11.96/-14.38
Θ(172.5°)	-11.72/-11.5	-10.18/-8.91	-9.1/-9.56	-9.71/-11.12	-12.76/-12.3	-14.43/-14.82	-10.88/-9.22	-8.18/-8.14	-7.7/-7.42	-8.1/-8.13	-9.84/-10.61	-11.62/-15.23	-15.78/-16.19	-15.74/-14.78	-12.58/-11.71	-11.52/-12.45	-14.47/-14.65	-14.68/-14.1	-12.62/-12.11	-12.65/-13.5	-13.77/-12.42	-12.75/-12.67	-11.64/-10.67	-9.81/-10.58
Θ(180°)	-8.14/-8.68	-8.83/-9.02	-9.25/-9.69	-10.59/-11.81	-12.22/-11.96	-11.43/-11.24	-10.23/-9.66	-9.62/-8.76	-8.17/-8.8	-8.39/-9.38	-9.43/-10.24	-12.64/-12.13	-11.39/-12.61	-12.74/-13.96	-15.16/-14.83	-15.12/-15.42	-15.17/-15.24	-15.08/-14.23	-15.13/-14.76	-14.08/-12.24	-11.54/-10.42	-9.68/-8.92	-8.87/-8.47	-8.14/-7.75
Freq(Hz)	5.785GPol.	Theta/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	3.69/4	4.14/4.05	3.97/3.67	3.31/3	2.51/1.76	1.14/0.25	-0.48/-1.19	-2.41/-2.38	-1.86/-1.75	-0.94/0.17	0.57/1.36	2.11/2.35	2.77/3.38	3.94/19	4.03/3.41	3.13/2.92	2.04/1.39	0.63/-0.45	-1.63/-2.75	-2.82/-2.03	-1.25/-0.49	0.08/0.97	1.91/2.43	2.96/3.43
Θ(7.5°)	2.4/2.87	3/3.06	3.19/3.04	2.64/2.16	1.61/0.77	-0.3/-1.34	-1.83/-1.77	-1.03/-0.95	-0.22/0.95	1.37/2.01	2.42/2.72	3.37/3.69	3.82/3.96	4.04/4.08	4.01/3.57	2.91/2.4	1.86/1.17	0.57/0.03	-0.91/-1.51	-2.14/-2.08	-1.75/-1.54	-1.18/-0.79	-0.04/0.63	1.21/1.89
Θ(15°)	0.35/1.48	1.79/1.74	1.59/1.48	1.15/0.82	0.32/0.15	0.65/0.63	0.42/0.63	1.07/1.17	1.71/2.47	2.74/3.08	3.35/3.28	3.18/2.82	2.87/2.89	2.75/2.55	2.23/1.58	0.32/-0.55	-1.72/-3.08	-4.91/-5.26	-4.74/-3.95	-3.59/-3.32	-2.9/-2.69	-4.88/-4.39	-3.09/-2.54	-2.18/-1.04
Θ(22.5°)	-1.5/-0.13	0.36/0.4	0.56/0.59	0.16/-0.69	-0.81/-0.08	0.08/-0.57	-1.09/-0.95	-1.03/-0.19	1.17/2.03	2.61/2.85	3.06/2.86	2.68/2.35	2.26/2.16	1.48/0.85	0.5/0.17	-0.49/-1.55	-2.63/-2.44	-3.34/-4.11	-4.87/-6.31	-5.82/-3.18	-1.14/-0.49	-0.84/-0.88	-1.86/-1.89	-1.79/-1.88
Θ(30°)	0.67/0.36	0.36/0.14	-0.11/-0.08	-1.08/-1.75	-1.37/-1	-0.48/-0.58	-0.38/0.58	0.46/0.35	0.56/1.01	2.28/2.61	2.58/2.79	2.71/2.84	3.02/2.6	0.95/-0.64	-1.32/-1.26	-1.18/-1.65	-2.34/-3.68	-4.58/-5.65	-7.51/-7.62	-7.21/-6.41	-3.6/-1.32	-0.29/-1.04	-2.21/-2.37	-1.35/0.41
Θ(37.5°)	1.09/1.19	0.4/0.92	1.1/-0.24	-2.4/-3.58	-3.62/-2.35	-1.52/-0.32	1.06/1.73	1.72/1.67	1.17/1.65	2.66/3.13	3.66/2.8	2/2.84	2.79/1.9	-0.5/-0.6	-0.38/-1.09	-2.31/-5.59	-8.28/-8.73	-9.2/-9.13	-8.42/-7.5	-7.58/-9.39	-7.11/-5.19	-4.88/-4.39	-4.08/-3.28	-1.63/0.18
Θ(45°)	-0.94/-0.01	-0.57/0.37	0.86/0.48	-1.41/-3.12	-3.08/-3.32	-3.73/-2.45	0.21/3.2	1.88/1.65	0.62/1.77	2.98/3.63	3.27/2.27	1.69/2.18	1.13/0.78	0.56/-0.52	-2.26/-2.37	-2.6/-4.1	-6.66/-8.51	-8.88/-9.72	-11.26/-9.83	-8.6/-7.73	-7.9/-7.79	-8.51/-9.54	-8.66/-5.13	-4.24/-2.08
Θ(52.5°)	-7.46/-4.12	-1.99/-1.42	-1.18/-0.47	-0.57/-2.28	-4.31/-4.85	-4/-2.5	-0.25/1.1	0.75/0.53	0.82/1.33	2.4/2.46	2.01/1.52	1.3/0.84	1.94/-0.33	-0.45/-1.98	-3.33/-2.26	-1.88/-2.41	-5.15/-8.77	-12.31/-12.71	-14.21/-12.7	-8.4/-6.8	-5.88/-6.33	-6.56/-8.06	-7.02/-5.51	-6.08/-6.88
Θ(60°)	-9.35/-9.03	-4.28/-3.21	-3.37/-2.18	-2.14/-1.56	-3.2/-5.8	-4.45/-1.4	0.47/1.46	0.64/-0.25	0.18/-0.1	1.27/1.08	0.48/0.73	-0.43/-0.07	1.58/-0.71	-0.94/-2.81	-4.61/-3.3	-1.73/-2.33	-4.82/-9.33	-13.63/-12.09	-9.11/-9.06	-9.02/-5.43	-4.66/-4.74	-5.04/-7.72	-7.92/-7.68	-8.57/-7.49
Θ(67.5°)	-5.2/-5.94	-4.59/-4.3	-4.62/-2.95	-2.27/-1.19	-2.32/-4.38	-4.04/-2.43	-0.62/1.11	0.75/-0.75	-1.35/-0.9	-0.45/-1.99	-2.71/-1.06	-2.11/-1.05	-0.04/-1.9	-3/-5.59	-6.5/-4.55	-3.04/-2.38	-4.83/-10.1	-11.24/-8.22	-7.35/-8.27	-10.95/-6.55	-4.27/-3.04	-4.72/-6.25	-8.5/-8.92	-6.61/-3.74
Θ(75°)	-2.21/-3.7	-5.94/-4.14	-6.44/-3.94	-1.93/-0.76	-1.6/-3.51	-3.26/-3.5	-2.5/0.03	0.89/-1.37	-1.83/-2.68	-2.4/-4.83	-6.06/-3.75	-5.93/-4.56	-2.03/-4.79	-5.57/-7.01	-7.57/-7.16	-5.28/-4.44	-5.79/-8.15	-7.66/-7.64	-6.89/-7.05	-12.26/-6.16	-3.78/-4.26	-4.26/-6.63	-6.84/-6.95	-4.38/-3.12
Θ(82.5°)	-1.11/-3.49	-5.31/-4.81	-7.47/-4.4	-2.65/-0.76	-0.79/-4.29	-4.81/-5.12	-4.59/-0.85	-0.23/-3.11	-5.6/-5.73	-4.53/-7.74	-11.65/-6.94	-10.93/-7.27	-5.42/-7.12	-6.74/-7.34	-9.76/-8.47	-5.71/-3.96	-5.79/-8.27	-9.24/-7.62	-8.23/-10.76	-8.81/-3.31	-3.51/-6.58	-6.03/-5.84	-6.4/-3.48	-3.4/-3.85
Θ(90°)	-1.27/-4.47	-4.39/-3.67	-8.72/-4.74	-3.87/-1.84	-1.21/-4.09	-7.64/-6.78	-6.42/-3.8	-3.51/-4.97	-8.79/-8.02	-8.35/-8.37	-8.96/-9.99	-14.12/-8.68	-10.88/-8.24	-6.37/-8.07	-10.3/-9.14	-6.79/-5.03	-5.71/-8.52	-11.44/-9.23	-7.31/-8.09	-8.72/-2.24	-3.82/-6.87	-5.41/-5.14	-7.12/-2.92	-3.17/-4.48
Θ(97.5°)	-3.56/-6.35	-3.45/-4.24	-8.52/-6.33	-5.54/-2.9	-1.94/-5.76	-9.49/-8.17	-11.01/-6.51	-6.1/-8.74	-10.28/-10.2	-11.95/-9.87	-7.47/-6.1	-10.49/-8.29	-8.15/-9.23	-6.71/-7.52	-15.15/-14.14	-11.68/-10.04	-7.98/-9.71	-13.19/-5.29	-6.82/-6.87	-7.04/-3.16	-4.97/-7.07	-3.4/-4.14	-7.14/-2.66	-3.82/-4.91
Θ(105°)	-4.4/-7.66	-5.59/-4.67	-10.15/-8.81	-6.48/-4.51	-3.11/-6.64	-10.4/-8.17	-9.36/-11.62	-10.84/-9.75	-8.56/-9.38	-7.53/-6.61	-5.76/-6.56	-4.67/-6.77	-7.14/-6.63	-8.25/-7.79	-13.69/-10.47	-11.58/-10.72	-10.1/-10.22	-10.61/-4.78	-4.77/-4.67	-8.82/-5.18	-10.03/-7.1	-2.31/-4.68	-6.39/-3.32	-3.09/-6.07
Θ(112.5°)	-5.16/-8.75	-5.86/-4.83	-9.67/-9.68	-8.12/-7.47	-4.21/-5.04	-9.68/-11.77	-12.13/-13.52	-13.2/-9.98	-9.22/-6.81	-8.05/-5.95	-5.17/-5.25	-4.09/-5.02	-6.46/-6.21	-7.07/-9.67	-9.55/-8.01	-7.39/-8.55	-10.48/-7.28	-11.3/-4.75	-7.25/-7.14	-8.48/-5.45	-9.11/-3.07	-2.2/-4.71	-6.63/-1.66	-2.08/-5.52
Θ(120°)	-3.21/-7.52	-7.38/-5.95	-8.78/-8.19	-8.01/-10.45	-9.07/-6.76	-7.79/-9.76	-9.11/-11.61	-14.23/-12.23	-7.7/-7.32	-8.09/-7.04	-6.29/-5.93	-4.15/-4.51	-7.29/-9.35	-6.78/-6.07	-10.5/-6.48	-2.61/-5.67	-10.9/-11.96	-8.43/-4						



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

Θ(22.5°)	-5.17/-6.48	-7.14/-6.88	-5.47/-3.51	-1.61/-0.15	1.18/2.07	2.863/3.34	3.24/2.88	2.36/1.36	-0.19/-1.42	-1.72/-1.31	-1.47/-2.44	-4.94/-7.52	-7.72/-6.21	-4.29/-2.75	-2.23/-1.97	-1.73/-1.49	-1.76/-2.48	-3.17/-3.52	-3.61/-4.09	-3.96/-3.3	-3.22/-3.29	-3.13/-2.5	-2.08/-2.64	-3.13/-3.93
Θ(30°)	-9.08/-9.85	-8.22/-6.65	-6.11/-4.82	-2.43/-0.57	1.03/2.45	3.544/17	4.54/45	4.012/98	1.4/-0.4	-4.02/-4.89	-4.29/-3.52	-3.63/-6.31	-8.36/-6.91	-5.07/-3.77	-3.9/-4.79	-5.26/-5.43	-5.94/-5.12	-5.12/-5.45	-5.09/-6.06	-8/-7	-6.19/-5.33	-4.08/-3.91	-3.03/-2.88	-3.95/-6.2
Θ(142.5°)	-8.17/-11.18	-11.05/-14.26	-7.02/-5.51	-3.39/-0.85	1.35/2.64	3.694/72	5.08/4.96	4.75/3	2.90/78	-2.95/-6.93	-5.25/-4.26	-3.1/-5.08	-8.96/-9.78	-9.03/-8.58	-10.48/-7.59	-4.97/-3.9	-3.58/-4.5	-6.47/-8.03	-8.94/-10.04	-9.85/-7.85	-5.76/-5.41	-6.14/-6.05	-4.64/-4.58	-4.94/-5.82
Θ(45°)	-7.89/-12.16	-18.48/-14.38	-8.06/-4.44	-2.28/-0.8	0.92/69	3.914/69	5.04/4.96	4.61/11	3.33/1.92	-1.11/-6.55	-5.78/-3.42	-4.41/-7.17	-10.11/-8.64	-8.25/-13.01	-13.09/-7.96	-5.42/-3.36	-3.3/-3.01	-4.65/-7.8	-11.71/-16.26	-15.54/-8.97	-5.35/-4.95	-5.92/-8.58	-8.44/-7.07	-6/-5.6
Θ(52.5°)	-9.93/-11.85	-18.88/-18.96	-14.3/-5.73	-1.65/-0.21	0.82/62	3.69/4.5	4.98/4.99	4.333/75	2.81/79	0.15/-3.41	-6.18/-6.3	-5.04/-11.9	-14.51/-7.66	-6.12/-12.46	-15.69/-5.4	-2.67/-2.74	-3.37/-4.33	-5.75/-9.93	-14.86/-14.68	-15.74/-12.35	-6.73/-5.48	-6.61/-8.07	-7.52/-9.64	-7.48/-9.15
Θ(60°)	-9.52/-10.57	-15.23/-19.12	-18.75/-15	-2.44/-0.54	0.54/2.29	3.714/69	5.715/91	4.763/83	3.182/03	1.48/-1.78	-5.79/-7.37	-6.11/-8.82	-11.73/-6.29	-6.71/-15.86	-11.3/-4.74	-5.14/-6.59	-4.69/-4.3	-5.55/-8.63	-17.51/-19.02	-15.33/-15.57	-10.21/-11.19	-14.81/-14.01	-9.44/-6.08	-5.39/-9.96
Θ(67.5°)	-9.72/-8.98	-9.85/-15.5	-19.12/-12.42	-5.08/-2.24	0.662/3	3.31/4.25	5.27/5.7	4.913/5	2.83/1.78	1.03/-1.64	-6.6/-6.12	-6.03/-9.96	-11.9/-6.89	-9.85/-17.84	-12.34/-6.09	-5.15/-6.85	-8.08/-6.63	-4.01/-8.53	-15.29/-11.71	-12.15/-11.94	-12.92/-14.16	-18.05/-14.16	-9.32/-6.19	-5.92/-9.58
Θ(75°)	-8.88/-8.01	-9.13/-14.59	-12.48/-14.35	-6.57/-3	0.161/65	2.83/3.94	5.04/5.4	4.783/53	2.41/3.6	0.67/-1.16	-4.24/-7.61	-5.6/-7.77	-14.08/-8.64	-10.98/-16.45	-15.24/-10.03	-8.81/-9.6	-9.1/-4.59	-2.14/-8.32	-12.81/-8.29	-9.24/-14.72	-14.82/-18.05	-13.85/-9.61	-10.48/-7.79	-6.02/-10.68
Θ(82.5°)	-8.36/-7.51	-8.73/-11.66	-8.82/-12.4	-8.47/-3.04	-0.760/7	2.13/44	4.68/4.85	4.09/2.9	2.29/1.57	0.31/-1.91	-4.31/-6.25	-7.69/-7.85	-14.77/-7.53	-9.4/-19.42	-15.56/-8.36	-14.48/-12.33	-10.98/-5.53	-2.8/-9.04	-7.78/-4.32	-11.42/-9.4	-10.97/-18.78	-13.67/-9.16	-10.34/-9.16	-7.68/-11.94
Θ(90°)	-7.42/-8.03	-8.9/-9.61	-7.41/-10.64	-9.93/-4.58	-1.57/-0.59	1.273/18	3.913/92	3.612/82	1.740/42	0.19/-0.96	-5.38/-5.96	-6.02/-6.97	-18.86/-8.94	-12.67/-14.85	-16.18/-10.6	-9.18/-16.65	-14.67/-9.31	-3.34/-10.08	-6.23/-5.38	-19.24/-12.12	-16.08/-18.26	-12.62/-8.61	-14.9/-9.94	-8.53/-13
Θ(97.5°)	-7.27/-8.28	-8.9/-10.22	-6.81/-9.97	-8.7/-5.52	-2.49/-0.84	0.822/09	2.93/06	2.841/82	1.190/33	-1.19/-2.69	-3.33/-7.74	-5.79/-7.06	-19.12/-8.06	-6.14/-15.05	-16.63/-12.06	-14.1/-14.03	-13.08/-13.58	-7.18/-10.16	-7.96/-7.64	-18.56/-8.8	-15.27/-17.59	-14.43/-12.39	-15.37/-11.72	-10.23/-12.79
Θ(105°)	-7.85/-8.17	-9.82/-9.49	-7.09/-9.44	-10.43/-6.38	-3.38/-2.56	-0.85/12	2.022/01	2.18/16	0.51/0.57	-1.02/-2.57	-5.29/-5.27	-4.75/-6.38	-10.62/-1.95	-4.65/-9.34	-16.19/-13.17	-10.88/-18.32	-18.82/-18.97	-13.29/-17.28	-6.56/-7.71	-19.06/-18.1	-17.25/-10.92	-12.98/-14.1	-18.84/-13.66	-12.43/-12.06
Θ(112.5°)	-7.24/-8.91	-10.89/-9.44	-7.74/-10.07	-9.43/-6.97	-4.38/-3.4	-1.89/-0.46	1.021/65	1.020/35	-0.86/-1.6	-2.14/-4.35	-4.39/-6.93	-4.63/-7.4	-10.42/-12.66	-7.47/-10.46	-16.56/-14.1	-12.82/-19.39	-11.34/-9.67	-18.17/-15.13	-8.77/-9.11	-18.11/-14.9	-14.69/-15.46	-18.39/-13.31	-18.04/-11.15	-10.7/-14.29
Θ(120°)	-8.52/-8.72	-13.09/-10.21	-8.89/-10.5	-10.88/-8.03	-4.85/-4.52	-2.97/-9.01	0.420/42	-0.23/-0.92	-1.64/-2.83	-3.47/-5.01	-4.22/-5.42	-6.01/-5.3	-7.44/-15.39	-6.95/-9.23	-18.26/-11.17	-9.55/-14.44	-10.69/-8.19	-10.1/-11.18	-12.18/-15.3	-18.95/-13.8	-10.96/-11.5	-18.32/-17.68	-18.85/-13.92	-15.15/-13.92
Θ(127.5°)	-8.86/-10.9	-16.88/-10.85	-9.03/-13.41	-11.76/-6.95	-6.01/-5.92	-4.81/-2.1	-0.56/0	-0.91/-2.07	-2.72/-2.96	-4.27/-5.45	-5.98/-5.83	-9.49/-9.87	-8.53/-9.84	-12.11/-13.67	-10.58/-11.04	-14.68/-14.89	-12.44/-12.66	-15.09/-12.59	-14.02/-18.1	-18.91/-19.01	-13.78/-15.43	-18.48/-14.13	-17.11/-18.2	-18.19/-12.16
Θ(135°)	-14.21/-17.71	-12.27/-10.84	-17.49/-11.98	-7.76/-9.02	-7.63/-6.17	-5.25/-4.26	-3.24/-2.67	-1.75/-2.25	-2.74/-3.46	-6.95/-7.38	-7.75/-3.67	-4.21/-9.24	-9.7/-6.86	-11.32/-18.92	-12.81/-15.68	-18.26/-14.4	-12.43/-12.17	-15.66/-17.69	-18.31/-17.78	-16.15/-17.82	-14.29/-14.33	-18.89/-17.53	-18.92/-19.09	-17.11/-10.54
Θ(142.5°)	-13.02/-17.71	-17.75/-14.55	-14.6/-13.39	-9.95/-9.49	-8.81/-7.15	-6.28/-5.43	-3.91/-1.53	-3.75/-3.81	-4.12/-6.37	-6.74/-7.78	-9.54/-4.9	-5.06/-8.21	-15.08/-12.26	-12.18/-18.13	-15.11/-10.45	-11.82/-17.84	-18.45/-18.8	-17.14/-12.43	-16.08/-17.86	-17.98/-12.11	-15.58/-16.16	-15.12/-19.24	-19.32/-12.52	
Θ(150°)	-19.13/-17.52	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66	-13.71/-17.66
Θ(157.5°)	-17.83/-18.16	-18.55/-18.69	-18.96/-14.87	-12.53/-11.31	-10.54/-8.73	-7.64/-7.11	-7.1/-6.97	-6.94/-7.35	-6.75/-7.13	-7.07/-6.19	-7.71/-9.9	-12.16/-17.66	-17.12/-11.24	-9.07/-9.01	-10.99/-15.93	-17.19/-12.55	-10.69/-12.37	-15.76/-17.71	-18.27/-17.79	-18.66/-15.91	-13.48/-12.66	-11.83/-12.88	-14.01/-15.05	-17.63/-19.08
Θ(165°)	-18.3/-18.18	-18.79/-19.41	-16.65/-14.89	-14.1/-13.32	-14.15/-16.28	-15.59/-15.56	-13.98/-11.29	-11.69/-11.44	-9.53/-9.84	-9.96/-9.84	-11.55/-12.73	-10.96/-9.32	-8.16/-8.72	-8.39/-9.91	-12.41/-15.19	-15.85/-15.08	-14.63/-17.32	-17.77/-17.96	-18.55/-17.14	-18.36/-17.42	-18.77/-18.57	-17.49/-18.8	-18.52/-18.39	-18.08/-18.94
Θ(172.5°)	-15.12/-16.35	-17.9/-18.99	-18.61/-17.93	-16.8/-15.03	-12.54/-11.75	-11.35/-10.01	-9.05/-8.59	-8.19/-7.46	-6.87/-7.71	-8.13/-8.89	-11.31/-11.69	-12/-14.23	-11.87/-12.23	-13.13/-13.54	-14.78/-18.16	-19.35/-15.97	-16.49/-18.77	-18.4/-17.47	-17.74/-17.17	-18.57/-19.19	-17.25/-17.99	-18.82/-18.53	-18.61/-16.3	
Θ(180°)	-15.02/-16.74	-18.03/-19.43	-18.99/-19.14	-18.85/-18.84	-18.52/-18.35	-17.95/-17.42	-18.79/-17.43	-18.35/-18.32	-17.85/-18.73	-17.2/-17.79	-19.11/-15.94	-18.9/-18.16	-17.69/-18.03	-17.69/-17.48	-17.34/-18.95	-17.83/-19.24	-18.16/-17.39	-18.38/-19	-18.91/-17.05	-16.31/-16.28	-17.46/-18.45	-15.48/-15.27	-17.35/-16.64	-14.79/-14.07
Freq(Hz)	5.3GPol	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	0.84/0.96	0.85/0.85	0.99/1	0.38/-0.6	-1.38/-2.85	-4.36/-5.03	-8.27/-12.38	-14.75/-17.8	-12.23/-11.08	-6.5/-4.39	-3.2/-1.27	-0.68/-1.02	-0.59/0.21	0.7/0.78	0.38/-0.18	-0.44/-0.66	-1.53/-2.87	-4.04/-5.63	-8.19/-9.8	-11.01/-11.21	-8.98/-6.06	-4.55/-3.7	-2.45/-1.24	-0.53/-0.25
Θ(7.5°)	-0.030/39	0.23/27	0.39/33	-0.38/-1.56	-2.31/-3	-4.69/-5.24	-6.54/-6.93	-8.07/-8.69	-7.47/-6.06	-5.26/-2.69	-1.94/-0.4	0.87/0.7	0.08/0.24	0.42/0.21	-0.15/-0.6	-0.94/-1.18	-1.83/-3.42	-5.4/-7.35	-10.53/-15.59	-19.16/-18.89	-13.88/-10.58	-7.13/-5.33	-4.56/-2.81	-1.56/-0.85
Θ(15°)	-0.82/0.15	-0.44/0.55	0.37/-0.33	-1.46/-2.72	-3.93/-5.06	-6.48/-8.38	-8.14/-8.69	-6.84/-4.92	-6.33/-4.46	-3.33/-2.59	-1.62/-0.8	0.19/0.16	-0.07/0.33	0.06/-0.68	-1.81/-3.39	-5.14/-6.24	-6.9/-9.32	-14.22/-18.69	-18.58/-15.35	-12.69/-10.59	-5.83/-4.94	-4.07/-2.7	-1.99/-1.77	
Θ(22.5°)	-0.84/-0.12	0.21/0.5	0.47/0.05	-0.57/-1.06	-2.25/-4.16	-6.62/-10.42	-15.44/-13.33	-7.9/-4.31	-3.06/-2.9	-3.6/-3.7	-2.11/-1.39	-0.89/-0.69	-0.7/-1.21	-2.28/-3.96	-5.83/-7.4	-9.35/-12.08	-15.46/-17.97	-19.17/-18.48	-18.08/-15.32	-12.87/-12.05	-10.11/-8.27	-6.4/-5.32	-5.66/-4.18	-2.71/-1.77
Θ(30°)	-0.97/0.03	0.22/0.61	1.26/1.51	1.24/0.64	-0.24/-0.82	-1.97/-4.55	-5.72/-14.37	-17.58/-11.12	-5.62/-3.31	-3.66/-4.46	-4.4/-3.49	-2.65/-1.93	-2.77/-4.47	-4.29/-4.97	-6.15/-7.19	-8.44/-9.97	-11.49/-12.36	-13.57/-18.81	-17.48/-18.72	-17.57/-17.13	-15.97/-14.98	-10.88/-6.33	-4.59/-5.33	-2.36/-2.17
Θ(37.5°)	-2.98/-1.45	-0.18/0.7	1.69/2.14	2.46/2.1	1.41/0.72	-0.68/-2.28	-3.74/-6.08	-10.46/-9.94	-7.75/-5.01	-4.06/-5.02	-6.24/-6.7	-3.33/-3.02	-4.51/-5.73	-5.65/-7.11	-6.09/-5.65	-6.67/-15.59	-18.39/-18.16	-18.32/-18.08	-18.84/-17.98	-17.19/-17.7	-18.81/-16.68	-10.53/-6.67	-4.08/-4.14	-3.62/-3.37
Θ(45°)	-5.37/-3.95	-1.57/-0.24	0.81/96	3.02/6.7	1.26/-0.96	-2.83/-4.39	-5.87/-6.8	-7.31/-8.74	-8.2/-6.61	-6.3/-4.51	-6.12/-5.12	-3.99/-3.03	-4.51/-7.68	-7.39/-6.01	-6.14/-8.26	-10.23/-12.63	-16.51/-18.57	-15.27/-11.79	-12.47/-15.25	-18.75/-19.15	-18.11/-19.08	-13.37/-8.03	-6.07/-6.59	-6.39/-5.82
Θ(52.5°)	-6.18/-5.48	-3.67/-1.52	0.32/-1.28	1.63/1.21	0.31/-1.5	-3.43/-5.22	-6.93/-8.15	-8.33/-7.9	-8.7/-3.99	-6.43/-8.49	-6.31/-5.16	-5.11/-2.97	-5.48/-8.42	-6.79/-8.89	-8.67/-7.13	-8.34/-12.02	-18.7/-14.55	-18.55/-18.05	-18.05/-17.96	-16.62/-12.56	-11.69/-18.15	-12.25/-10.99	-9.35/-9.91	-9.48/-8.35
Θ(60°)	-5.94/-4.04	-4.2/-1.77	-0.36/-0.02	0.030/48	-0.39/-1.71	-2.18/-2.6	-4.06/-5.67	-7.01/-7.99	-8.79/-8.56	-6.72/-5.65	-5.5/-6.75	-6.99/-7.38	-3.74/-11.87	-8.11/-7.44	-12.12/-10.51	-6.89/-6.2	-9.73/-14.15	-18.18/-12.85	-11.77/-13.56	-18/-18.18	-15.13/-13.86	-14.72/-14.87	-12.16/-7.88	-7.14/-8.56
Θ(67.5°)	-5.16/-3.87	-2.36/-2.44	-1.16/-1.21	-1.12/-0.74	-1.1/-0.45	-1.05/-2.28	-4.38/-5.2	-6.07/-8.29	-6.35/-6.26	-4.82/-5	-6.73/-8.15	-1.79/-6.94	-6.41/-9.01	-10.62/-11.86	-1.11/-9.08	-7.15/-6.65	-8.78/-15.02	-12.13/-8.04	-8.76/-14.86	-18.24/-17.47	-18.22/-17.88	-17.99/-16.35	-12.01/-7.44	-4.25/-5.19
Θ(75°)	-5.78/-4.3	-1																						



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

Θ(67.5°)	-14.39/-10.49	-10.04/-14.71	-18.01/-11.08	-4.31/-1.67	-1.74/-0.34	2.53/4	4.84/5	4.45/3.05	2.32/47	1.47/-1.21	-1.92/-0.54	-7.63/-11.56	-14.26/-13.35	-16.52/-19.08	-17.89/-16.11	-19.21/-18.83	-14.72/-9.8	-17.29/-13.98	-10.85/-10.99	-18.06/-17.66	-15.35/-15.84	-18.75/-18.58	-19/-11.74	-16.16/-9.62
Θ(75°)	-9.63/-9.43	-9.76/-10.88	-12.9/-13.34	-6.66/-2.92	-2.37/-0.71	1.45/3.12	4.61/4.92	4.46/3.21	2.31/1.89	1.25/-0.98	-2.44/-3.79	-7.95/-9.24	-12.9/-11.68	-16.23/-15.14	-17.94/-19.14	-19/-17.61	-11.86/-12.68	-13.73/-6.76	-11.07/-10.7	-11.18/-9.89	-12.55/-17.94	-16.09/-14.54	-13.17/-10.59	-10.33/-10.4
Θ(82.5°)	-8.7/-8.45	-6.66/-9.34	-10.08/-12.99	-7.69/-3.59	-2.55/-0.82	0.93/3.34	3.98/4.17	3.99/2.59	1.78/1.83	1.35/-1.75	-1.52/-4.49	-8.96/-7.81	-12.95/-8.32	-17.62/-13.55	-17.52/-17.81	-15.31/-18.05	-12.32/-13.16	-9.64/-5.66	-14.62/-5.99	-7.23/-9.62	-9.45/-18.54	-11.65/-8.63	-9.25/-8.6	
Θ(90°)	-7.85/-6.98	-6/-7.63	-8.12/-14.9	-11.74/-4.31	-2.71/-1.34	0.34/2.8	3.52/3.43	3.26/2.43	1.33/1.19	0.29/-0.46	-2.32/-2.8	-9.81/-5.94	-12.74/-7.38	-15.35/-14.87	-19.25/-13.28	-17.69/-18.09	-10.15/-8.72	9.98/-4.91	-14.52/-6.05	-7.58/-10.95	-10.29/-19.1	-15.29/-11.36	-11.08/-7.72	-9.58/-7.61
Θ(97.5°)	-5.77/-7.24	-4.86/-6.93	-7.28/-14.51	-12.19/-4.91	-2.71/-1.28	-0.16/2.43	2.55/-1.99	2.08/1.87	0.81/1.18	0.16/-1.62	-3.28/-2.61	-8.28/-6.37	-12.44/-8.46	-11.41/-8.64	-11.31/-12.84	-11.39/-9.24	-19.68/-10.78	-8.92/-9.24	-18.21/-6.01	-6.58/-15.91	-15.77/-18.76	-14.57/-10.05	-10.58/-9.39	-8.08/-8.11
Θ(105°)	-6.47/-5.57	-5.34/-6.58	-8.03/-14.17	-13.59/-4.95	-2.4/-6.55	-0.77/1.77	2.42/1.9	1.32/0.56	0.73/0.53	-0.04/-0.92	-2.97/-2.97	-7.2/-4.72	-14.99/-9.83	-11.11/-11.54	-16.91/-9.34	-11.66/-7.81	-17.52/-9.04	-6.25/-4.73	-19.39/-6.96	-10.01/-10.44	-11.23/-16.94	-17.54/-8.66	-12.37/-1.74	-9.47/-6.11
Θ(112.5°)	-5.53/-6.29	-6.61/-6.04	-9.4/-13.06	-9.96/-5.05	-3/-3	-0.61/1.33	1.56/0.92	-0.49/-0.16	-0.25/-0.52	-1.68/-2.65	-2.79/-3.53	-7.5/-9.42	-7.11/-18.08	-12.3/-10.29	-9.34/-10.98	-10.14/-8.45	-14.51/-11.64	-7.86/-5.73	-15.83/-7	-12.14/-10.77	-16.41/-16.59	-12.8/-17.38	-13.7/-9.34	-9.15/-7.06
Θ(120°)	-6.13/-8.59	-5.1/-9.32	-10.69/-12.3	-8.34/-5.12	-3.5/-4.07	-3/-0.01	0.37/-0.42	-0.81/-1.38	-0.62/-1.23	-2.58/-3.89	-4.04/-4.66	-8.48/-11.19	-8.72/-12.95	-16.21/-7.27	-14.3/-18.26	-7.38/-7.39	-12.08/-7.81	-10.54/-7.53	-14.44/-13.68	-18.88/-11.16	-14.45/-10.2	-17.87/-15.39	-17.37/-8.82	-11.48/-7.1
Θ(127.5°)	-7.63/-8.91	-11.4/-10.2	-11.25/-9.96	-7.36/-4.69	-3.79/-3.7	-4.03/-2.05	-0.53/-0.1	-1.17/-1.94	-2.29/-1.71	-2.69/-5	-7.01/-5.51	-5.03/-17.91	-6.73/-8.11	-14.4/-7.86	-16.12/-16.23	-14.22/-17.9	-19.17/-16.93	-15.95/-12.63	-17.98/-14.78	-18.5/-18.66	-17.42/-14.19	-18.77/-15.78	-18.89/-11.87	-14.56/-10.52
Θ(135°)	-12.02/-17.37	-15/-10.33	-9.44/-11.23	-6.43/-4.59	-5.81/-6.35	-3.94/-2.55	-1.49/-1.67	-2.17/-2.43	-2.76/-2.98	-3.68/-4.24	-4.52/-6.08	-10.45/-4.83	-4.69/-18.64	-6.39/-6.61	-15.57/-14.39	-19.13/-16.06	-16.61/-17.68	-17.87/-15.59	-18.61/-16.34	-12.69/-18.61	-18.63/-15.43	-15.65/-16.46	-17.75/-17.51	-13.72/-15.09
Θ(142.5°)	-12.3/-12.97	-18.25/-11.2	-4.85/-4.53	-6.93/-6.6	-8.88/-7.14	-4.78/-3.74	-4.53/-3.64	-4.01/-3.47	-2.56/-2.78	-4.65/-6.65	-5.61/-3.91	-2.46/-4.5	-12.51/-6.39	-4.43/-7.85	-18.83/-18.47	-14.36/-13.38	-12.91/-10.43	-13.26/-16.8	-13.64/-14.89	-14.16/-13.57	-18.88/-18.95	-17.51/-15.47	-11.99/-12.18	-14.1/-16.99
Θ(150°)	-14.99/-12.7	-9.04/-8.54	-9.68/-9.71	-8.83/-8.61	-9.64/-9.78	-7.98/-5.93	-4.52/-4.14	-4.37/-4.3	-4.99/-5.51	-6.36/-6.71	-6.11/-4.67	-7.17/-5.07	-7.78/-7.96	-8.5/-16.1	-18.62/-13.32	-11.2/-9.44	-9.17/-14.52	-18.38/-18.83	-16.68/-13.04	-8.65/-8.3	-10.88/-12.74	-12.52/-13.06	-15.42/-17.65	
Θ(157.5°)	-15.59/-18.78	-13.27/-9.09	-8.01/-9.01	-12.59/-16.06	-14.39/-10.07	-7.63/-6.62	-6.76/-7.03	-6.98/-7.66	-6.81/-6.55	-6.1/-5.52	-6.8/-11.51	-18.82/-12.16	-7.17/-6.8	-9.85/-17.01	-17.86/-18.93	-14.76/-13.74	-14.09/-18.12	-18.35/-18.89	-14.92/-15.78	-17.29/-13.23	-9.94/-8.7	-9.43/-9.6	-10.17/-12.62	-15.5/-15.25
Θ(165°)	-15.65/-14.58	-14.51/-15.04	-18.81/-18.1	-17.57/-16.09	-13.2/-11.5	-10.31/-10.25	-9.29/-8.49	-8.79/-7.17	-7.79/-7.98	-7.84/-8.6	-7.64/-7.75	-7.44/-7.33	-7.71/-9.31	-13.29/-18.84	-12.98/-12.79	-12.86/-14.92	-18.49/-18.57	-18.15/-18.53	-18.14/-18.05	-19.35/-15.4	-15.28/-13.4	-11.99/-12.18	-14.1/-16.99	-13.15/-14.71
Θ(172.5°)	-12.56/-11.79	-9.63/-8.18	-8.24/-9.38	-9.38/-10.94	-14.24/-16.18	-17.23/-16.76	-13.75/-12.64	-10.72/-10.68	-10.16/-9.16	-8.87/-7.52	-9.27/-10.76	-11.94/-17.41	-18.54/-19.28	-19.46/-17.08	-14.17/-12.18	-11.9/-13.3	-15.96/-17.76	-16.54/-15.7	-13.66/-12.42	-13.57/-15.45	-16.17/-14.87	-15.51/-14.13	-12.27/-11.31	-10.42/-11.23
Θ(180°)	-7.59/-8.23	-8.29/-8.2	-8.97/-9.37	-10.2/-12.27	-13.34/-12.57	-12.06/-11.49	-10.35/-10.38	-9.91/-8.41	-7.94/-7.84	-7.55/-8.8	-8.92/-10.27	-13.34/-12.67	-11.9/-13.33	-13.95/-15.89	-17.3/-17.51	-18.2/-18.23	-19/-17.28	-18.27/-18.07	-18.55/-18.23	-15.4/-13.29	-11.78/-10.05	-9.16/-8.18	-8.04/-7.86	-7.02/-6.76
Freq(Hz)	5.785GPol.	ThetaAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)°Φ(7.5°)	Φ(15°)°Φ(22.5°)	Φ(30°)°Φ(37.5°)	Φ(45°)°Φ(52.5°)	Φ(60°)°Φ(67.5°)	Φ(75°)°Φ(82.5°)	Φ(90°)°Φ(97.5°)	Φ(105°)°Φ(112.5°)	Φ(120°)°Φ(127.5°)	Φ(135°)°Φ(142.5°)	Φ(150°)°Φ(157.5°)	Φ(165°)°Φ(172.5°)	Φ(180°)°Φ(187.5°)	Φ(195°)°Φ(202.5°)	Φ(210°)°Φ(217.5°)	Φ(225°)°Φ(232.5°)	Φ(240°)°Φ(247.5°)	Φ(255°)°Φ(262.5°)	Φ(270°)°Φ(277.5°)	Φ(285°)°Φ(292.5°)	Φ(300°)°Φ(307.5°)	Φ(315°)°Φ(322.5°)	Φ(330°)°Φ(337.5°)	Φ(345°)°Φ(352.5°)
Θ(0°)	1.24/1.38	1.29/1.06	0.86/0.57	0.14/-0.32	-1.06/-2.05	-2.75/-4.21	-5.77/-6.83	-8.69/-8.03	-6.12/-5.82	-3.62/-1.84	-1.29/-0.04	0.81/0.93	1.35/2	2.31/2.15	1.72/0.8	-0.14/-0.74	-1.96/-3.47	-4.71/-6.68	-9.73/-11.65	-10.24/-7.89	-6.05/-4.01	-2.67/-1.48	-0.53/-0.18	0.28/0.95
Θ(7.5°)	1.91/1.91	1.62/1	0.36/-0.46	-1.79/-2.92	-4.19/-6.36	-9.02/-10.15	-11.02/-10.15	-6.73/-6	-4.92/-3.46	-2.57/-1.42	-1.27/-1.33	-0.41/0.16	0.50/0.78	1.02/1.31	1.23/0.72	0.09/-0.44	-1/-1.66	-2.52/-3.3	-4.82/-8.05	-6.17/-6.11	-4.98/-4.25	-3.16/-1.94	-0.64/-0.23	0.92/1.6
Θ(15°)	0.89/1.2	1.08/0.26	-0.5/-1.18	-1.91/-2.95	-3.94/-4.27	-3.42/-3	-2.07/-2.25	-2.04/-1.98	-2.24/-1.27	-2.57/-3.42	-3.92/-4.51	-3.4/-2.68	-2.16/-1.78	-2.23/-1.2	-9.17/-5.68	-7.52/-10.18	-14.87/-17.88	-14.96/-17.99	-8.85/-7.38	-5.25/-2.92	-2.6/-1.68	-0.80/-2.28		
Θ(22.5°)	0.11/0.19	0.16/-0.04	0.07/-0.45	-1.63/-3.44	-4.35/-3.99	-4.34/-4.92	-5.26/-5.03	-4.64/-4.6	-4.73/-4.7	-5.15/-6.59	-6.14/-5.77	-6.38/-8.68	-8.18/-7.08	-6.38/-5.32	-4.17/-3.81	-4.04/-4.5	-5.47/-5.28	-5.66/-6.83	-9.92/-16.18	-18.33/-9.77	-5.76/-3.8	-3.01/-2.03	-1.84/-1.18	-0.12/0
Θ(30°)	0.80/57	0.76/0.77	0.80/34	-1.29/-3.6	-4.84/-5.82	-6.05/-4.99	-4.33/-3.06	-2.65/-3.43	-5.68/-6.73	-7.94/-5.66	-7.81/-5.46	-5.15/-6.04	-4.87/-5.24	-8.46/-11.31	-4.52/-3.85	-3.96/-6.86	-6.53/-8.74	-11.81/-14.64	-16.31/-18.66	-11.39/-5.83	-2.84/-2.14	-2.15/-2.03	-1.02/0.4	
Θ(37.5°)	0.06/-0.04	-0.32/0.95	2.06/1.4	-0.7/-2.91	-4.49/-5.07	-5.65/-4.21	-2.54/-1.61	-2.02/-3.47	-5.26/-6.84	-5.86/-3.59	-2.11/-3.54	-3.89/-1.62	-1.94/-5.37	-13.35/-11.31	-6.71/-5.55	-5.56/-7.29	-9.31/-11.86	-13.4/-12.28	-12.25/-11.49	-12.83/-18.68	-18.83/-16.6	-11.84/-7.08	-4.5/-4.24	-2.36/-0.69
Θ(45°)	-3.33/-1.72	-1.79/-0.65	0.46/1.03	0.02/-1.3	-2.45/-5.11	-6.79/-6.82	-4.18/-2.66	-2.82/-2.26	-6.43/-4.06	-2.51/-1.55	-1.12/-1.52	-1.92/-1.4	-3.95/-6.06	-6.55/-9.78	-18.09/-14.81	-9.35/-8.34	-8.48/-8.96	-10.27/-12.67	-18.19/-18	-18.68/-16.66	-19.03/-13.57	-8.86/-7.33	-7.64/-6.1	
Θ(52.5°)	-10.81/-5.93	-3.61/-3.51	-2.27/-0.02	0.89/-0.49	-3.53/-5.86	-7/-6.23	-3.09/-2.79	-5.5/-6.3	-5.24/-3.88	-1.94/-1.87	-0.6/-2.37	-3.66/-10.52	-8.77/-10.7	-18.19/-11.89	-6.83/-5.74	-6.53/-7.98	-15.55/-18.15	-18.55/-18.04	-14.78/-14.81	-13.17/-19.08	-12.89/-10.16	-5.76/-6.4	-8.79/-10.26	
Θ(60°)	-8.69/-11.49	-5.87/-5.11	-4.84/-2.06	-0.99/0.07	-1.74/-6.36	-7.55/-7.37	-1.56/-1.74	-4.7/-6.24	-5.1/-3.96	-2.1/-2.05	-2.19/-1.42	-6.46/-5.52	-4.68/-14.45	-9.67/-10.38	-6.49/-5.01	-5.48/-8.61	-15.51/-12.66	-9.7/-10.99	-12.68/-8.52	-9.78/-10.64	-12.87/-11.1	-6.89/-7.23	-7.85/-6.51	
Θ(67.5°)	-4.86/-6.47	-4.24/-5	-5.72/-3.64	-2.05/-0.32	-1.33/-5.47	-1.71/-5.38	-3.45/-2.45	-3.25/-5.26	-4.57/-3.14	-3.34/-5.7	-6.28/-6.97	-7.77/-5.7	-6.67/-15	-18.63/-18.52	-16.14/-10.07	-6.49/-3.89	-6.6/-12.09	-13.12/-8.68	-6.96/-9.84	-13.33/-8.47	-8.14/-8.8	-10.95/-12.97	-14.12/-10.86	-7.72/-3.62
Θ(75°)	-2.76/-3.02	-4.65/-2.67	-6.72/-3.8	-2.32/-1.03	-2.59/-5.23	-5.43/-9.1	-7.09/-2.66	-2.45/-4.58	-3.33/-3.98	-4.31/-8.01	-8.95/-8.76	-12.65/-10.61	-7.24/-17.43	-17.14/-18.05	-17.79/-9.54	-7.94/-13.3	-9.21/-4.13	-11.71/-9.76	-7.23/-8.11	-13.25/-5.4	-6.05/-10.59	-12.52/-15.58	-14.25/-11.53	-6.95/-4.23
Θ(82.5°)	-2.35/-2.85	-3.93/-3.1	-6.33/-3.66	-3.52/-1.41	-1.89/-7.22	-7.75/-9.73	-8.97/-2.96	-3.27/-6.14	-4.94/-5.44	-5.25/-9.1	-12/-10.5	-14.54/-11.42	-9.89/-14.41	-12.88/-16.5	-18.51/-13.78	-7.84/-6.53	-11.31/-11.86	-14.72/-15	-10.99/-19.12	-7.96/-2.56	-5/-14.99	-16.05/-15.51	-13.37/-7.07	-6.33/-7.21
Θ(90°)	-3.14/-3.3	-4.82/-3.06	-7.77/-3.77	-4.45/-2.55	-1.65/-6.05	-14.26/-11.84	-9.02/-5.6	-5.15/-7.71	-8.79/-7.33	-7.51/-7.46	-9.94/-10.22	-16.35/-9.62	-16.54/-13.76	-9.59/-13.11	-17.52/-12.36	-9.29/-9.15	-11.02/-13.22	-17.15/-14.12	-8.94/-2.59	-6.44/-17.35	-16.07/-13.22	-18.15/-7.32	-10.37/-9.71	
Θ(97.5°)	-7.05/-7.83	-5.84/-4.98	-7.95/-6.1	-5.83/-3.16	-1.94/-7.88	-17.87/-11.03	-13.69/-7.57	-7.19/-10.33	-10.12/-10.99	-13.61/-12.5	-11.46/-6.83	-14.84/-9.44	-10.86/-19.31	-9.24/-10.58	-18.22/-17.12	-17.51/-14.51	-10.98/-13.62	-15.54/-9.93	-7.23/-8.82	-7.15/-6.11	-8.78/-14.4	-9.41/-12.16	-18.28/-8.16	-7.79/-13.15
Θ(105°)	-11.94/-13.8	-9.81/-6.38	-11.24/-8.49	-6.86/-4.86	-3.84/-7.5	-18.34/-13.59	-11.37/-11.68	-10.58/-9.63	-7.79/-12.12	-10.18/-11.37	-10.38/-9.47	-7.93/-11.43	-9.32/-10.43	-11.01/-11.91	-17.75/-17.87	-15.63/-10.49	-11.19/-8.92	-13.25/-8.08	-6.83/-8.52	-13.03/-10.57	-17.26/-8.48	-10.04/-17.47	-15.57/-7.47	-6.76/-13.12
Θ(120°)	-12.47/-19.13	-17.8/-17.27	-17.61/-11.87	-8.45/-10.32	-9.59/-8.94	-12.04/-17.3	-14.27/-17.94	-18.39/-13.69	-9.94/-10.67	-13.94/-17.33	-13.49/-9.54	-5.62/-7.84	-10.52/-9.37	-12.52/-10.12	-18.98/-11.08	-5/-7	-18.97/-13.94	-14.11/-7.95	-9.24/-15.29	-10.2/-13.79	-11.09/-10.28	-14.74/-11.79	-7.22/-7.06	-8.33/-10.45
Θ(127.5°)	-14.43/-12.65	-18.72/-16.78	-19.1/-15.57	-10.27/-7.81	-8.81/-13.2	-16.81/-1																		



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

Θ (112.5°)	-18.2/-18.16	-16.17/-11.89	-11.86/-8.59	-7.32/-6.76	-5.4/-6.16	-5.47/-5.17	-5.68/-5.02	-4.14/-4.62	-6.69/-6.95	-7.83/-15.34	-6.77/-10.89	-14.97/-12.45	-12.73/-17.59	-19/-18.98	-16.93/-10.2	-8.17/-8.56	-12.8/-10.88	-10.12/-11.23	-8.1/-9.69	-18.55/-14.1	-11.6/-17.86	-14.25/-17.85	-17.56/-15.44	-15.44/-17.92
Θ (120°)	-15.57/-16.48	-19.41/-15.8	-14.7/-11.19	-11.17/-9.05	-8.02/-7.84	-9.47/-8.16	-7.75/-5.71	-5.18/-5.99	-7.98/-14.04	-9.63/-10.35	-16.23/-18.96	-18.72/-18.26	-17.54/-18.36	-18.71/-13.78	-13.9/-14.56	-7.39/-12.53	-14.82/-8.31	-9.13/-12.83	-11.57/-10.01	-10.08/-12.49	-12.96/-17.94	-9.37/-12.58	-11.57/-11.2	-13.61/-17.76
Θ (127.5°)	-16.92/-18.78	-17.57/-18.67	-19.17/-17.5	-12.64/-13.76	-12.07/-9.61	-8.89/-10.81	-10.47/-8.3	-7.05/-6.61	-7.79/-12.61	-19.04/-18.68	-15.24/-15.2	-18.37/-18.92	-17.91/-18.92	-17.12/-15.39	-11.1/-9.15	-11.09/-11.62	-18.78/-10.5	-17.93/-18.11	-16.01/-16.38	-10.95/-12.36	-10.57/-9.74	-10.57/-15.43		
Θ (135°)	-14.82/-17.25	-17.92/-17.49	-18.69/-17.77	-17.42/-13.84	-11.87/-11.73	-12.35/-10.75	-9.61/-9.3	-9.96/-8	-6.95/-10.53	-17.66/-17.86	-18/-16.08	-10.76/-10.21	-18.2/-19.27	-13.6/-12.12	-9.04/-9.17	-11.02/-19.01	-12.76/-11.07	-18.74/-16.11	-17.32/-14.74	-9.44/-6.18	-8.05/-13.38	-9.86/-10.5	-9.06/-8.98	-9.99/-13.21
Θ (142.5°)	-15.32/-17.9	-17.77/-18.65	-18.76/-19.21	-18.18/-18.64	-15.26/-13.93	-14.51/-14.73	-12.3/-10.97	-9.81/-9.38	-10.33/-13.18	-17.26/-16.53	-15.99/-13.85	-13.25/-17.81	-14.48/-10.17	-9.86/-11.26	-13.98/-11.4	-12.96/-12.99	-8.91/-9.45	-12.91/-14.06	-19/-14.1	-8.52/-6.2	-7.84/-8.11	-6.81/-7.84	-10/-9.44	-9.68/-10.57
Θ (150°)	-13.34/-18.99	-18.91/-18.51	-19.23/-17.31	-18.17/-18.2	-15.87/-13.06	-14.4/-16.62	-14.42/-11.38	-8.82/-6.73	-7.99/-12.37	-14.61/-14.89	-15.28/-14.67	-15.1/-15.2	-13.75/-18.4	-18.85/-19.67	-18.98/-18.94	-17.75/-18.63	-15.65/-15.02	-12.79/-8.86	-7.22/-7.56	-7.82/-7.1	-7.12/-7.35	-8.44/-10.22	-11.77/-11.18	
Θ (157.5°)	-13.54/-14.62	-15.68/-17.96	-19.02/-18.62	-18.27/-17.96	-18.75/-18.79	-18.65/-19.08	-18.6/-18.6	-13.53/-13.12	-14.38/-14.17	-15.38/-15.66	-14.45/-15.41	-18.13/-18.09	-18.52/-17.99	-18.61/-18.78	-18.96/-18.32	-18.67/-18.4	-16.98/-12.74	-13.96/-18.44	-16.58/-12.23	-8.88/-8.43	-7.9/-8.44	-7.2/-7.3	-8.8/-11	-14/-13.06
Θ (165°)	-12.52/-14.98	-18.46/-18.39	-18.33/-15.84	-14.2/-15.52	-17.59/-18.15	-16.68/-16.36	-19.15/-18.2	-18.85/-19.15	-17.3/-18.6	-17.94/-18	-18.65/-19.7	-17.88/-19.33	-17.13/-14.58	-18.49/-19.17	-18.93/-18.52	-18.61/-17.67	-18.62/-16.88	-18.35/-17.75	-18.4/-16.16	-14.86/-15.15	-13.36/-11.45	-8.71/-7.94	-8.79/-10.38	-11.74/-11.98
Θ (172.5°)	-9.52/-10.66	-12.06/-13.05	-14.27/-16.22	-17.32/-18.48	-18.88/-18.95	-19.04/-17.64	-18.84/-18.01	-18.32/-19.37	-17.65/-17.95	-16.55/-14.52	-14.82/-16.87	-17.79/-18.46	-19.13/-17.53	-18.74/-18.41	-18.76/-18.16	-17.34/-19.05	-18.77/-18.48	-19.23/-17.3	-18.93/-18.22	-19.35/-15.33	-13.11/-11.95	-10.61/-9.45	-9.76/-10.73	-10.3/-9.25
Θ (180°)	-11.55/-12.3	-12.56/-12.77	-14.19/-16.6	-17.46/-18.17	-18.44/-18.54	-17.79/-17.73	-18.03/-19.39	-18.1/-15.34	-13.27/-12.26	-13.35/-15.95	-18.02/-17.6	-18.05/-18.03	-17.76/-19.18	-18.38/-17.92	-19.2/-18.34	-18.35/-19.13	-18.36/-18.36	-18.62/-18.15	-18.29/-17.19	-16.91/-14.79	-11.77/-11.13	-11.99/-11.46	-11.15/-12.29	-12.25/-11.38
Freq(Hz)	5.2GPa	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ (0°)	0.41/-0.31	-1.37/-2.62	-3.66/-4.83	-6.91/-10.97	-16.07/-16.74	-12.65/-8.07	-5.4/-3.7	-2.45/-1.06	0.42/-1.13	0.87/-0.79	1.51/-98	1.87/-1.43	0.98/-0.42	-0.4/-1.94	-4.73/-7.92	-9.22/-14.2	-19.19/-14.14	-9.57/-6.16	-4.52/-2.57	-1.29/-0.86	0.07/-0.95	1.22/-1.38	1.51/-1.4	1.18/-0.89
Θ (7.5°)	-0.14/-0.98	-2.32/-4.23	-6.2/-8.49	-11.77/-15.75	-14.98/-11.44	-8.44/-5.63	-3.95/-2.64	-1.34/-0.53	0.11/-1.1	1.61/-31	1.01/-133	1.79/-81	1.44/-80.7	0.07/-1.05	-3.02/-5.56	-6.87/-8.34	-15.12/-19.3	-11.68/-8.53	-5.37/-3.41	-1.88/-0.97	-0.52/-0.44	1.07/-1.13	1.24/-1.28	0.94/-0.38
Θ (15°)	-0.79/-1.97	-3.93/-6.17	-8.66/-12.76	-16.24/-18.26	-11.91/-7.82	-5.21/-3.57	-2.51/-1.38	-0.7/-0.43	0.21/-1.04	1.32/-13	1.26/-1.56	1.74/-61	1.34/-12	0.91/-0.1	-6.32/-9.29	-4.7/-6.1	-10.39/-18.69	-15.27/-10.75	-6.9/-4.21	-2.32/-1.2	-0.8/-0.09	0.67/-0.62	0.63/-0.6	0.09/-0.36
Θ (22.5°)	-1.44/-2.78	-4.9/-6.51	-8.61/-12.69	-15.93/-11.97	-8.29/-5.71	-4.22/-3.01	-1.77/-0.94	-0.33/-0.01	0.02/-0.54	0.68/-0.35	-0.14/-0.7	1.34/-0.5	0.67/-0.49	-0.08/-0.9	-2.04/-3.94	-5.42/-6.65	-9.83/-17.47	-15.72/-12.05	-8.6/-5.81	-4.18/-2.71	-1.75/-0.59	0.43/-0.74	1.01/-0.72	-0.37/-1
Θ (30°)	-3.05/-2.36	-3.96/-14.3	-6.09/-8.25	-10.37/-10.53	-8.17/-5.03	-2.83/-1.16	0.04/-1.4	1.15/-0.78	1.01/-0.5	0.34/-0.07	-0.98/-0.6	1.69/-183	1.24/-13	1.4/-3.16	-5.35/-8.54	-8.95/-153	-9.77/-18.66	-16.28/-11.4	-8.21/-8.4	-3.2/-2.66	-2.36/-2.01	-0.68/-0.14	0.56/-0.8	0.28/-0.62
Θ (37.5°)	-2.11/-1.97	-2.88/-4.42	-4.84/-6.44	-8.46/-10.44	-5.07/-3.04	-1.3/-0.17	0.53/-1.4	1.84/-1.38	0.95/-0.59	0.05/-0.12	0.19/-83	2.852/-79	1.74/-0.91	-0.18/-1.95	-5.25/-11.3	-16.82/-14.26	-14.32/-18.07	-14.17/-9.98	-9.88/-7.45	-4.06/-2.21	-1.42/-2.06	-2.1/-0.39	0.53/-0.12	-0.82/-1.29
Θ (45°)	-4.26/-4.41	-4.48/-3.97	-5.11/-6.4	-7.94/-8.5	-6.04/-3.84	-1.62/-0.13	0.52/-0.33	0.11/-0.2	-0.86/-0.09	-0.01/-0.33	1.04/-2.28	3.423.5	3.2/88	2.34/-0.41	-2.82/-7.88	-13.42/-13.9	-13.43/-17.58	-15.08/-12.37	-12.31/-9.78	-6.04/-3.23	-2.05/-1.87	-2.36/-1.42	-0.31/-1	-2.36/-4.04
Θ (52.5°)	-10.16/-6.97	-9.23/-11.7	-7.36/-9.66	-10.06/-9.84	-8.43/-4.31	-1.8/-0.18	0.94/-0.8	-0.36/-1.72	-3.24/-2.6	-0.77/-0.73	1.03/-16	3.33/-0.22	2.48/-0.7	2.73/-1.55	-1.29/-5.06	-14.78/-18.72	-14.07/-15.11	-12.14/-8.99	-8.16/-8.74	-7.45/-4.83	-2.41/-2.38	-2.92/-2.27	-2.13/-0.33	-6.54/-8.29
Θ (60°)	-17.59/-18.1	-14.51/-14.82	-15.37/-12.52	-13.55/-15.13	-10.61/-5.21	-1.94/-0.51	1.94/-1.82	0.39/-0.24	-6.74/-3.27	-2.56/-1.16	0.05/-0.16	2.34/-0.79	0.68/-1.89	2.36/-0.6	-2.85/-7.95	-18.21/-16.8	-17.74/-12.32	-9.09/-8.77	-9.21/-10.22	-11.94/-8.45	-4.1/-2.4	-2.85/-3.48	-4.17/-6.96	-11.66/-17.9
Θ (67.5°)	-10.63/-12.56	-10.21/-11.4	-10.85/-16.34	-17.37/-14.93	-7.35/-3.16	-0.91/-0.3	1.41/-0.24	0.42/-3.13	-6.82/-6.58	-3.5/-3.52	-2.32/-1.49	-1.09/-1.17	-0.76/-0.66	-0.4/-2.42	-4.95/-10.81	-17.61/-17.66	-15.33/-13.3	-7.24/-5.95	-8.33/-13.49	-16.18/-10.99	-5.7/-4.55	-5.25/-6.28	-7.51/-10.06	-11.14/-13
Θ (75°)	-7.12/-7.34	-5.24/-6.75	-7.25/-11.01	-12.03/-8.45	-5.69/-4.05	-2.7/-1.75	-0.06/-0.58	-0.81/-2.71	-7.34/-7.15	-6.02/-5.23	-5.31/-5.51	-5.63/-4.4	-3.48/-3.95	-4.65/-6.25	-7.3/-13.12	-19.19/-15.18	-11.48/-10.98	-8.51/-4.33	-5.12/-9.91	-14.13/-15.9	-8.61/-6.14	-7.87/-3.72	-7.92/-8.54	-8.15/-7.26
Θ (82.5°)	-4.2/-4.58	-3.62/-4.48	-5.29/-6.67	-8.78/-8.63	-7.08/-5.35	-4.27/-7.23	-0.99/-1.51	-3.17/-5.16	-7.97/-5.25	-6.28/-8.3	-10.24/-10.09	-9.81/-7.54	-8.72/-9.13	-10.88/-16.96	-19.24/-13.01	-8.95/-7.67	-7.45/-6.03	-14.39/-9.65	-9.15/-8.79	-13.19/-19.7	-14.39/-9.65	-9.15/-8.79	-6.82/-6.89	-6.3/-6.81
Θ (90°)	-3.53/-3.5	-3.02/-3.71	-4.11/-6.3	-7.77/-8.06	-6.07/-5.05	-4.68/-4.78	-3.1/-2.43	-5.67/-7.23	-7.8/-4.72	-5.28/-7.59	-9.76/-11.72	-9.79/-9.78	-9.93/-9.19	-9.65/-8.41	-18.18/-19.11	-17.53/-13.8	-8.72/-9.96	-7.51/-4.88	-5.94/-7.58	-10.29/-16.16	-14.31/-13.24	-9.99/-10.31	-6.84/-5.63	-4.9/-4.12
Θ (97.5°)	-3.13/-2.87	-3.2/-2.72	-4.01/-5.85	-7.01/-6.71	-6.65/-6.38	-6.14/-4.79	-4.47/-4.93	-6.93/-11.32	-6.54/-3.9	-4.06/-7.05	-7.58/-8.22	-7.73/-8.96	-9.13/-8.35	-9.66/-10.67	-13.18/-18.19	-19.12/-14.3	-11.7/-9.45	-10.68/-10.56	-7.41/-10.6	-17.81/-12.22	-14.2/-11.94	-8.59/-8.6	-6.06/-3.67	-3.61/-4.13
Θ (105°)	-2.99/-3.35	-1.96/-2.34	-4.69/-5.56	-5.85/-6.84	-7.21/-7.73	-7.79/-6.27	-5.12/-7.14	-9.56/-12.27	-6.43/-3.94	-4.08/-5.47	-6.37/-6.71	-8.08/-9.47	-8.82/-10.69	-19/-18.84	-11.51/-13.18	-11.52/-10.07	-11.1/-15.61	-14.29/-14.83	-18/-11.22	-8.92/-10.98	-9.01/-9.84	-5.76/-3.81	-3.63/-3.43	
Θ (112.5°)	-3.14/-2.73	-3.15/-2.67	-5.09/-6.69	-6.69/-7.61	-7.15/-8.26	-8.4/-9.15	-8.4/-8.68	-5.6/-8.32	-5.83/-3.63	-4.82/-6.33	-4.45/-5.04	-6.8/-7.16	-7.37/-10.95	-12.21/-14.05	-19.28/-11.94	-19.7/-10.56	-16.65/-14.25	-17.07/-12.03	-13.88/-8.8	-6.33/-8.8	-5.91/-3.58	-7.2/-4.14	-4.06/-3.35	
Θ (120°)	-3.64/-3.98	-3.67/-3.88	-4.49/-6.65	-8.04/-7.7	-8.3/-6.71	-8.87/-8.35	-7.3/-9.18	-11.75/-9.97	-5.64/-4.22	-5.21/-6.41	-4.47/-4.46	-7.91/-8.89	-8.69/-11.26	-12.2/-17.93	-12.82/-11.22	-15.64/-10.72	-18.07/-18.47	-12.53/-7.16	-17.47/-12.08	-8.35/-11.89	-5.97/-14.22	-6.63/-4.34	-5.83/-2.86	-3.88/-3.69
Θ (127.5°)	-4.21/-4.66	-4.85/-3.57	-3.99/-6.72	-7.13/-7.92	-7.85/-8.78	-7.48/-6.87	-8.23/-9.94	-10.04/-10.58	-6.6/-5.64	-6.6/-37	-6.28/-5.66	-7.17/-10.09	-10.48/-12.46	-13.64/-9.96	-13.45/-8.74	-10.04/-16.52	-17.94/-17.28	-8.71/-8.6	-15.79/-12.14	-11.62/-16.1	-7.57/-12.13	-7.37/-7.14	-7.4/-5.41	-3.63/-3.07
Θ (135°)	-5.19/-3.8	-3.42/-3.99	-5.74/-7.06	-7.25/-6.4	-6.4/-5.99	-6.48/-6.03	-6.88/-7.65	-6.48/-10.38	-8.75/-7.74	-7.07/-5.95	-6.4/-10.39	-8.19/-6.12	-9.44/-10.52	-10.65/-9.83	-14.81/-9.09	-17.84/-16.99	-18.8/-18.9	-18.32/-16.9	-16.91/-14.59	-17.61/-17.63	-15.37/-9.59	-9.2/-8.29	-7.35/-7.27	-7.25/-5.33
Θ (142.5°)	-4.53/-3.99	-4.53/-4.82	-4.87/-5.17	-6.81/-8.58	-9.84/-10.95	-10.08/-9.47	-8.73/-11.12	-12.95/-9.62	-8.01/-6.07	-8.25/-11.08	-7.79/-9.6	-9.9/-8.12	-7.81/-9.29	-11.28/-10.83	-12.04/-19.22	-17.95/-18.46	-18.22/-18.89	-17.96/-15.73	-16.48/-17.79	-16.17/-11	-10.54/-8.2	-7.02/-6.86	-7.1/-6.47	-5.28/-4.66
Θ (150°)	-7.48/-6.23	-5.46/-4.92	-5.55/-6.13	-6.72/-9.13	-11.6/-11.63	-10.99/-9.85	-10.63/-12.92	-12.42/-11.02	-8.46/-7.62	-8.71/-9.91	-11.95/-11.11	-8.17/-9.18	-14.9/-17.28	-18.6/-18.56	-18.87/-18.24	-18.09/-16.99	-16.49/-17.93	-17.21/-16.04	-18.16/-19.13	-15.94/-14.36	-13.26/-11.13	-10.04/-9.84	-8.69/-7.48	-7.32/-7.04
Θ (157.5°)	-9.52/-8.74	-9.29/-9.43	-8.48/-9.22	-8.52/-7.28	-7.46/-7.65	-7.91/-8.66	-8.65/-9.1	-12.25/-11.84	-11.61/-11.45	-12.28/-10.47	-8.13/-7.77	-9.82/-14.36	-18.27/-19.47	-17.88/-18.51	-19.01/-18.15	-17.84/-16.99	-18.8/-18.9	-18.32/-16.9	-16.91/-14.59	-14.62/-17.35	-16.22/-13.82	-11.53/-10.25	-9.76/-10.54	-8.54



Radiated Composite Gain Data of 2.4GHz and 5GHz

Appendix A

Θ(157.5°)	-13.85/-16.76	-19.02/-18.61	-18.08/-15.68	-15.01/-16.32	-18.23/-17.92	-18.19/-15.4	-15.46/-12.33	-14/-17.9	-17.28/-15.7	-13.52/-11.59	-14.39/-18.98	-17.7/-16.55	-16.83/-18.03	-18.4/-19.1	-18.9/-18.21	-17.02/-18.52	-19.28/-15.6	-16.92/-18.64	-15.94/-13.46	-11.97/-11.59	-10.96/-12.6	-13.31/-15	-13.33/-11.95	-11.98/-12.45
Θ(165°)	-15.84/-17.72	-18.47/-18.84	-17.15/-17.42	-18.41/-15.24	-14.53/-18.48	-14.51/-15.98	-16.41/-13.61	-12.75/-11.25	-11.73/-13.12	-13.37/-14.44	-17.38/-18.96	-18.87/-19.25	-17.4/-15.94	-16.98/-17.83	-17.97/-18.19	-17.77/-17.03	-19.32/-18.71	-18.6/-18.88	-17.53/-15.22	-16.63/-17.45	-18.29/-15.69	-13.96/-14.04	-13.59/-13.18	-14.28/-15.3
Θ(172.5°)	-15.88/-16.43	-18.45/-18.34	-18.04/-18.94	-18.04/-18.94	-18.97/-19.16	-18.95/-18.33	-17.31/-12.03	-18.03/-15.06	-13.92/-13.26	-15.37/-18.85	-19.02/-18.81	-18.97/-17.89	-18.32/-17.61	-18.33/-18.43	-17.37/-19.09	-19.35/-17.7	-18.27/-19.04	-17.96/-17.07	-17.37/-17.65	-17.23/-18.4	-18.62/-17.03	-14.87/-14.27	-13.9/-14.52	-15.14/-15.53
Θ(180°)	-18.01/-17.34	-17.37/-17.29	-18.68/-19.33	-19.2/-18.43	-18.08/-17.89	-19.87/-18.77	-17.11/-16.5	-16.34/-17.25	-18.87/-19.31	-17.54/-18.73	-17.55/-18.01	-18.5/-18.94	-17.99/-19.17	-17.93/-18.09	-17.29/-17.89	-18.63/-16.67	-17.45/-19.4	-18.56/-18.28	-17.23/-14.28	-14.5/-14.92	-15.41/-14.37	-13.64/-14.54	-15.69/-17.42	-18.26/-19.05
Freq(Hz)	5.6GPol.	Theta/Ant. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	4.75/-4.78	-4.37/-3.93	-3.61/-3.43	-3.16/-2.58	-2.07/-1.86	-1.61/-1.41	-1.35/-1.63	-1.93/-1.97	-2.35/-3.27	-3.72/-3.93	-4.6/-6.51	-8.73/-9.84	-9.08/-6.96	-4.66/-3.4	-3.78/-3.85	-1.99/-1.37	-1.41/-0.37	-0.19/-0.25	-0.47/-0.7	-0.77/-1.41	-2.08/-2.61	-3.23/-3.6	-4.2/-4.97	-4.98/-4.67
Θ(7.5°)	-12.77/-10.2	-7.22/-4.95	-2.88/-1.77	-1.3/-0.54	-0.120/0.18	0.590/49	0.130/05	-0.55/-1.76	-2.2/-2.06	-2.5/-3.42	-3.02/-2.5	-2.58/-2.85	-3.01/-3.09	-3.16/-2.97	-3.25/-4.54	-5.11/-3.8	-3.88/-3.58	-2.55/-2.72	-2.3/-2.1	-2.25/-1.97	-2.7/-3.64	-4.43/-5.67	-6.41/-8.33	-11.66/-13.11
Θ(15°)	-16.38/-17.59	-11.42/-7.3	-4.8/-3.54	-1.77/-0.23	0.160/53	0.95/1.01	0.670/85	0.61/-0.33	-0.7/-0.55	-0.220/0.1	0.0/24	0.550/7	0.760/52	-0.01/-0.76	-1.95/-3.93	-5.74/-6.48	-6.12/-5.98	-4.98/-3.97	-3.32/-2.91	-2.69/-2.62	-2.4/-2.63	-3.42/-4.69	-5.68/-6.66	-8.2/-11.02
Θ(22.5°)	-8.45/-14.27	-19.09/-11.95	-9.7/-7.73	-4.64/-3.22	-2.2/-1.12	0.040/7	0.771/17	1.180/71	0.730/84	0.60/86	1.377/1.59	1.731/84	1.78/1.14	0.09/-0.56	-1.4/-3.02	-5.6/-8.18	-8.1/-8.26	-7.09/-5.33	-4.57/-4.13	-3.23/-2.1	-1.63/-1.61	-1.69/-2.26	-3.21/-4.58	-6.27/-7.18
Θ(30°)	-7.19/-7.56	-10.4/-11.32	-13.77/-12.74	-8.93/-6.33	-3.35/-1.13	-0.03/-0.13	-0.53/-0.08	-0.6/-0.92	0.190/39	0.290/84	0.910/6	1.421/75	1.340/37	-0.47/-0.67	-1.29/-2.75	-5.62/-8.97	-10.05/-11.83	-9.67/-7.47	-7.44/-5.67	-5.25/-4.99	-2.49/-1.88	-1.45/-2.48	-3.49/-4.62	-6.27/-7.41
Θ(37.5°)	-16.38/-17.59	-11.42/-7.3	-4.8/-3.54	-1.77/-0.23	0.160/53	0.95/1.01	0.670/85	0.61/-0.33	-0.7/-0.55	-0.220/0.1	0.0/24	0.550/7	0.760/52	-0.01/-0.76	-1.95/-3.93	-5.74/-6.48	-6.12/-5.98	-4.98/-3.97	-3.32/-2.91	-2.69/-2.62	-2.4/-2.63	-3.42/-4.69	-5.68/-6.66	-8.2/-11.02
Θ(45°)	-5.13/-4.46	-4.88/-6.04	-6.92/-10.05	-15.7/-17.17	-10.06/-5.33	-2.74/-0.78	0.410/33	-0.47/-1.07	-1.92/-0.84	-0.14/-1.57	-0.870/33	1.177/1.55	1.750/91	-0.31/-1.29	-2.23/-3.26	-5.17/-9.47	-13.22/-15.11	-17.76/-12.94	-11.29/-10.06	-6.83/-4.74	-3.39/-3.12	-3.84/-5.53	-8.34/-10.65	-9.73/-8
Θ(52.5°)	-8.11/-6.54	-6.74/-6.24	-6.77/-9.18	-13.66/-19.23	-11.93/-7.3	-3.85/-1.95	-0.640/21	0.33/-0.69	-1.71/-1.09	-2.08/-1.32	-0.35/-1.11	1.58/22	3.122/13	0.92/-0.75	-3.11/-4.81	-5.84/-7.27	-14.61/-15.22	-12.72/-15.04	-14.33/-11.23	-7.25/-4.04	-3.02/-2.29	-2.91/-5.51	-11.68/-17.24	-13.42/-9.84
Θ(60°)	-10.57/-8.95	-7.82/-6.78	-7.02/-10.26	-18.32/-17.56	-13.37/-9.79	-7.02/-4.62	-3/-1.55	-0.55/-1.32	-2.76/-2.77	-2.9/-2.34	-0.530/35	0.841/67	3.152/68	1.38/-0.71	-3.34/-6.39	-6.61/-9.79	-15.61/-17.96	-12.47/-13.55	-15.34/-14.62	-11.73/-6.52	-5.27/-3.38	-1.95/-3.43	-9.76/-19.31	-18.74/-18.17
Θ(67.5°)	-13.31/-9.09	-8.54/-7.69	-9.09/-11.87	-18.68/-16.76	-14.38/-12.7	-9.55/-6.77	-3.38/-2.32	-2.54/-2.62	-3.69/-4.44	-3.94/-4.54	-1.73/-1.1	-10.85	1.88/1.7	0.49/-1.23	-4.45/-8.46	-9.72/-10.75	-14.26/-18.2	-9.89/-10.8	-17.24/-17.64	-16.23/-8.5	-5.32/-3.51	-2.29/-3.63	-7.29/-13.37	-17.78/-17.85
Θ(75°)	-10.84/-9.18	-10.99/-9.93	-12.6/-17.72	-18.16/-16.14	-18.7/-16.67	-11.66/-8.72	-4.89/-3.21	-2.98/-6.13	-6.96/-7.28	-8.77/-7.5	-5.64/-4.4	-4.43/-2.08	-0.32/-0.56	-0.92/-1.98	-3.92/-9.26	-12.04/-10.38	-13.53/-14.56	-8.99/-10.07	-13.8/-19.05	-18.99/-13.94	-6.65/-4.34	-2.37/-3.43	-6.56/-10.33	-10.38/-11.18
Θ(82.5°)	-9.73/-9.08	-11.19/-11.19	-12.97/-16.59	-15.51/-18.23	-18.75/-14.26	-11.13/-9.16	-5.61/-4.02	-4.34/-7.52	-9.63/-10.72	-18.33/-15.17	-10.21/-10.29	-8.41/-5.29	-3.04/-2.98	-4.78/-3.85	-6.5/-11.97	-13.81/-11.42	-10.94/-14.55	-8.83/-9.1	-17.09/-17.96	-16.66/-14.94	-2.97/-5.09	-6.82/-7.59	-7.94/-8.91	
Θ(90°)	-7.82/-7.46	-10.17/-10.49	-11.05/-13.38	-15.92/-18.38	-18.64/-15.52	-10.93/-12.93	-9.69/-4.93	-5.83/-10.23	-19.16/-12.95	-18.69/-11.39	-10.17/-15.12	-11.32/-9.49	-5.69/-4.95	-7.16/-6.82	-8.23/-14.63	-14.33/-10.53	-8.97/-10.9	-10.87/-8.35	-12.8/-14.12	-14.61/-10.31	-8.83/-7.45	-5.08/-5.05	-6.99/-6.75	-6.75/-8.04
Θ(97.5°)	-7.42/-7.2	-10.27/-7.97	-9.07/-11.32	-16.04/-18.48	-18.02/-14.79	-13.07/-15.66	-12.85/-8.14	-8.25/-15.37	-18.99/-12.39	-10.22/-9.71	-9.2/-8.7	-8.09/-8.97	-6.89/-5.84	-8.68/-8.34	-14.09/-17.64	-18.99/-15.45	-11.13/-10.47	-10.88/-15.66	-15.74/-13.86	-16.91/-7.63	-8.63/-8.39	-5.49/-5.77	-6.09/-7.08	-5.62/-6.99
Θ(105°)	-6.56/-5.66	-8.65/-7.49	-5.97/-9.59	-14.77/-17.76	-17.58/-18.16	-18.38/-17.45	-17.79/-12.46	-11.25/-19.47	-17.81/-10.75	-7.28/-15.03	-6.34/-9.11	-6.87/-6.76	-6.72/-7.45	-18.4/-9.01	-14.46/-15.45	-18.19/-16.56	-10.39/-8.91	-12.19/-18.8	-13.89/-12.1	-13.78/-5.63	-9.51/-9.94	-4.77/-6.83	-7.38/-5.55	-4.57/-7.18
Θ(112.5°)	-5.22/-5.94	-7.25/-4.9	-4.53/-7.15	-10.17/-13.86	-18.54/-18.34	-17.15/-12.31	-13.66/-15.31	-18.47/-18.86	-13.04/-7.7	-5.84/-4.38	-9.64/-6.6	-7.55/-8.27	-6.3/-7.66	-8.82/-8.61	-9.54/-8.52	-8.12/-18.08	-19.13/-8.58	-17.41/-13.12	-18.9/-13.63	-9.56/-6.4	-10.14/-7.15	-3.29/-5.12	-6.7/-4.84	-5.01/-5.99
Θ(120°)	-3.51/-5.22	-4.5/-5.18	-4.01/-4.35	-8.07/-14.11	-17.69/-18.48	-14.77/-11.8	-10.19/-11.44	-16/-18.74	-11.32/-9.87	-7.08/-5.67	-10.54/-9.32	-6.89/-9.52	-9.38/-9.01	-7.84/-7.3	-10.1/-8.52	-8.95/-11.46	-18.55/-13.08	-12.72/-9.82	-18.2/-12.23	-12.93/-8.41	-9.84/-7.7	-14.68/-4.68	-5.04/-3.58	-5.1/-4.52
Θ(127.5°)	-2.88/-2.85	-3.43/-4.35	-4.13/-4.88	-6.73/-11.4	-18.54/-19.03	-14.22/-10.83	-10.35/-10.99	-15.83/-13.99	-12.54/-10.67	-8.32/-9.36	-13.72/-14.15	-8.84/-10.83	-12.82/-9.1	-9.96/-7.96	-16.4/-9.52	-18.78/-17.95	-16.83/-18.08	-18.42/-18.35	-17.79/-18.82	-12.76/-10.13	-8.81/-7.16	-17.64/-6.95	-6.85/-5.16	
Θ(135°)	-2.06/-2.58	-3.54/-4.65	-3.45/-5.37	-7.15/-10.53	-13.55/-15.36	-15.43/-12.87	-10.43/-10.14	-11.43/-13.13	-14.3/-12.86	-10.15/-9.19	-9.88/-12.82	-14.1/-11.92	-10.44/-11.33	-8.84/-8.67	-8.03/-7.82	-10.06/-16.3	-13.63/-16.38	-12.42/-18.16	-19.29/-18.36	-11.53/-10.44	-12.7/-8.16	-7.58/-7.81	-7.01/-6.25	-5.76/-3.94
Θ(142.5°)	-2.58/-3.8	-3.75/-4.26	-4.36/-4.67	-7.88/-10.18	-12.73/-14.25	-13.13/-11.04	-10.19/-11.11	-12.05/-15.94	-8.84/-8.03	-10.67/-12.15	-10.49/-11.13	-13.08/-10.71	-9.48/-12.21	-11.59/-13.41	-18.66/-15.92	-15.18/-14.7	-18.32/-17.22	-13.11/-19.16	-15.79/-13.1	-11.47/-7.16	-6.52/-7.09	-7.95/-6.57	-5.88/-5.97	
Θ(150°)	-3.98/-3.79	-4.86/-5.01	-6.91/-6.6	-6.83/-8.71	-9.41/-10.18	-11.05/-10.42	-9.3/-9.16	-9.62/-10.65	-12.77/-10.08	-7.52/-9.02	-10.94/-10.31	-8.26/-7.63	-9.08/-11.96	-16.42/-18.71	-18.59/-18.46	-18.33/-18.08	-18.42/-18.35	-17.79/-18.82	-12.76/-10.13	-8.81/-6.71	-14.29/-14.08	-11.94/-9.42	-9.21/-7.97	-6.88/-6
Θ(157.5°)	-5.33/-5.1	-7.28/-8.11	-7.28/-8.83	-8.75/-10.42	-13.35/-12.28	-10.52/-9.88	-9.7/-9.27	-9.81/-11.05	-13.94/-13.05	-9.44/-9.46	-8.69/-8.46	-10.01/-11.11	-13.07/-18.4	-18.62/-17.88	-18.18/-17.24	-13.52/-13.53	-17.12/-17.56	-18.12/-18.79	-17.73/-19.04	-18.06/-17.8	-14.49/-14.08	-11.94/-9.42	-9.21/-7.97	-6.88/-6
Θ(165°)	-6.96/-8.29	-9.06/-12.16	-13.19/-13.2	-16.89/-18.55	-16.1/-14.89	-15.89/-15.77	-15.09/-13.95	-12.45/-12.08	-11.08/-8.66	-9.11/-11.93	-11.51/-11.1	-11.52/-12.42	-15.54/-17.64	-18.02/-17.38	-17.95/-17.51	-17.88/-17.98	-18.1/-18.7	-17.52/-19.25	-18.78/-18.51	-18.56/-17.69	-18.99/-17.19	-15.1/-14.83	-13.5/-10.61	-7.75/-6.07
Θ(172.5°)	-11.04/-11.19	-9.73/-8.49	-8.78/-9.92	-10.23/-10.61	-11.2/-11.97	-13.05/-15.02	-15.53/-15.39	-16.99/-17.95	-16.44/-16.77	-19.43/-15.36	-12.89/-11.73	-11.83/-12.54	-14.44/-16.43	-17.04/-17.63	-18.9/-17.9	-18.74/-17.9	-16.74/-17.74	-18.96/-18.01	-17.19/-18.57	-18.18/-18.62	-18.85/-18.51	-18.87/-18.06	-18.16/-16.66	-13.27/-11.32
Θ(180°)	-17.24/-17.02	-19.1/-18.57	-17.54/-18.41	-18.36/-18.04	-17.24/-15.36	-15.29/-15.88	-14.65/-15.12	-16.96/-16.25	-16.23/-14.55	-13.71/-13.04	-12.46/-12.44	-13.62/-16.01	-18.4/-17.88	-18.03/-18.63	-17.97/-15.53	-13.57/-15.38	-18.57/-18.11	-18.58/-17.86	-17.53/-17.23	-17.55/-18.25	-18.23/-17.28	-18.26/-18.93	-18.26/-18.94	-17.85/-18.84
Freq(Hz)	5.785GPol.	Phi/Ant. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-1.91/-2.58	-2.93/-3.33	-3.63/-3.44	-3.19/-2.82	-2.17/-1.56	-1.33/-1.04	-0.48/-0.2	-0.53/-0.33	0.210/34	0.01/-0.42	-0.73/-0.92	-0.9/-1.1	-1.59/-2.33	-2.87/-2.75	-2.62/-4.18	-5.31/-3.8	-3.44/-2.46	-1.83/-1.15	-0.010/2.2	0.280/44				



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Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	5.04	4.33	4.45	4.49
Ant. 2 Max Gain (dBi)	2.88	2.88	3.11	2.92
Ant. 1 Polarization/Θ(°)/Φ(°)	Phi/30/247.5	Phi/22.5/255	Theta/45/187.5	Phi/97.5/187.5
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/67.5/150	Phi/45/120	Theta/82.5/247.5	Phi/0/97.5
Max Gain (dBi)	5.04	4.33	4.45	4.49
DG [1SS] (dBi)	5.27	5.41	6.31	6.38
DG [2SS] (dBi)	5.04	4.33	4.45	4.49



Radiated Composite Gain Data of 6GHz

Appendix B

DG 1SS Result

Freq(Hz)	6.175GPol.	PhiL	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-					
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)	
Θ(0°)	-0.03-0.24	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12	-0.19-0.12		
Θ(7.5°)	-0.68-0.29	-0.23-0.18	-0.31-0.37	-0.19-0.01	0.16-0.13	0.21-0.05	0.77-0.76	0.79-0.97	0.68-0.05	-1.13-2.16	-2.79-3.06	-3.58-3.87	-2.62-1.17	-0.81-0.9	-0.98-0.62	-0.06-0.62	1.04-1.09	0.83-0.18	-0.74-1.67	-2.81-3.89	-4.95-5.43	-4.35-2.86	-1.96-1.48	-1.31-1.05	
Θ(15°)	-2.38-2.2	-1.53-1.67	-1.75-1.85	-2.02-1.83	-0.91-0.21	0.51-1.08	1.62-2.21	2.31-2.2	1.72-0.14	-0.09-1.77	-3.41-5.19	-6.44-6.32	-5.03-4.07	-3.39-2.56	-1.47-0.27	1.07-2.19	3.09-3.6	3.38-2.8	1.72-0.24	-1.81-3.8	-3.81-3.3	-2.83-2.87	-2.91-2.68	-3.12-3.18	
Θ(22.5°)	-5.08-5.25	-4.67-3.68	-2.81-1.68	-1.03-0.24	0.46-0.56	0.78-1.24	1.84-2.54	3.08-3.29	3.31-2.61	1.65-0.37	-1.39-3.4	-5.75-6.87	-5.05-3.24	-2.19-0.87	0.38-1.65	2.42-0.06	3.46-3.76	3.42-2.29	0.62-1.44	-3.22-2.53	-0.46-1.16	-2.58-4.73	-4.72-4.51		
Θ(30°)	-4.18-3.84	-4.74-4.24	-2.89-1.47	-0.12-0.96	1.29-1.05	1.51-2.6	3.17-3.41	3.49-3.55	3.64-3.28	2.85-1.61	0.42-0.36	-1.75-3.9	-5.1-3.81	-1.91-0.05	0.51-0.6	1.01-2.19	3.53-4.27	3.78-2.62	1.95-1.46	0.58-0.34	-0.62-0.54	-0.29-0.14	-0.83-2.49	-4.54-4.55	
Θ(37.5°)	-4.26-4.1	-3.31-4.74	-4.59-3.06	-0.61-1.2	1.49-1.64	2.73-3.71	4.37-5.27	3.91-3.41	3.56-3.25	2.36-1.72	1.29-1.1	0.04-1.56	-3.47-4.85	-3.42-0.46	0.31-0.35	-0.45-0.75	2.32-3.39	2.56-2.74	2.51-1.74	-0.02-2.79	-4.43-3.6	-1.01-0.49	0.44-0.41	-2.47-1.08	
Θ(45°)	-5.42-5.46	-4.71-5.45	-5.96-3.44	-1.14-0.53	1.49-2.01	2.61-2.97	3.64-3.96	3.84-3.66	4.14-3.95	2.32-1.03	1.1-1.8	0.75-0.02	-2.19-4.2	-3.48-1.8	-1.04-0.33	-1.08-1.37	-0.66-0.58	1.82-2.6	2.10-86	-0.47-2.29	-4.53-5.44	-3.83-1.56	0.08-0.31	-2.42-5.62	
Θ(52.5°)	-6.93-7.68	-6.18-6.72	-5.16-3.38	-1.47-0.19	0.79-1.05	1.58-1.39	1.74-2.55	2.82-3.2	4.18-4.22	2.21-0.46	0.89-1.35	1.65-0.53	-1.44-3.57	-3.66-2.03	-0.52-0.35	-1.68-2.05	-2.96-1.34	0.15-0.57	0.69-0.09	-1.67-5.12	-10.52-8.59	-4.17-3.49	-3.32-2.53	-4.5-6.88	
Θ(60°)	-5.45-9.96	-7.31-6.66	-5.42-4.28	-2.47-0.91	-0.93-0.8	-0.89-0.72	-0.63-1.37	2.32-2.22	2.92-3.7	2.01-0.36	0.12-1.06	2.22-1.81	-2.14-4.45	-2.86-3.9	-1.56-0.72	-2.27-3.62	-4.19-2.71	-0.72-0.14	-0.03-1.16	-2.47-4.88	-11.02-12	-12.26-9.06	-5.21-3.76	-5.03-4.02	
Θ(67.5°)	-5.29-8.02	-7.53-9.82	-5.39-7.01	-4.77-2.52	-3.97-4.38	-2.73-2.45	-2.54-0.31	1.86-1.78	1.77-2.92	1.46-0.97	-0.70-65	2.21-1.46	-2.75-1.6	-3.87-4.51	-3.42-3.23	-4.41-4.61	-5.57-3.46	-0.62-0.53	-0.46-1.59	-2.24-4.42	-6.18-7.46	-11.74-12.35	-8.36-4.71	-4.73-4.11	
Θ(75°)	-6.4-9	-8.39-13.81	-5.58-8.77	-5.73-5.35	-8.37-8.47	-7.2-3.54	-2.34-1.56	0.80-89	0.38-1.73	0.98-1.22	-0.76-0.56	2.19-1.94	-2.79-5.51	-5.45-5.33	-3.54-5.03	-6.89-5.93	-5.71-5.19	-1.22-1.13	-1.2-2.21	-2.58-3.94	-4.34-7.2	-14.72-15.09	-10.19-6.9	-6.08-4.16	
Θ(82.5°)	-4.82-9.3	-7.97-12.12	-7.43-9.66	-7.48-8.35	-8.62-9.76	-12.75-5.08	-4.42-3.48	-0.43-0.49	-1.16-0.58	0.17-1.67	-1.12-0.05	2.18-1.61	-2.55-4.06	-4.3-4.75	-4.86-7.69	-8.07-5.64	-4.88-5.7	-4.13-4.28	-4.06-3.56	-5.86-5.2	-11.78-13.1	-14.01-15.01	-11.78-11.03	-14.91-7.64	-5.2-5.96
Θ(90°)	-5.36-10.04	-7.4-12.16	-7.95-11.17	-9.49-9.34	-13.03-8.11	-13.83-5.79	-4.22-5.15	-2.42-2.51	-2.37-0.91	-0.62-2.26	-1.73-0.86	-1.43-1.27	-1.21-3.36	-5.77-3.35	-4.15-7.47	-8.45-8.48	-8.09-7.1	-5.51-6.23	-7.14-6.25	-9.11-6.97	-6.02-9.21	-11.61-11.02	-14.27-9.04	-7.28-6.35	
Θ(97.5°)	-5.95-12.22	-6.44-13.01	-8.55-13.66	-7.87-12.12	-13.59-6.68	-11.84-6.8	-6.8-8.23	-4.46-4.72	-4.62-2.95	-1.87-4.13	-3.1-0.82	1.42-0.53	-1.35-2.29	-4.75-5.01	-5.03-7.46	-7.28-8.65	-12.55-10.78	-11.05-12.58	-10.33-13.5	-15.95-13.4	-9.67-13.94	-13.51-13.5	-10.53-8.99	-8.29-9.1	
Θ(105°)	-7.45-12.19	-7.13-14.72	-8.82-13.32	-8.6-13.73	-14.1-8.99	-13.39-9.12	-7.13-8.74	-7.06-8.4	-7.49-4.45	-3.67-5.53	-5.21-1.78	0.71-0.73	-4.72-4.26	-6.1-7.38	-8.27-10.37	-14.76-8.91	-10.1-14.66	-9.77-14.41	-10.4-15.01	-11.78-15.31	-15.08-10.36	-15.42-9.25	-10.21-10.29		
Θ(112.5°)	-8.84-13.72	-7.06-9.22	-9.93-14.24	-10.56-15.44	-14.01-10.07	-10.52-9.95	-18.11-6.82	-8.79-11.05	-10.55-9.93	-4.1-6.43	-5.52-1.89	0.26-0.44	-2.13-3.99	-5.18-4.71	-5.4-10.74	-7.89-10.55	-15.49-14.22	-10.85-11.3	-12.4-10.99	-10.72-11.99	-14.77-10.85	-14.58-15.71	-12.95-10	-12.33-8.6	
Θ(120°)	-11-9.4	-8.63-11.19	-7.79-15.36	-10.02-16.02	-11.8-9.2	-8.14-12.76	-12.54-13.81	-10.93-15.1	-12.19-15.67	-5.46-5.02	-4.82-2.5	-1.9-1.03	-2.07-3.36	-6.28-5.33	-6.4-10.16	-8.83-13.85	-15.35-10.03	-8.55-5.93	-7.96-12.65	-8.55-7.39	-9.22-11.13	-6.7-11.94	-12.18-14.13	-12.88-9.09	
Θ(127.5°)	-10.96-11.09	-8.86-9.97	-12.61-15.35	-13.16-15.28	-8.65-10.63	-10.32-11.39	-15.66-13.09	-14.91-15	-12.47-8.55	-6.35-5.99	-5-2.47	-2.16-4.21	-5.66-4.07	-5.54-6.58	-6.87-10.5	-12.43-15.08	-14.62-12.47	-6.53-8.49	-9.66-8.52	-8.17-12.29	-15.16-14.23	-13.13-11.34	-11.84-10.62		
Θ(135°)	-9.53-8.81	-11.28-12.74	-12.85-15.01	-11.01-13.88	-9.02-7.43	-10.22-10.2	-10.71-15.9	-12.81-14.42	-12.67-7.44	-5.34-4.58	-5.06-4.6	-3.78-4.38	-5.94-7.27	-8.02-3.83	-5.12-8.98	-14.13-15.08	-14.6-11.41	-7.87-8.71	-9.87-13.81	-10.45-13.85	-9.79-13.23	-14.89-11.31	-12.56-14.09	-14.48-7.8	
Θ(142.5°)	-9.9-6.36	-10.43-13.85	-13.93-12.4	-9.36-11.92	-10.57-7.3	-9.43-14.48	-14.86-10.4	-9.57-10.69	-13.09-9.62	-5.93-3.88	-4.08-4.13	-4.2-5.91	-6.99-10.93	-11.15-9.35	-11.1-15.49	-14.75-15.07	-14.44-13.78	-8.86-7.53	-9.6-12.5	-15.39-15.51	-8.36-9.83	-11.56-10.34	-11.34-11.76	-13.77-11.99	
Θ(150°)	-14.75-10.46	-9.54-13.82	-16.48-14.87	-13.26-11.51	-7.71-6.83	-8.94-11.8	-13.25-11.64	-8.74-7.73	-8.09-8.83	-7.27-5.49	-4.58-4.3	-4.61-5.86	-8.25-8.17	-10.28-12.62	-15.59-14.12	-12.26-10.89	-10.09-12.54	-11.62-8.1	-8.72-11.68	-13.97-15.64	-10.49-11.08	-15.5-15.91	-12.28-10.32	-8.5-10.72	
Θ(157.5°)	-13.89-13.11	-11.51-13.81	-15.36-15.63	-14.22-12.64	-11.46-9.3	-9.23-11.16	-13.87-13.15	-11.58-9.82	-8.52-8.33	-7.24-5.25	-3.98-3.59	-5.15-8.88	-12.61-12.23	-12.23-13.32	-12.71-14.17	-14.68-13.29	-10.01-8.87	-10.38-14.09	-15.85-14.12	-11.4-10.26	-12.1-12.76	-14.67-15.37	-15.35-12.99		
Θ(165°)	-12.37-14.01	-11.75-11.79	-11.77-11.85	-12.21-11.2	-11.8-10.91	-10.67-10.91	-11.51-12.78	-12.1-11.54	-10.28-9.34	-8.18-7.75	-7.34-8.19	-9.38-9.83	-6.77-5.87	-7.05-8.82	-9.68-10.89	-13.62-14.78	-13.78-13.03	-14.06-14.47	-14.74-15.38	-14.51-13.24	-12.6-12.38	-14.26-14.9	-13.39-10.86	-10.76-11.53	
Θ(172.5°)	-11.03-10.75	-10.55-11.02	-10.83-10.07	-10.61-10.63	-8.91-10.92	-12.99-12.65	-13.74-15.38	-14.72-13.82	-13.03-12.53	-10.93-9.71	-8.79-8.06	-6.82-6.62	-7.95-10.16	-11.46-11.69	-12.7-14.91	-13.99-13.9	-13.87-14.26	-14.63-14.75	-15.18-15.55	-15.19-15.63	-15.42-14.02	-13.51-12.47	-12.49-11.6	-10.97-11.32	
Θ(180°)	-8.03-7.97	-8.14-8.56	-8.46-9.14	-10.21-10.25	-11.76-11.71	-11.71-13.08	-13.29-13.32	-13.67-13.26	-12.72-13.5	-11.76-10.38	-9.74-9.41	-10.13-10.59	-11.44-13.08	-12.21-11.35	-11.58-13.38	-14.83-14.58	-13.77-14.15	-13.66-15.09	-15-15.33	-15.34-14.51	-12.15-11.61	-11.95-11.36	-11.18-11.1	-9.9-8.77	
Freq(Hz)	6.175GPol.	ThetaL	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)	
Θ(0°)	-0.21-0.79	-1.41-1.92	-2.28-2.8	-3.35-3.45	-3.51-3.1	-2.56-1.98	-1.35-1.19	-0.55-0.26	-0.04-0.23	0.25-0.1	0.04-0.11	-0.13-0.86	-1.39-1.27	-1.19-1.18	-1.01-0.97	-0.81-0.79	-0.81-0.88	-0.84-0.67	-0.54-0.24	0.02-0.49	0.59-0.34	0.63-0.94	0.76-0.34	0.14-0.19	
Θ(7.5°)	-1.68-1.54	-1.15-0.66	-1.10-1.03	0.32-0.3	-0.01-0.28	-0.95-1.37	-1.73-1.95	-1.37-0.9	-0.6-0.17	-0.01-0.17	0.30-0.51	0.29-0.27	-0.71-0.74	-0.84-1.57	-2.51-4	-5.32-6.36	-7.1-6.4	-4.97-3.64	-2.86-1.82	-0.88-0.47	-0.45-0.66	-0.42-0.38	-0.69-1.11	-1.42-1.49	
Θ(15°)	-4.37-3.86	-3.26-3.14	-3.04-2.97	-2.95-2.61	-2.41-1.81	-1.81-2.65	-3.34-3.68	-4.1-4.11	-3.46-2.03	-1.39-0.87	-0.19-0.27	0.53-0.35	0.28-0.56	0.54-0.3	0.65-0.96	0.67-0.27	-1.98-1.44	-0.05-6	0.77-0.93	1.31-1	0.46-0.44	-1.33-2.23	-2.81-3.07	-3.79-4.52	
Θ(22.5°)	-6.44-5.83	-4.71-4.2	-5-5.93	-6.31-6.96	-7.47-8.39	-9.59-8.74	-4.91-2.35	-1.09-0.42	-0.24-0.35	-0.58-0.17	0.59-1.59	2.41-2.69	2.68-2.61	2.33-1.96	1.95-2.13	2.23-2.04	1.49-1.75	2.22-2.58	2.73-2.58	2.36-1.3	1.80-67	-0.89-2.13	-2.74-3.13	-3.38-4.93	
Θ(30°)	-5.84-4.19	-1.99-1.57	-2.56-4.4	-5.62-5.46	-6.16-6.42	-6.33-2.47	-1.5-0.36	1.12-2.14	2.64-4.99	1.66-0.82	1.06-2.03	3.13-74	3.64-3.33	3.25-2.67	1.18-0.41	1.68-2.18	2.23-1.71	1.91-0.6	-1.14-1.57	-0.74-0.2	0.75-0.61	-0.57-2.08	-3.57-3.66	-3.33-4.69	
Θ(37.5°)	-7.18-9.55	-7.03-5.18	-5.72-6.28	-4.78-2.79	-1.26-0.01	0.80-8.2	0.51-0.74	1.72-7.8	3.62-3.91	3.22-1.9	1.72-1.8	2.82-66	2.36-2.66	2.51-1.41	0.75-0.73	1.33-1.48	0.94-0.83	-2.32-5.87	-8.7-6.73	-4.01-3.14	-3				



Radiated Composite Gain Data of 6GHz

Appendix B

Θ(22.5°)	-2.16/-1.35	-2.15/-2.98	-3.23/-4.12	-2.91/-1.51	-0.8/-0.19	0.40/0.84	0.91/1.6	1.73/2.01	1.98/1.54	1.04/0.41	0.1/-0.3	-1.59/-3.4	-6.03/-8.5	-4.54/-1.24	-0.2/-0.28	-1.01/-1.57	-1.13/-0.03	1.21/2.15	2.45/2.37	1.92/1.09	0.36/-0.01	-0.78/-1.32	-3.47/-5.27	-4.42/-2.98
Θ(30°)	-3.02/-1.88	-2.83/-4.53	-5.3/-5.28	-4.54/-3.82	-3.28/-2.23	-1.55/-1.76	-2.25/-1.4	-0.0/74	1.16/0.92	0.88/0.71	0.65/0.88	0.71/-0.58	-3.05/-6.03	-5.57/-2.82	-1.24/-1.12	-2.15/-3.05	-2.99/-2.03	-1.18/-0.59	-0.58/-0.48	-0.75/-1.21	-2.44/-4.34	-3.1/-1.77	-3.52/-8.35	-9.71/-5.3
Θ(37.5°)	-5.64/-3.82	-4.38/-6.76	-4.94/-0.08	-2.77/-1.31	-0.63/-0.28	-0.93/-1.56	-1.95/-1.57	-0.53/0.09	-0.02/-0.86	-0.73/-0.71	-0.18/0.68	0.88/-0.12	-0.89/-2.96	-3.06/-2.38	-2.22/-1.7	-1.39/-2.42	-3.17/-3.26	-2.12/-1.54	-0.47/0.73	0.58/-0.24	-1.35/-3.38	-3.53/-1.22	-1.8/-7.64	-14.89/-7.74
Θ(45°)	-8.09/-5.48	-5.45/-7.33	-6.43/-6	-3.9/-1	0.53/0.1	-1.16/-1.8	-1.22/-1.19	-0.59/-0.17	-0.9/-1.83	-1.96/-1.93	-0.83/0.54	0.81/0.62	0.38/-0.98	-3.04/-3.2	-2.81/-3.11	-2.86/-3.83	-3.43/-3	-3.01/-3.05	-1.89/-0.53	-1.75/-2.43	-2.07/-3	-3/-1.16	-1.44/-5.28	-12.94/-13.74
Θ(52.5°)	-6.35/-5.33	-5.75/-9.09	-8.25/-6.73	-3.1/-1.3	-0.38/-0.65	-0.86/-2.09	-1.13/-0.7	-0.89/-0.65	-0.76/-2.46	-1.89/-1.59	-0.67/0.73	0.33/0.53	0.93/-0.81	-4.45/-4.96	-4.43/-5.93	-3.16/-2.76	-4.09/-3.65	-3.65/-4.42	-3.41/-3.92	-4.69/-6.35	-4.22/-6.31	-7.83/-3.12	-3.96/-7.91	-10.84/-12.71
Θ(60°)	-6.47/-6.55	-7.45/-9.88	-7.43/-4.17	-2.34/-2.16	-1.79/-1.8	-2.99/-4.59	-3.31/-2.61	-3.54/-1.86	-0.75/-3.16	-2.12/-1.24	-1.56/0.17	0.28/0.73	2.03/-0.12	-3.92/-8.92	-5.26/-5.96	-5.65/-3.21	-3.65/-3.61	-2.83/-3.36	-3.34/-4.63	-6.42/-9.97	-14.65/-10.41	-7.65/-6.63	-8.01/-7.14	-8.25/-10.66
Θ(67.5°)	-8.37/-7.47	-8.02/-12.25	-6.91/-4.86	-4.38/-4.1	-4.84/-6.71	-6.85/-4.97	-3.84/-2.11	-4.13/-3.07	-0.58/-4.96	-3.24/-2.1	-2.27/-0.98	-1.50/68	2.6/-0.57	-3.93/-3.62	-3.84/-4	-5.1/-3.47	-3.69/-2.84	-3.2/-2.41	-2.82/-3.94	-4.33/-8.17	-12.89/-15.4	-15.45/-10.06	-8.88/-8.51	-8.38/-9.2
Θ(75°)	-7.95/-7.72	-10.83/-13.47	-8.77/-8.22	-8.07/-7.19	-9.77/-12.57	-7.19/-5.16	-3.39/-2.18	-3.56/-6	-1.56/-4.64	-4.31/-2.45	-2.44/-1.04	-1.02/1	2.41/09	-2.38/-3.54	-3.74/-2.39	-4.97/-4.6	-4.91/-2.11	-2.21/-0.45	-1.43/-2.1	-2.71/-6.15	-8.35/-9.96	-14.53/-10.95	-10.56/-8.6	-7.65/-10.74
Θ(82.5°)	-7.48/-10.03	-9.92/-13.33	-9/-12.12	-11.03/-9.76	-14.88/-10.69	-11.16/-8.11	-3.75/-3.25	-3.17/-7	-2.53/-52	-4.22/-2.42	-1.9/-1.91	-0.98/1.38	2.36/0.68	-1.5/-2.13	-2.27/-2.62	-4.6/-5.01	-5.34/-1.41	-2.01/0.02	-0.82/-1.68	-0.56/-3.43	-5.76/-7.91	-11.63/-16.19	-10.63/-8.43	-9.45/-12.53
Θ(90°)	-8.82/-13.22	-9.85/-12.98	-9.2/-13.82	-12.23/-12.52	-13.62/-9.25	-9.51/-7.3	-3.62/-3.22	-3.41/-5.84	-3.63/-4.56	-6.26/-2.25	-1.85/-1.54	-1.39/0.84	2.12/1.32	-1.29/-2.08	-2.67/-1.72	-3.93/-6.27	-6.96/-4.46	-3.75/-2.54	-3.7/-6.04	-4.76/-4.16	-6.15/-8.68	-9.61/-15.46	-13.28/-11.4	-8.65/-12.05
Θ(97.5°)	-10.72/-13.88	-9.78/-12.42	-10.43/-11.9	-12.25/-15.87	-9.44/-7.32	-8.4/-6.64	-4.35/-4.23	-4.28/-6.54	-3.96/-5.94	-6.17/-2.63	-2.56/-2.21	-1.42/1.24	2.32/1.24	-0.33/-1.4	-3.74/-2.42	-3.92/-6.54	-7.66/-6.45	-6.72/-8.55	-9.69/-12.13	-11.11/-7.54	-9.03/-10.27	-9.21/-15.41	-13.64/-13.37	-9.38/-11.97
Θ(105°)	-11.75/-14.71	-11.51/-11.49	-11.13/-13.81	-8.78/-12.75	-9.78/-7.15	-9.82/-6.43	-5.83/-6.66	-4.03/-6.08	-4.03/-4.98	-6.07/-2.83	-2.13/-2.03	-1.89/0	1.57/0.84	-1.03/-1.66	-3.38/-2.5	-3.94/-7.62	-10.11/-8.77	-3.81/-6.86	-11.3/-13.6	-15.07/-10.01	-14.06/-14.91	-10.39/-13.55	-13.66/-15.47	-11.24/-13.58
Θ(112.5°)	-11.25/-12.12	-12.99/-11.63	-10.31/-13.7	-9.52/-13.67	-8.73/-7.95	-9.07/-6.21	-5.49/-6.74	-5.93/-6.35	-4.01/-5.85	-6.04/-3.89	-3.17/-2.33	-1.83/-0.35	0.65/0.11	-1.02/-2.2	-2.65/-3.39	-5.82/-8.98	-14.07/-10.95	-6.39/-10.57	-12.84/-16.1	-14.66/-11.73	-14.36/-12.42	-13.94/-15.88	-13.03/-15.5	-15.28/-12.34
Θ(120°)	-11.84/-13.94	-11.35/-10.88	-12.06/-13.4	-14.59/-11.73	-11.32/-11.17	-11.78/-8.32	-6.93/-8.54	-8.87/-7.09	-4.19/-6.24	-7.96/-6.64	-5.28/-3.23	-2.02/-1.04	-0.46/-2.32	-2.1/-2.25	-3.98/-4.31	-5.3/-6.39	-13.51/-9.83	-4.53/-12.6	-13.97/-14.8	-11.12/-9.72	-15.32/-11.53	-7.24/-14.41	-13.66/-15.52	-15.03/-13.89
Θ(127.5°)	-13.63/-12.3	-14.02/-11.76	-15.48/-14.68	-14.29/-12.13	-10.55/-14.77	-11.14/-9.34	-10.68/-12.14	-11.48/-7.19	-5.77/-9.9	-7.78/-7.95	-6.11/-3.89	-2.01/-2.27	-2.56/-3.61	-3.66/-3.77	-2.57/-3.03	-5.08/-11.28	-10.43/-9.68	-9.61/-7.5	-10.43/-9.68	-7.74/-7.48	-12.32/-14.26	-15.63/-11.7	-12.78/-15.37	-14.97/-14.87
Θ(135°)	-11.5/-13.09	-14.61/-14.28	-15.24/-13.23	-15.5/-8.61	-8.7/-10.42	-13.41/-13.18	-13.78/-13.98	-11.24/-7.14	-5.55/-7.75	-10.19/-8.72	-7.13/-4.96	-2.22/-0.9	-1.79/-4.52	-3.95/-2.3	-3.95/-4.45	-7.34/-6.68	-9.78/-8.6	-12.84/-11.61	-14.85/-15.91	-10.26/-10.78	-12.6/-14.92	-14.92/-11.01	-14.01/-15.41	-15.17/-15.71
Θ(142.5°)	-11.64/-13.94	-12.34/-10.56	-12.12/-14.02	-12.73/-9.68	-13.94/-15.63	-13.07/-14.32	-12.13/-7.54	-7.35/-9.41	-9.82/-8.21	-4.07/-2.82	-3.57/-4.24	-5.12/-4.58	-7.28/-7.16	-9.04/-15.14	-13.68/-14.66	-15.22/-13.09	-13.55/-14.64	-12.01/-11.81	-11.58/-15.06	-14.91/-14.88	-15.23/-14.91	-14.91/-15.81	-15.23/-14.91	-10.35/-10.92
Θ(150°)	-15.07/-13.81	-14.64/-15.98	-14.31/-15.25	-15.04/-11.09	-9.31/-10.58	-14.26/-14.17	-14.74/-15.25	-16.12/-12.99	-8.46/-7.89	-9.73/-10.35	-8.52/-7.43	-7.59/-5.83	-5.4/-6.46	-7.45/-8.66	-10.21/-10.29	-9.27/-9.46	-12.96/-13.36	-12.32/-11.21	-9.2/-9.68	-15.41/-11.81	-15.2/-14.54	-15.2/-14.54	-12.98/-15.47	-10.95/-12.34
Θ(157.5°)	-11.8/-11.16	-12.15/-13.31	-12.88/-13.17	-14.89/-14.32	-11.57/-10.57	-12.24/-13.65	-16.07/-13.57	-15.09/-13.44	-11.59/-11.64	-12.61/-12.58	-10.16/-8.41	-8.02/-7.72	-7.77/-9.41	-9.77/-9.03	-9.59/-10.14	-10.7/-7.1	-7.15/-8.68	-10.51/-13.31	-14.04/-13.68	-14.01/-14.24	-11.41/-8.48	-7.62/-8.01	-10.51/-15.52	-14/-12.31
Θ(165°)	-15.64/-13.15	-12.46/-11.97	-11.28/-10.65	-10.87/-11.6	-13.05/-13.28	-13.57/-14.45	-14.15/-13.93	-13.42/-12.91	-13.41/-14.4	-14.58/-12.26	-9.41/-8.18	-7.89/-8.01	-10.03/-11.78	-11.84/-12.23	-10.98/-9.33	-8.88/-9.36	-9.65/-11.38	-13.53/-14.17	-15.4/-15.51	-15.4/-15.02	-12.52/-13	-14.3/-15.5	-14.96/-15.21	-15.05/-15.53
Θ(172.5°)	-15.65/-15.6	-14.7/-14.24	-13.88/-14.39	-13.16/-13.49	-15.02/-14.96	-15.11/-15.08	-15.3/-14.34	-14.9/-13.88	-13.29/-12.86	-12.44/-12.48	-12.68/-12.33	-12.18/-12.8	-12.54/-14.33	-13.08/-12.02	-11.68/-13.84	-14.88/-14.38	-13.93/-14.92	-14.11/-14.88	-15.44/-14.59	-14.63/-15.18	-14.64/-15.44	-16.05/-14.79	-15.29/-14.82	-15.2/-15.14
Θ(180°)	-15.1/-15.45	-15.63/-15.02	-15.93/-15.08	-14.99/-15.08	-15.04/-15.68	-15.52/-15.1	-15.3/-15.11	-14.94/-16.01	-15.29/-14.15	-13.75/-13.48	-12.76/-12.03	-11.94/-12.42	-12.07/-14.11	-15.43/-15.92	-13.81/-13.88	-14.5/-15.6	-15.64/-15.5	-14.38/-15.62	-15.39/-15.64	-15.65/-14.81	-15.11/-14.74	-15.02/-14.19	-13.06/-14.59	
Freq(GHz)	6.995GPol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	4.06/3.68	3.16/2.59	1.87/1.12	0.22/-0.59	-1.58/-2.59	-3.4/-2.75	-1.37/-0.07	0.84/1.79	2.53/0.4	3.51/3.98	4.12/4.15	4.133/3.73	3.35/3.03	2.56/1.88	0.97/-0.13	-1.48/-2.47	-2.69/-2.51	-1.93/-1.75	-1.08/0.39	1.59/2.02	2.63/3.55	3.76/3.9	4.11/4.06	4.11/4.25
Θ(7.5°)	2.05/1.41	0.71/-0.27	-1.3/-1.93	-2.53/-3.18	-3.27/-3.54	-3.2/-2.62	-1.69/-0.52	0.43/-1.7	1.96/2.62	3.31/3.68	3.98/4.44	4.78/4.76	4.58/4.34	4.18/4.04	3.63/2.88	1.92/0.77	-0.36/-1.46	-2.48/-3.14	-2.86/-1.58	-0.22/0.78	1.72/2.72	3.21/2.49	3.54/3.22	3.08/2.75
Θ(15°)	0.24/-1.51	-3.19/-4.55	-4.69/-4.86	-5.23/-5.22	-5.05/-4.75	-4.54/-2.22	-3.43/-3.39	-2.35/-1.59	-7.09/-0.04	0.61/1.06	1.722/2.81	3.72/4.41	4.75/4.65	4.333/3.81	3.27/2.6	1.77/0.91	0.34/-0.27	-1.14/-2.13	-2.54/-2.41	-2.75/-2.67	-1.48/-0.05	1.35/2.24	2.61/2.69	2.54/1.67
Θ(22.5°)	-0.81/-3.15	-4.76/-4.65	-3.73/-2.96	-2.88/-3.21	-4.25/-5.84	-7.14/-6.74	-5.27/-4.32	-4.32/-3.63	-2.2/-0.88	0.24/0.82	1.36/2.24	3.27/4.1	4.28/4.16	3.93/5.2	3.12/1.82	-0.16/-2.02	-2.73/-2.31	-1.44/-0.19	0.74/1.06	0.81/-0.68	-3.03/-2.73	-1.15/-0.13	0.43/0.72	0.71/0.45
Θ(30°)	-3.15/-5.04	-4.57/-3.36	-1.87/-0.98	-1.6/-2.42	-3.58/-3.44	-2.95/-2.4	-2.2/-2.7	-3.59/-2.49	-4.45/-2.6	-0.16/-1.1	1.82/1.8	2.82/4.12	4.71/4.92	4.81/4.16	3.81/3.28	1.97/0.1	-1.27/-1.54	-1.37/-0.24	0.38/0.67	1.14/0.89	-1.34/-4.28	-2.72/-2.17	-2.22/-2.47	-2.52/-1.96
Θ(37.5°)	-4.4/-6.02	-5.71/-5.49	-5.39/-6.06	-8.82/-7.93	-5.99/-3.88	-3.44/-2.88	-2.38/-1.07	-0.44/-0.95	-2.98/-3.37	-0.92/0.46	1.05/1.67	3.14/4.86	5.78/6	5.27/3.8	3.53/2.8	2.24/1.13	1.74/2.2	2.27/1.69	-0.17/-1.91	-2.24/-0.5	-0.58/-2.38	-3.61/-2.88	-5.11/-5.18	-4.77/-4.42
Θ(45°)	-2.15/-4.1	-7.51/-8.71	-9.74/-8.64	-8.32/-6.57	-5.57/-5.07	-4.81/-3.68	-3.78/-2.95	-1.13/-0.35	-1.28/-3.01	-1.57/0.16	0.88/1.72	3.18/4.25	5.286/3.1	5.883/5.2	2.43/2.04	1.25/-0.72	-0.38/0.57	-1.98/-5.37	-7.43/-5.31	-4.68/-5.72	-6.64/-7.58	-9.39/-8.31	-4.76/-2.85	
Θ(52.5°)	-1.02/-2.9	-6.38/-7.17	-6.46/-6.69	-8.47/-5.92	-5.72/-8.09	-8.42/-5.93	-4.1/-3.22	-2.83/-0.83	0.01/-1.49	-0.52/0.62	1.26/2.67	3.58/4.14	5.165/6.1	5.21/3.22	2.48/2.29	1.96/0.04	-2.35/-2.55	-2.66/-3.57	-6/-8.51	-10.22/-15.34	-9.69/-10.69	-15.34/-14.77	-14.83/-10.78	-5.11/-2.48
Θ(60°)	-1.18/-3.51	-5.03/-2.63	-4.32/-6.83	-9.25/-8.35	-9.51/-10.34	-8.82/-5.99	-3.61/-2.76	-3.49/-2.34	0.25/-0.58	-1.01/0.68	0.82/-59	2.923/4.8	4.364/5.1	4.223/0.5	2.58/2.21	2.46/0.57	-1.64/-1.78	-4.57/-8.29	-11.36/-14.06	-7.63/-8.64	-10.62/-9.88	-14.31/-15.47	-11.46/-9.27	-5.87/-2.79
Θ(67.5°)	-2.75/-5.4	-3.62/-2.18	-6.98/-7.33	-8.19/-7.41	-6.58/-6.84	-5.41/-7.49	-6.68/-3.45	-2.76/-3.12	-0.97/-0.52	-2.04/-0.37	0.34/2.38	1.86/3.16	3.64/3.73	2.07/2.17	1.72/0.99	1.56/0.55	-0.12/-0.15	-4.22/-6.35	-4.42/-4.14	-10.51/-12.76	-14.13/-14.07	-10.99/-8.41	-5.47/-3.72	
Θ(75°)	-4.56/-7.02	-3.46/-3.85	-11.52/-6.86	-7.09/-7.32	-8.92/-5.54	-3.15/-2.85	-4.52/-3.67	-1.2/-1.72	-2.13/-0.94	-2.17/-2.5	0.1/21	0.76												



Sporton International Inc.



Radiated Composite Gain Data of 6GHz

Appendix B

Θ(22.5°)	-0.82/-1.04	-1.22/-3.29	-5.07/-7.75	-7.45/-6.15	-5.45/-4.82	-3.84/-3.23	-3.69/-3.55	-2.75/-2.32	-1.82/-1.13	-0.63/-0.89	-1.72/-2.74	-4/-6.29	-7.45/-8.01	-5.19/-2.64	-2.37/-3.12	-4.37/-5.08	-3.85/-1.67	0.32/1.34	1.16/0.24	-1.02/-2.83	-3.93/-4.21	-6.19/-7.49	-9.92/-9.4	-5.13/-1.94
Θ(30°)	-1.59/-1.05	-1.62/-3.37	-5.8/-8.84	-9.77/-9.1	-8.46/-7.0	-6.38/-6.62	-6.63/-5.74	-5.6/-4.83	-3.98/-3.8	-2.92/-2.2	-1.62/-1.1	-0.61/-0.66	-2.46/-4.97	-4.61/-3.06	-1.83/-1.84	-2.99/-4.57	-4.55/-2.09	-0.46/-0.57	-1.69/-2.55	-4/-6.03	-9.28/-15.24	-12.11/-9.05	-12.24/-17.89	-9.6/-3.81
Θ(37.5°)	-4.09/-1.96	-2.68/-5.4	-7.05/-9.14	-6.35/-3.42	-2.45/-2.89	-7.72/-7.95	-7.49/-7.4	-6.84/-6.29	-5.73/-5.86	-6.06/-5.93	-3.83/-1.89	-0.50/0.04	-6.46/-2.8	-2.88/-1.39	-1.25/-0.75	-0.79/-2.67	-3.35/-2.25	-0.94/-4.22	-3.96/-1.28	-0.23/-1.06	-3.58/-7.68	-8.64/-5.57	-6.13/-12.27	-17.64/-3.78
Θ(45°)	-7.34/-4.4	-4.02/-6.35	-8.99/-11.08	-6.94/-3.12	-1.61/-3.05	-6.83/-9.77	-9.13/-9.71	-6.97/-7.09	-7.25/-7.49	-9.98/-11.47	-7.47/-3.75	-0.98/0.32	-0.2/-1.68	-4.65/-2.07	-1.55/-1.55	-1.3/-2.51	-3.31/-2.29	-4.88/-7.11	-4.44/-1.39	-2.24/-3.74	-4.57/-6.89	-5.88/-3.4	-3.54/-7.25	-18.68/-15.2
Θ(52.5°)	-6.89/-4.08	-4.47/-8.71	-9.95/-9.2	-6.21/-6.42	-4.12/-6.62	-11.58/-10.55	-10.44/-8.72	-7.14/-6.97	-7.05/-7.84	-10.22/-9.09	-5.71/-3.68	-1.3/-0.07	-0.1/-3.1	-6.31/-3.2	-2.94/-4.56	-2.29/-2.62	-3.77/-3.44	-7.1/-11.08	-5.57/-5.24	-5.98/-6.43	-6.68/-11.41	-12.42/-4.94	-5.33/-11.7	-16.87/-17.77
Θ(60°)	-9.66/-5.11	-6.85/-9.86	-9.02/-6.99	-4.99/-5.64	-7.68/-10.81	-7.22/-11.3	-10.31/-10.57	-9.15/-7.18	-6.33/-7.19	-9.3/-7.47	-5.54/-4.89	-2.59/-0.23	0.57/-1.04	-3.79/-7.88	-4.79/-5.84	-8.98/-6.36	-5.83/-6.47	-9.14/-12.98	-10.62/-9.15	-11.66/-14.12	-17.25/-18.9	-10.71/-8.45	-10.93/-12.64	-13.52/-18.96
Θ(67.5°)	-12.36/-6.47	-9.03/-13.29	-10.47/-7.26	-5.05/-6.37	-11.55/-15.66	-13.54/-10.26	-8.81/-8.04	-8.24/-7.24	-5.81/-7.79	-10.47/-6.47	-6.12/-6.09	-3.79/0.11	1.48/-1.01	-3.6/-4.18	-3.15/-4.31	-10.41/-6.56	-7.93/-8.16	-9.5/-12.62	-10.85/-11.52	-14.17/-19.02	-17.34/-18.41	-18.71/-16.13	-14.03/-17.25	-16.3/-15.94
Θ(75°)	-17.83/-8.14	-14.58/-18.1	-13.32/-9.16	-8.16/-10.51	-17.77/-17.46	-11.7/-9.76	-8.47/-7.5	-6.97/-8.1	-10.94/-7.48	-6.76/-7.61	-3.82/-0.13	1.52/1.02	-2.21/-4.08	-3.75/-3.77	-10.78/-8.62	-12.02/-9.31	-8.77/-7.9	-8.41/-7.39	-10.88/-16.46	-17.3/-18.55	-17.52/-17.58	-19.09/-18.34	-14.16/-17.89	
Θ(82.5°)	-15.79/-11.21	-18.14/-18.38	-13.52/-12.66	-14.71/-14.09	-16.93/-11.95	-11.23/-11.89	-10.71/-10.5	-8.56/-7.34	-6.21/-7.02	-9.72/-6.48	-6.66/-8.28	-3.13/-0.24	1.61/0.71	-0.71/-4.4	-1.74/-3.96	-7.88/-10.04	-14.63/-7.41	-6.88/-6.43	-6.92/-6.26	-5.12/-9.04	-11.02/-18.02	-19.06/-19.2	-17.66/-17.62	-18.4/-19.4
Θ(90°)	-18.72/-18.96	-17.69/-18.11	-15.75/-17.85	-18.11/-18.87	-16.76/-10.46	-12.67/-9.58	-9.61/-10.6	-10.34/-7.38	-7.23/-8.29	-11.52/-6.96	-6.71/-7.79	-4.12/-0.91	1.48/1.05	-0.69/-1.49	-2.13/-3.28	-6.4/-14.77	-12.88/-10.27	-7.78/-8.29	-11.15/-11.29	-9.56/-8.64	-8.43/-13.66	-13.47/-18.81	-14.68/-19	-18.98/-16.68
Θ(97.5°)	-17.96/-17.81	-17.21/-17.8	-15.64/-17.22	-18.1/-18.63	-13.12/-9.54	-12.6/-10.35	-10.79/-11.09	-10.3/-8.41	-7.64/-9.36	-11.85/-7.34	-7.77/-7.39	-3.97/-0.62	1.3/1.1	0.33/-0.02	-3.34/-4.26	-7.38/-15.01	-14.49/-13.71	-13.53/-18.63	-18.8/-18.92	-14.87/-10.48	-9.39/-13.81	-17.47/-16.14	-17.97/-18.12	-17.74/-17.77
Θ(105°)	-17.43/-19.1	-17.99/-18.32	-18.85/-17.52	-12.91/-13.79	-11.71/-11.58	-15.37/-26	-11.11/-12.18	-10.38/-8.53	-8.11/-8.07	-11.11/-12.18	-10.38/-8.53	-4.74/-2.18	0.48/0.82	-0.13/0.02	-3.31/-3.75	-6.89/-14.41	-17.05/-12.93	-9.51/-14.89	-11.79/-17.32	-17.55/-17.18	-15.66/-17.81	-10.36/-15.26	-15.52/-18.94	-17.72/-18.55
Θ(112.5°)	-17.61/-18.89	-18.12/-18.48	-19/-18.78	-11.79/-18.92	-13.32/-13.82	-13.53/-8	-8.36/-12.26	-11.94/-10.4	-6.34/-8.44	-10.83/-8.56	-6.82/-6.06	-4.99/-3.26	-0.42/0.78	-0.2/-0.22	-2.4/-4.18	-8.85/-15.73	-17.76/-18.47	-13.94/-18.57	-18.32/-19.1	-18.29/-17.52	-16.79/-13.77	-18.5/-19.29	-15.5/-17.91	-17.7/-18.21
Θ(120°)	-15.18/-18.27	-18.51/-15.1	-17.99/-14.5	-16.33/-15.62	-14.67/-14.68	-13.87/-10.93	-9.66/-14.03	-13.08/-10.06	-8.04/-8.9	-12.56/-13.39	-8.16/-6.32	-5.79/-3.19	-2.09/-1.03	-0.67/-1.68	-4.09/-4.71	-7.38/-11.11	-13.35/-19.72	-15.84/-17.4	-17.39/-18.53	-17.54/-19.3	-10.89/-19.04	-19.03/-18.6	-17.74/-17.77	-17.47/-17.77
Θ(127.5°)	-15.17/-15.28	-16.57/-15.57	-17.99/-16.27	-15.77/-17.95	-17.89/-18.12	-10.68/-13.09	-12.99/-9.34	-8.53/-10.92	-12.54/-11.37	-8.86/-5.61	-4.64/-5.36	-4.54/-2.7	-2.85/-1.92	-2.57/-4.3	-6.08/-11.38	-15.39/-15.64	-11.79/-11.23	-10.18/-9.55	-9.44/-13.4	-12.93/-16.9	-16.27/-15.77	-14.07/-17.82	-17.06/-17.68	-17.06/-17.68
Θ(135°)	-11.85/-14.57	-17.02/-15.92	-18.26/-15.27	-17.99/-17.33	-18.39/-15.09	-16.22/-15.27	-15.42/-17.02	-13.16/-10.07	-8.44/-9.6	-12.45/-13.13	-10.32/-9.11	-5.37/-3.17	-3.4/-4.34	-2.45/-0.42	-3.77/-4.86	-6.48/-12.46	-18.27/-11.82	-14.82/-18.55	-18.12/-19.28	-11.53/-18.2	-14.25/-17.62	-18.32/-18.08	-17.48/-18.44	-19.22/-18.66
Θ(142.5°)	-11.96/-17.55	-13.52/-11.16	-13.24/-16.09	-16.24/-18.71	-17.72/-18.59	-18.35/-18.89	-16.33/-15.76	-12.61/-10.66	-10.26/-9.65	-9.36/-9.92	-10.08/-7.35	-6.05/-4.08	-4.71/-4.11	-4.43/-4.15	-6.27/-9.33	-9.91/-18.76	-16.16/-16.74	-17.95/-14.08	-14.85/-17.15	-18.69/-12.31	-18.71/-18.03	-18.17/-17.61	-18.71/-18.03	-18.17/-17.61
Θ(150°)	-18.34/-15.77	-18.44/-18.9	-19.31/-15.67	-17.69/-13.85	-18.13/-17.96	-17.12/-17.95	-19.14/-17.83	-9.13/-11.39	-12.43/-11.22	-10.72/-4.8	-6.76/-4.85	-4.47/-5.66	-6.55/-7.96	-11.56/-12.06	-8.66/-9.02	-14.36/-17.06	-12.96/-11.33	-10.77/-11.52	-18.71/-18.62	-15.73/-18.03	-18.62/-16.45	-17.26/-17.98	-18.62/-16.45	-17.26/-17.98
Θ(157.5°)	-15.67/-14.43	-14.93/-14.85	-14.02/-14.96	-17.35/-17.52	-16.67/-16.27	-18.29/-18.47	-18.71/-14.86	-18.16/-18.4	-16.49/-14.64	-13.84/-14.31	-14.91/-13.16	-11.51/-8.04	-6.93/-8.81	-9.29/-8.41	-9.28/-10.38	-9.33/-6.78	-5.87/-8.01	-10.09/-14.76	-17.97/-18.56	-18.15/-16.61	-12.54/-10.06	-9.72/-11.06	-13.6/-18.58	-18.34/-17.68
Θ(165°)	-18.48/-14.79	-13.56/-12.6	-11.42/-11.07	-11.35/-12.98	-16.87/-17.52	-17.23/-17.46	-16.11/-16.06	-15.26/-15.82	-18.39/-18.69	-18.3/-16.63	-14.58/-13.76	-12.55/-12.83	-15.03/-13.54	-12.28/-12.89	-11.41/-9.98	-9.27/-3.44	-9.14/-12.03	-13.52/-15.58	-18.64/-18.11	-18.42/-17.64	-14.01/-14.06	-17.81/-18.79	-18.67/-18.66	-17.37/-17.87
Θ(172.5°)	-17.81/-18.05	-17.58/-18.6	-15.99/-15.94	-14.72/-15.4	-17.8/-17.83	-17.97/-17.86	-17.98/-17.99	-19.02/-18.53	-16.85/-15.23	-14.67/-14.79	-14.66/-13.92	-15.17/-16.73	-15.85/-16.63	-17.08/-14.82	-13.44/-15.07	-17.77/-16.27	-15.5/-17.32	-17.16/-17.85	-18.49/-16.24	-17.73/-18.47	-17.25/-18.68	-19.21/-17.5	-19.03/-17.46	-17.38/-17.96
Θ(180°)	-18.28/-18.23	-18.98/-18.29	-18.68/-17.52	-18.35/-18.25	-18.12/-19.3	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11	-18.75/-17.11
Freq(Hz)	6.995GPol.	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	1.62/1.18	0.59/0.13	-0.8/-1.1	-1.34/-1.6	-1.81/-1.77	-1.51/-1.01	-0.46/-0.05	0.22/0.7	1.13/1.38	1.63/1.89	1.85/1.79	1.78/1.27	0.74/0.46	-0.05/-0.77	-1.57/-2.45	-3.2/-3.28	-2.82/-2.29	-1.45/-1.4	-1.39/-0.04	1.02/0.99	1.07/1.89	2.11/2.05	1.93/1.7	1.79/1.82
Θ(7.5°)	-0.53/-1.42	-2.67/-4.67	-6.45/-6.72	-6.89/-9.68	-6.34/-5.02	-3.8/-2.51	-1.42/-0.7	-0.14/0.3	0.63/1.1	1.48/1.62	1.56/1.94	2.12/1.87	0.61/0.47	0.31/-0.15	-0.69/-1.08	-1.41/-1.86	-1.82/-1.88	-2.06/-1.4	-0.64/-0.02	0.45/1.33	1.75/1.96	1.83/1.31	0.88/0.22	-
Θ(15°)	-4.54/-8.17	-12.97/-18.55	-17.55/-18.57	-18.85/-14.78	-11.01/-7.91	-5.52/-3.7	-2.47/-1.64	-1.25/-1.38	-1.52/-1.65	-1.57/-1.61	-1.32/-0.47	0.04/0.13	1.28/1.17	0.70	-0.73/-4.33	-2.45/-3.66	-5.08/-6.74	-9.29/-10.54	-8.71/-5.69	-3.5/-2.49	0.28/0.94	0.25/0.84	0.92/0.67	-0.21/-1.97
Θ(22.5°)	-5.17/-9.62	-12.75/-12.27	-10.27/-9.15	-9.04/-8	-7.69/-7.66	-7.06/-6.42	-5.15/-4.28	-3.97/-3.13	-2.48/-2.2	-1.69/-1.62	-1.45/-0.91	-0.40/0.91	1.25/1.33	1.22/1.17	0.88/-0.31	-2.5/-4.97	-7.3/-9.96	-11.67/-8.95	-6.31/-4.31	-2.19/-1.68	-2.31/-3.12	-2.97/-2.77	-2.63/-2.42	-2.29/-2.88
Θ(30°)	-8.88/-14.4	-14.67/-13.92	-10.81/-7.78	-7.03/-5.56	-5.58/-5.18	-5.01/-5.07	-5.18/-5.96	-6.98/-6.99	-5.89/-3.94	-2.6/-2.15	-1.58/-1.14	-0.28/-1.39	2.18/2.45	2.31/1.16	1.06/0.67	-0.76/-2.99	-4.48/-5.22	-5.79/-3.9	-2.86/-2.32	-1.41/-0.99	-1.78/-2.59	-3.34/-5.02	-5.59/-6.34	-6.92/-6.27
Θ(37.5°)	-10.84/-16.92	-18.84/-19.01	-14.24/-9.48	-8.43/-5.56	-9.35/-6.74	-5.2/-4.11	-3.63/-3.25	-3.77/-5.26	-6.35/-5.69	-4.9/-5.11	-4.25/-2.72	-0.33/2.42	3.93/9.99	2.69/0.15	0.65/0.91	-0.8/-3.16	-3.02/-2.54	-2.52/-3.29	-4.53/-5.1	-4.33/-2.31	-1.64/-1.76	-1.96/-2.93	-6.18/-4.83	-10.67/-10.93
Θ(45°)	-5.3/-6.93	-14.93/-15.96	-11.32/-9.68	-14.04/-16.96	-18.36/-13.82	-9.78/-6.02	-4.96/-4.54	-4.57/-5.41	-6.46/-6.7	-7.6/-7.37	-4.84/-2.43	-0.57/1.36	3.32/4.45	4.19/1.85	0.77/0.38	-1.02/-4.38	-3.83/-2.38	-2.47/-4.44	-10.28/-16.42	-13.21/-8.57	-7.99/-7.28	-6.07/-6.99	-9.96/-12.92	-8.96/-5.24
Θ(52.5°)	-2.31/-5.04	-9.69/-12.71	-9.71/-10.77	-18.59/-11.9	-12.24/-17.66	-18.19/-10.66	-6.91/-5.51	-5.45/-5.67	-5.04/-4.67	-5.66/-5.78	-2.82/-0.79	0.75/1.54	3.22/3.64	3.75/1.82	0.60/5.9	-1.32/-4.27	-4.51/-4.69	-5.54/-7.28	-12.61/-16.47	-17.61/-18.35	-17.76/-17.88	-19.07/-17.51	-18.02/-10.96	-7.34/-3.97
Θ(60°)	-1.63/-4.58	-8.74/-7.99	-7.05/-12.38	-17.91/-9.95	-12.07/-16.6	-18.45/-15.33	-10.61/-7.91	-6.38/-6.39	-5.19/-4.5	-5.5/-5.77	-2.9/-1.38	-0.42/0.96	1.92/2.07	2.04/1.74	-0.79/-1.35	-1.6/-4.31	-5.69/-6.97	-8.83/-14.19	-18.89/-16.47	-11.28/-11.19	11.08/-13.1	-18.33/-18.49	-11.83/-9.04	-5.79/-2.72
Θ(67.5°)	-3.14/-5.54	-8.66/-7.99	-8.08/-13.66	-16.94/-11.22	-14.16/-18.28	-18.11/-18.66	-18.91/-11.34	-6.14/-6.14	-6.47/-4.5	-5.77/-6.68	-4.28/-2.75	-1.34/0.33	1.48/1	-0.37/0.16	-2.6/-3.92	-2.69/-4.9	-5.72/-6.68							



Radiated Composite Gain Data of 6GHz

Appendix B

Θ(75°)	-8.68/-11.66	-7.97/-19.16	-10.61/-18.96	-10.55/-7.87	-11.86/-13.03	-11.89/-6.96	-6.1/-5.69	-2.06/-1.98	-4.88/-3.71	-4.06/-5.72	-4.14/-4.61	-3.46/-1.86	-5.47/-8.66	-8.42/-12.6	-8.51/-11.66	-14.01/-8.74	-6.96/-5.12	-2.59/-2.32	-1.76/-2.53	-3.39/-2.38	-3.49/-7.37	-17.31/-16.97	-13.51/-7.65	-11.01/-6.72
Θ(82.5°)	-6.75/-10.35	-9.68/-18.1	-12.76/-17.86	-10.13/-10.08	-12.55/-18.31	-17.96/-8.92	-7.6/-6.53	-2.51/-2.44	-4.89/-4.29	-4.75/-6.67	-5.09/-5.18	-2.81/-2.24	-6.39/-7.62	-8.32/-12.07	-9.71/-13.08	-11.47/-8.74	-6.78/-4.27	-3.05/-3.51	-3.61/-4.14	-7.05/-6.33	-3.88/-6.99	-12.86/-13.14	-18.81/-7.62	-9.31/-7.85
Θ(90°)	-7.21/-11.05	-10.37/-17.55	-11.61/-16.86	-11.01/-10.82	-18.45/-12.76	-16.54/-8.65	-6.74/-6.68	-5.52/-6.58	-4.27/-4.99	-5.15/-8.8	-7.27/-6.18	-3.21/-2.58	-5.12/-7.81	-9.26/-10.78	-11.77/-11.89	-12.47/-9.85	-10.03/-6.9	-4.11/-6.81	-6.69/-8.25	-12.83/-6.83	-6.65/-9.75	-17.76/-13.04	-18.55/-9.54	-14.33/-10.59
Θ(97.5°)	-9.41/-13.37	-10.16/-18.05	-11.03/-19.21	-9.55/-16.58	-18.85/-10.02	-14.35/-7.48	-6.46/-7.93	-3.74/-4.7	-5.82/-6.51	-5.94/-10.54	-8.47/-6.14	-2.95/-3.16	-5.79/-7.73	-9.03/-9.92	-15.57/-11.83	-9.89/-11.5	-13.02/-10.94	-10.96/-13.75	-10.94/-16.35	-19.07/-15.24	-11.53/-15.65	-18.07/-14.63	-18.15/-11.26	-12.62/-10.34
Θ(105°)	-11.19/-15.5	-10.68/-17.86	-9.83/-18.62	-10.71/-18.96	-17.66/-9.98	-14.73/-8.42	-6.59/-8.07	-5.85/-7.36	-7.33/-9.46	-8.63/-12.26	-10.5/-6.16	-3.85/-3.31	-6.17/-10.82	-10.97/-9.61	-13.77/-15.56	-12.23/-14.02	-19.12/-11.56	-10.86/-17.16	-17.59/-18.53	-18.59/-17.95	-18.34/-18.93	-18.06/-17.94	-19.64/-16.08	-16.25/-11.59
Θ(112.5°)	-14.4/-16	-12.29/-12.36	-11.51/-18.14	-11.69/-18.95	-15.58/-12.09	-12.35/-10.58	-8.51/-13.66	-8.05/-11.19	-11.33/-11.57	-9.98/-14.15	-11.35/-5.89	-3.3/-3.83	-7.81/-11.33	-11.75/-9.27	-18.44/-14.98	-12.22/-16.65	-18.9/-15.86	-18.73/-17.57	-17.69/-16.24	-18.22/-16.65	-18.24/-15.95	-19.24/-18.21	-19.05/-13.64	-17.57/-9.64
Θ(120°)	-13.87/-15.26	-14.52/-16.74	-9.21/-19.11	-9.74/-19.1	-12.09/-12.69	-15.34/-18.65	-13.17/-18.49	-14.53/-17.48	-16.25/-13.32	-16.12/-12.93	-11.48/-5.92	-5.51/-5.31	-8.97/-9.23	-11.45/-9.71	-14.58/-18.26	-15.37/-18.2	-18.89/-12.57	-17.65/-11.34	-10.54/-17.6	-11.24/-6.77	-11.67/-14.74	-11.93/-13.11	-18.56/-17.73	-18.52/-12.47
Θ(127.5°)	-17.65/-16.04	-17.35/-16.83	-13.85/-18.64	-14.45/-17.57	-11.76/-13.91	-18.36/-18.91	-18.44/-17.32	-18.07/-17.54	-16.13/-18.21	-16.04/-13.56	-10.6/-5.12	-4.67/-8.22	-16.14/-12.64	-11.79/-8.05	-10.45/-18.02	-18.05/-10.83	-17.55/-18.43	-9.25/-8.43	-14.47/-17.77	-12.69/-8.38	-10.26/-16.09	-18.23/-13.42	-14/-18.37	-17.22/-12.83
Θ(135°)	-13.48/-13.19	-18.25/-19.16	-13.87/-19.07	-12.73/-18.88	-10.32/-10.09	-18.66/-16.03	-15.76/-19.23	-18.65/-18.68	-16.29/-10.26	-9.99/-9.95	-9.58/-6.67	-5.28/-8.1	-17.99/-18.3	-15.4/-7.53	-10.91/-15.35	-18.75/-18.36	-17.54/-15.93	-9.74/-9.44	-11.22/-14.9	-12.13/-15.85	-13.64/-15.5	-16.8/-16.49	-14.3/-16.9	-19.48/-11.22
Θ(142.5°)	-13.47/-10.05	-14.73/-18.96	-18.17/-18.09	-13.61/-15.15	-12.82/-8.22	-9.91/-17.53	-17.19/-10.64	-8.88/-10.57	-15.9/-15.58	-11.27/-8.23	-9.27/-8.93	-6.8/-9.19	-12.26/-18.72	-18.45/-12.62	-12.73/-18.41	-17.5/-18.43	-16.75/-18.38	-18.78/-17.86	-18.12/-15.03	-18.04/-18.63	-11.2/-14.36	-11.78/-12.05	-17.22/-14.78	-14.99/-12.47
Θ(150°)	-17.49/-14.14	-13.18/-18.68	-19.31/-17.93	-18.17/-17.02	-9.45/-7.08	-8.46/-12.4	-14.62/-11.54	-9.95/-9.8	-10.94/-13.34	-12.36/-11.23	-11.29/-10.6	-10.52/-14.16	-18.87/-16.02	-18.33/-17.87	-19.15/-17.9	-17.84/-18.03	-17.88/-18.91	-18.31/-17.87	-18.4/-18.09	-17.91/-18.88	-13.98/-17.05	-18.61/-19.11	-18.48/-16.89	-12.77/-12.62
Θ(157.5°)	-18.07/-14.68	-11.75/-15.25	-17.8/-18.36	-13.87/-17.65	-15.67/-12.52	-12.39/-13.97	-15.63/-13.82	-11.92/-9.73	-9.08/-10.23	-10.45/-9.41	-9.16/-10.16	-14.02/-18.64	-17.73/-17.6	-17.85/-18.83	-16.57/-14.3	-15.2/-17.44	-18.28/-18.83	-17.59/-18.06	-18.22/-18.64	-19.08/-16.61	-12.8/-12.66	-13.21/-14.28	-17.6/-18.1	-17.99/-15.25
Θ(165°)	-18.94/-18.3	-13.63/-12.58	-12.74/-14.74	-17.44/-18.11	-18.59/-18.24	-17.71/-17.17	-16.72/-14.63	-12.94/-11.75	-10.38/-9.52	-9.79/-11.64	-12.71/-15.8	-17.9/-15.8	-12.21/-10.91	-11.62/-11.74	-11.59/-14	-18.02/-17.74	-16.59/-15.03	-16.2/-16.23	-17.23/-17.62	-18.58/-18.76	-18.01/-17.92	-18.47/-17.77	-17.44/-14.01	-15.13/-16.67
Θ(172.5°)	-17.78/-14.95	-12.69/-11.48	-10.76/-10.68	-11.19/-11.81	-12.19/-13.93	-16.86/-18.2	-18.94/-18.66	-17.54/-15.97	-14.46/-13.08	-12.69/-11.97	-11.88/-12.33	-10.98/-11.59	-14.46/-17.73	-17.59/-18	-18.47/-18.55	-16.85/-15.32	-15.07/-16.88	-17.76/-18.21	-18.01/-18.75	-17.86/-18.22	-18.93/-18.65	-18.66/-18.02	-18.23/-18.3	-17.55/-18.39
Θ(180°)	-10.07/-10.7	-12.06/-13.27	-14/-16.13	-18.89/-17.89	-19.27/-17.92	-17.89/-18.07	-16.9/-18.22	-15.78/-14.5	-14.07/-14.61	-13.77/-13.79	-14.16/-13.91	-15.98/-17.01	-16.91/-17.05	-13.45/-12.1	-13.14/-14.78	-16.96/-18.64	-18.02/-18.75	-17.49/-18.68	-18.49/-18.15	-18.47/-16.95	-14.81/-13.74	-14.04/-14.1	-14.18/-13.98	-12.42/-10.78
Freq(Hz)	6.175GPdL	ThetaAnt. 2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-1.93/-2.5	-3.39/-4.03	-4.51/-5.18	-6.1/-6.64	-7.1/-7.42	-7.35/-6.95	-6.04/-5.6	-4.89/-4.63	-4.16/-3.69	-3.51/-3.22	-2.94/-2.64	-2.54/-3.13	-3.21/-2.61	-2.26/-2.43	-2.97/-3.68	-4.2/-5.6	-5.99/-6.52	-6.85/-6.94	-6.89/-4.38	-5.39/-4.38	-3.47/-2.84	-2.37/-1.73	-1.29/-1.33	-1.41/-1.45
Θ(7.5°)	-2.39/-2.32	-2.41/-2.52	-2.64/-3.04	-3.94/-4.7	-5.93/-7.46	-8.95/-10.97	-12.02/-10.71	-7.72/-5.79	-4.3/-3.08	-2.37/-1.7	-1.38/-1.32	-1.87/-2.8	-3.37/-3.56	-3.6/-4.23	-5.33/-6.86	-7.67/-7.77	-7.52/-7.23	-7.02/-6.62	-6.47/-6.14	-5.46/-5.1	-4.88/-4.76	-4.34/-3.93	-3.53/-3.21	-2.8/-2.41
Θ(15°)	-4.61/-4.31	-4.32/-5.51	-7.09/-8.47	-9.06/-8.66	-8.62/-8.77	-7.85/-9.14	-10.35/-9.82	-8.88/-8.1	-5.85/-3.76	-2.73/-1.74	-1.07/-1.04	-1.34/-2.07	-2.66/-2.1	-1.26/-1.04	-0.580/-1.2	0.450/-4.1	0.06/-0.22	-0.57/-1.48	-2.65/-3.92	-4.91/-6.13	-6.6/-7.31	-7.63/-7.73	-6.48/-6.08	-4.73/-4.94
Θ(22.5°)	-5.82/-4.54	-5.41/-6.26	-9.21/-11.99	-12.09/-12.14	-13.05/-13.81	-15.9/-16.06	-10.17/-6.72	-5.28/-4.19	-3.45/-3.35	-3.24/-2.06	-0.750/-2.7	-0.310/-5	0.951/-68	1.992/-06	2.092/-16	1.741/-12	0.24/-0.36	-0.91/-1.68	-2.46/-3.6	-5.05/-7.17	-10.85/-15.08	-12.1/-8.15	-5.77/-5.44	
Θ(30°)	-6.62/-6.97	-6.4/-7.4	-9.96/-14.4	-18.69/-18.25	-13.91/-10	-7.59/-7.1	-8.07/-9.31	-7.46/-4.92	-3.03/-1.71	-1.31/-0.94	0.351/-5.1	2.031/-93	1.10/-59	1.111/-36	0.44/-0.59	-0.71/-0.62	-1.11/-2.09	-4.04/-4.88	-4.73/-4.57	-5.21/-6.87	-9.33/-10.64	-13.22/-19.06	-17.74/-9	-6.42/-5.91
Θ(37.5°)	-12.38/-15.12	-15.6/-10.3	-15.13/-11.85	-8.45/-17.7	-7.13/-7.72	-4.57/-5.05	-7.51/-9.2	-8.18/-59	-2.9/-6.8	0.160/-8	1.21/-68	1.91/-09	0.220/-48	0.480/-31	-1.08/-2.47	-2.29/-2.14	-2.32/-4	-6.32/-8.1	-10.27/-16.69	-8.56/-9.38	-14.75/-11.6	-17.92/-18.62	-13.51/-9.77	-7.88/-8.71
Θ(45°)	-18.28/-18.12	-17.76/-10.83	-8.24/-6.05	-4.66/-4.85	-6.82/-7.96	-10.36/-15.11	-15.27/-13.63	-13.03/-7.87	-2.320/-29	0.640/-92	1.611/-38	0.470/-31	0.440/-42	0.34/-143	-1.5/-6.05	-0.77/-2.33	-1.45/-7.18	-10.27/-11.69	-12.38/-10.08	-10.25/-18.01	-13.33/-18.5	-17.74/-13.22	-9.5/-10.74	
Θ(52.5°)	-18.55/-16.88	-14.55/-7.76	-6.34/-5.12	-4.7/-7.59	-16.94/-19.11	-12.29/-6.47	-4.3/-3.58	-3.9/-4.71	-2.98/-0.54	-0.170/-7.1	2.242/-11	1.820/-96	0.06/-0.6	-0.76/-0.43	0.26/-0.25	-1.14/-2.05	-1.77/-2.52	-7.18/-12.42	-18.27/-18.7	-14.94/-11.56	-10.02/-13.38	-18.27/-18.32	-13.18/-11.76	-12.29/-16.59
Θ(60°)	-13.33/-17.22	-11.94/-7.45	-8.67/-6.63	-5.32/-8.97	-11/-9	-4.84/-2.77	-2.25/-3.15	-0.86/-1.89	-2.61/-1.18	-0.370/-42	2.572/-36	2.32/-48	0.12/-0.17	-0.74/-0.67	-1.28/-2.67	-2.76/-2.32	-0.96/-2.44	-5.43/-6	-8.76/-8.4	-7.76/-13.41	-12.93/-11.19	-16.65/-16.83	-13.59/-8.82	-9.09/-18.75
Θ(67.5°)	-12.48/-18.1	-9.24/-7.17	-10.78/-4.73	-4.48/-6.81	-7.3/-6.6	-3.35/-2.86	-3.56/-2.64	-0.78/-0.7	-2.22/-2.3	-1.480/-95	2.892/-64	2.52/-07	-0.26/-0.03	0.18/-1.23	-0.01/-5.25	-4.72/-3.71	-1.55/-2.46	-1.98/-2.62	-4.62/-5.63	-4.15/-7.98	-18.89/-16.16	-19.06/-16.26	-12.8/-8.77	-6.86/-17.48
Θ(75°)	-13.06/-17.57	-7.5/-8.14	-9.94/-3.53	-4.5/-7.87	-8.07/-7.98	-4.58/-3.83	-5.74/-5.59	-3.87/-2.14	-2.1/-2.92	-2.180/-93	1.441/-94	1.591/-15	-0.69/-0.55	0.55/-3.08	-4.63/-9.35	-10.3/-4.86	-0.74/-0.57	-0.09/-0.22	-2.51/-5.37	-3.69/-4.84	-14.37/-19.08	-18.43/-18.77	-14.03/-10.81	-9.92/-17.65
Θ(82.5°)	-11.92/-11.23	-7.22/-11.35	-7.64/-2.38	-5.01/-8.15	-8.57/-12.22	-6.15/-5.38	-7.49/-8.13	-7.64/-3.35	-1.49/-3.13	-3.67/-6.02	-0.020/-58	0.53/-6.02	-1.99/-9.03	-0.18/-5.69	-6.61/-13.05	-12.04/-4.6	-0.310/-76	0.390/-17	-2.96/-7.48	-5.21/-4.88	-9.22/-13.84	-17.47/-17.91	-17.94/-14.83	-12.33/-18.36
Θ(90°)	-11.67/-11.16	-8.34/-17.48	-7.07/-2.64	-6.06/-9.86	-9.33/-16.23	-11.41/-8.49	-9.18/-9.35	-9.41/-5.16	-1.58/-2.88	-5.18/-3.2	-2.22/-2.05	-0.44/-2.26	-3.18/-3.34	-0.18/-6.72	-8.69/-9	-18.14/-7.58	-1.530/-62	-0.21/-1.73	-6.38/-12.42	-5.85/-4.95	-8.71/-7.29	-16.96/-18.73	-17.98/-13.4	-11.63/-18.45
Θ(97.5°)	-14.31/-12.43	-12.02/-18.23	-7.62/-3.78	-7.83/-10.55	-8.22/-10.5	-10.56/-7.91	-9.7/-8.81	-8.67/-4.98	-2.3/-3.81	-5.92/-4.55	-5.48/-4.08	-3.12/-3.28	-6.25/-3.29	-1.9/-8.81	-12.47/-11.59	-12.62/-10.9	-4.03/-0.34	-1.56/-4.14	-10.78/-17.7	-8.86/-6.13	-6.61/-6.71	-17.46/-16.28	-18.4/-11.23	-10.16/-16.8
Θ(105°)	-11.9/-15.74	-18.47/-19.03	-8.34/-7.1	-10.46/-14.96	-12.04/-9.29	-7.28/-59	-6.86/-7.22	-5.98/-5.02	-3.7/-5.41	-6.86/-5.94	-8.27/-5.15	-4.86/-4.08	-8.5/-6.06	-5.4/-7.38	-15.71/-11.55	-10.01/-18.52	-4.93/-1.88	-2.21/-5.45	-10.44/-18.35	-10.64/-6.53	-7.33/-9.09	-17.78/-9.1	-18.36/-9.1	-14.71/-17.42
Θ(112.5°)	-18.51/-17.81	-17.23/-13.55	-13.16/-11.12	-17.56/-18.56	-14.09/-9.24	-5.61/-3.83	-3.47/-4.11	-6.51/-7.87	-7.01/-7.54	-7.58/-7.93	-10.36/-6.44	-7.28/-8.16	-8.15/-8	-9.07/-10.32	-15.83/-11.34	-8.84/-15.52	-8.48/-4.77	-3.51/-59	-10.58/-17.51	-11.88/-9.32	-8.48/-18.64	-12.53/-19.03	-19.19/-11.28	-18.84/-18.81
Θ(120°)	-16.93/-16.43	-15.76/-11.24	-15.98/-17.75	-11.61/-10.06	-10.09/-13.89	-7.46/-3.83	-4.42/-6.16	-11.84/-13.81	-11.32/-15.21	-8.91/-8.63	-11.55/-10.92	-9.73/-13.45	-10.75/-17.18	-13.15/-12.96										



Radiated Composite Gain Data of 6GHz

Appendix B

Θ(127.5°)	-18.42/-15.35	-17.52/-14.04	-19.02/-19.4	-19.16/-13.02	-10.68/-17.46	-18.62/-18.5	-18.35/-17.87	-16.31/-11.15	-8.9/-11.09	-9.33/-10.39	-10.6/-8.42	-5.41/-5.21	-6.73/-13.97	-13.67/-18.78	-10.22/-8.22	-10.7/-18.7	-12.47/-11.95	-13.53/-9.84	-18.72/-17.64	-12.29/-8.31	-18.65/-17.65	-16.96/-13.76	-17.95/-18.97	-19/-18.08
Θ(135°)	-18.35/-17.96	-18.26/-18.91	-18.25/-17.34	-19.07/-8.21	-7.98/-12.03	-16.62/-17.22	-18.42/-16.96	-15.5/-10.23	-8.69/-12.11	-14.02/-10.52	-9.97/-6.97	-5.1/-4.72	-6.48/-12.63	-16.85/-17.58	-12.04/-11.18	-17.49/-10.98	-9.46/-11.41	-17.02/-11.93	-17.6/-18.57	-15.44/-10.88	-17.23/-18.26	-17.56/-11.27	-16.58/-18.4	-17.26/-18.79
Θ(142.5°)	-18.56/-15.73	-17.65/-18.2	-17.56/-16.93	-14.46/-9.62	-6.92/-9.21	-15.75/-18.39	-14.95/-19.26	-18.72/-10.44	-10.46/-16.5	-18.71/-12.76	-10.33/-7.31	-8.25/-8.02	-8.98/-12.2	-14.72/-17.57	-18/-15.4	-14.89/-17.58	-17.25/-18.71	-18.51/-18.75	-18.68/-18.18	-12.45/-18.36	-12.1/-17.56	-17.49/-17.76	-18.32/-18.25	-10.15/-14.12
Θ(150°)	-17.82/-15.36	-17.1/-18.25	-15.7/-17.96	-18.42/-11.26	-8.85/-10.7	-17.05/-15.51	-14.56/-19.1	-19.13/-14.49	-10.54/-12.68	-19.03/-15.92	-10.71/-9.72	-11.02/-10.45	-9.86/-12.84	-15.82/-16.4	-17.75/-18.3	-15.27/-14.74	-18.61/-18.12	-17.62/-18.51	-17.96/-17.69	-18.6/-18.57	-13.95/-14.05	-14.46/-12.09	-17.64/-18.82	-14.03/-13.79
Θ(157.5°)	-14.03/-13.91	-15.39/-18.1	-18.29/-17.59	-18.49/-17.14	-12.9/-11.53	-13.01/-15.16	-19.47/-18.73	-18.05/-14.86	-13.05/-14.66	-17.87/-17.1	-11.72/-9.98	-10.57/-14.65	-17.85/-18.72	-18.71/-18.38	-18.03/-17.25	-18.36/-18.12	-18.98/-18.19	-16.91/-18.23	-16.21/-15.16	-16.02/-17.94	-16.82/-13.21	-11.64/-10.99	-13.44/-18.49	-15.85/-13.46
Θ(165°)	-18.82/-17.8	-17.93/-18.26	-18.6/-17.38	-17.47/-16.61	-15.32/-15.21	-15.98/-17.46	-18.35/-17.91	-17.79/-16.02	-14.82/-16.3	-16.94/-14.09	-10.69/-9.21	-9.51/-9.52	-11.42/-16.24	-18.51/-18.46	-17.67/-15.29	-15.66/-18.42	-18.69/-17.65	-17.95/-19.15	-18.18/-18.96	-18.4/-18.43	-17.38/-18.53	-16.84/-18.23	-17.32/-17.63	-18.8/-18.38
Θ(172.5°)	-19.19/-19.21	-17.84/-17.72	-17.9/-19.15	-17.91/-17.89	-18.26/-18.11	-18.28/-18.33	-18.65/-16.75	-16.93/-15.52	-15.78/-16.57	-16.31/-16.26	-16.85/-17.03	-15.21/-14.97	-15.26/-14.38	-15.2/-15.25	-16.14/-19.1	-18.01/-18.55	-18.66/-18.58	-17.09/-17.94	-18.41/-19.21	-17.45/-17.91	-18.08/-18.23	-18.92/-18.11	-17.62/-18.19	-19.12/-18.34
Θ(180°)	-17.95/-18.69	-18.32/-17.77	-19.21/-18.71	-17.67/-17.94	-17.99/-18.12	-18.31/-19.23	-17.9/-18.44	-17.51/-19.03	-17.86/-16.49	-15.63/-14.97	-13.82/-12.99	-12.95/-13.2	-12.84/-16.37	-18.45/-18.44	-17.69/-17.99	-17.83/-17.67	-17.81/-18.24	-18.65/-18.27	-17.5/-18.82	-18.23/-18.2	-18.96/-17.71	-17.65/-16.83	-17.44/-15.69	-14.5/-17.22
Freq(Hz)	6.895GPd.	ThetaAnt. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	0.440/13	-0.31/-0.73	-1.5/-2.76	-4.54/-6.21	-8.7/-12.64	-18.8/-17.1	-11.7/-7.77	-5.47/-3.68	-2.54/-1.56	-0.79/-0.05	0.290/44	0.410/14	-0.07/-0.44	-0.87/-1.51	-2.53/-3.9	-6/-8.44	-10.05/-10.73	-10.85/-10.32	-8.03/-6.31	-4.82/-3.56	-2.13/-1.07	-0.87/-0.46	0.180/34	0.350/62
Θ(7.5°)	-1.42/-1.79	-1.94/-2.09	-2.59/-3.46	-4.38/-5.46	-6.63/-7.84	-9.56/-10.55	-10.02/-7.76	-5.98/-4.7	-3.13/-2.21	-1.07/-0.39	0.340/89	1.411/63	1.591/64	0.92/-0.12	-1.51/-3.57	-5.93/-8.21	-11.99/-14.93	-12.84/-9.69	-6.95/-5.21	-3.47/-2.28	-1.7/-1.3	-0.99/-1.05	-0.82/-0.76	
Θ(15°)	-1.3/-1.96	-2.44/-2.86	-3.2/-3.22	-3.6/-4.55	-5.86/-7.62	-10.09/-13.28	-16.47/-17.76	-13.44/-9.79	-6.91/-4.71	-3.31/-2.31	-1.270/0.6	0.971/66	2.182/08	1.891/53	1.070/5	-0.17/-0.63	-0.79/-0.82	-0.95/-1.83	-3.24/-5.16	-8.81/-10.77	-9.34/-6.25	-4.15/-2.75	-1.95/-1.44	-0.73/-0.76
Θ(22.5°)	-2.66/-3.7	-4.63/-4.66	-4.24/-3.65	-3.59/-4.74	-6.85/-10.23	-14.99/-15.21	-13.21/-12.07	-12.89/-12.62	-9.21/-5.99	-4/-2.8	-1.86/-0.64	0.541/26	1.280/96	0.55/-0.21	-0.73/-2.16	-3.9/-5.1	-4.42/-2.31	-0.560/23	0.47/-0.09	-2.22/-6.32	-12.73/-9.52	-5.53/-3.52	-2.53/-2.16	-2.32/-2.26
Θ(30°)	-4.09/-4.42	-3.73/-2.39	-1.39/-1.36	-2.72/-5.3	-7.73/-7.95	-7.03/-5.77	-5.24/-5.46	-9.38/-7.67	-3.78/-1.66	-0.85/-0.54	-0.110/81	1.191/33	1.251/13	0.54/-0.14	-1.34/-2.84	-4.08/-3.92	-3.16/-2.64	-2.43/-2.34	-2.35/-3.43	-8.07/-18.25	-9.93/-5.84	-4.89/-4.69	-4.33/-3.84	
Θ(37.5°)	-4.96/-4.97	-4.17/-3.88	-4.94/-6.67	-17.49/-14.23	-8.66/-7.05	-7.91/-8.13	-7.59/-5	-3.14/-2.83	-5.61/-7.14	-3.08/-0.58	-0.15/-0.15	0.571/23	1.481/85	1.811/38	0.33/-0.42	-0.95/-0.77	0.190/63	0.730/28	-2.01/-4.75	-6.29/-4.91	-6.11/-11.74	-17.37/-10.4	-10.61/-7.96	-5.61/-4.95
Θ(45°)	-5.02/-5.16	-7.62/-8.88	-14.47/-14.19	-9.27/-5.65	-4.1/-4.66	-6.23/-7.41	-9.1/-7.66	-3.74/-1.71	-2.45/-5.39	-2.340/11	-0.07/-0.29	0.861/12	1.081/98	1.311/-0.7	-2.19/-2.58	-2.57/-3.13	-2.98/-2.5	-0.93/-0.61	-1.73/-4.28	-8.35/-8.08	-7.4/-10.47	-15.66/-16.86	-15.82/-9.97	-6.72/-5.62
Θ(52.5°)	-6.17/-6.88	-9.1/-8.22	-9.23/-8.75	-7.63/-6.72	-6.24/-7.4	-7.68/-7.5	-7.31/-7.01	-6.25/-2.33	-1.35/-4.34	-1.820/04	-0.80/08	0.390/69	0.921/41	0.32/-1.78	-1.83/-2.27	-0.79/-1.84	-6.31/-6.53	-5.8/-5.93	-6.48/-7.71	-10.33/-18.36	-9.52/-10.93	-17.92/-18.66	-17.35/-18.99	-8.98/-7.33
Θ(60°)	-7.83/-9.01	-7.4/-3.8	-7.63/-7.88	-8.87/-13.05	-12.97/-10.99	-7.86/-5.38	-3.9/-4.05	-6.62/-4.42	-0.86/-2.76	-2.750/12	-1.580/45	0.23/-0.05	0.750/89	0.29/-2.08	-0.13/-0.29	0.39/-0.9	-3.72/-3.05	-6.48/-9.14	-11.41/-18.19	-10.05/-12.13	-17.26/-12.68	-16.39/-18.61	-18.29/-17.52	-13.72/-10.61
Θ(67.5°)	-9.52/-12.74	-9.98/-10.38	-12.45/-7.95	-7.77/-9.69	-9.61/-6.56	-3.95/-3.12	-2.95/-3.35	-5.42/-6.12	-2.05/-2.66	-4.39/-1	-1.327/0.8	-0.97/-0.04	-0.320/43	-1.55/-1.96	-0.16/-0.47	-0.37/-0.56	-1.14/-0.67	-3.69/-4.95	-3.32/-6.71	-8.71/-6.73	-18.48/-16.59	-18.48/-17.08	-15.88/-10.07	-13.49/-12.2
Θ(75°)	-11.54/-15.11	-4.12/-4.32	-17.68/-6.18	-6/-7.87	-8.89/-3.98	-3.71/-3.95	-5.37/-5.53	-3.83/-5.32	-5.81/-3.66	-0.80/-8.3	-0.64/-0.62	-0.27/-1.52	-2.04/-3.17	-1.84/-0.36	-2.12/-2.47	-0.152/11	0.37/-1.69	-0.61/-2.65	-5.87/-4.15	-7.75/-16.87	-17.92/-18.86	-17.35/-18.99	-14.38/-13.2	
Θ(82.5°)	-10.5/-16.18	-4.81/-7.31	-12.29/-4.36	-6.63/-8.52	-7.42/-3.63	-4.14/-4.29	-8.62/-13.19	-5.01/-4.17	-7.68/-6.2	-8.23/-4.37	-0.370/2	-2.19/-1.12	-1.31/-2.7	-2.43/-3.85	-4.22/-1.57	-3.58/-4.6	0.333/11	2.550/41	0.18/-2.44	-4.35/-4.94	-5.18/-8.91	-13.38/-18.61	-18.89/-17.76	-18.75/-14.14
Θ(90°)	-9.37/-17.57	-16.82/-17.07	-9.53/-3.63	-8.63/-8.87	-10.3/-6.7	-6.6/-5.27	-8.87/-17.98	-8.48/-3.62	-9.54/-9.39	-10.47/-8.5	-2.09/-0.4	-1.23/-5.6	-1.62/-6.1	-2.73/-5.06	-7.31/-2.11	-3.66/-6.7	-3.81/-24	-2.10/7	-2.1/-6.1	-5.38/-7.1	-8.71/-18.85	-17.73/-13.04	-13.95/-14.51	
Θ(97.5°)	-7.36/-17.75	-11.44/-18.59	-8.08/-4.84	-9.83/-11.94	-18.69/-13.05	-10.89/-9.36	-17.22/-18.6	-7.69/-3.62	-11.37/-14.86	-14.31/-4.89	-3.13/-1.76	-4.12/-4.53	-3.25/-5.71	-5.02/-9.02	-8.45/-4.37	-3.41/-5.81	-9.81/-4.5	-0.24/-1.43	-5.45/-13.15	-6.54/-11.02	-8.23/-5.17	-17.28/-19.13	-18.49/-9.94	-11.4/-15.49
Θ(105°)	-8.89/-16.18	-11.57/-18.3	-12.4/-9.23	-10.36/-11.76	-11.01/-13.59	-18.59/-14.18	-9.16/-10.38	-5.6/-4.78	-12.97/-16.57	-14.72/-10.95	-5.43/-3.52	-4.91/-9.13	-5.64/-5.95	-7.23/-11.37	-9.32/-9.26	-4.57/-5.27	-15.91/-4.22	-2.93/-3.18	-8.23/-13.73	-6.54/-9.66	-10.87/-5.99	-17.96/-18.74	-13.54/-10.59	-13.31/-12.85
Θ(112.5°)	-17.53/-13.29	-10.76/-16.64	-16.62/-17.99	-12.31/-12.36	-7.61/-6.89	-14.59/-10.27	-7.89/-12.38	-7.23/-8.18	-10.16/-15.76	-14.35/-9.63	-6.91/-6.14	-7.74/-11.06	-10.73/-6.38	-10.33/-12.09	-6.23/-5.84	-17.19/-5.86	-2.42/-2.68	-11.37/-19.57	-3.88/-9.21	-12.35/-12.17	-18.33/-18.6	-16.46/-17.1	-13.29/-12.46	
Θ(120°)	-17.71/-15	-10.14/-11.47	-18.88/-10.76	-9.62/-9.26	-9.84/-7.67	-7.77/-6.37	-6.05/-10.93	-11.5/-10.34	-18.76/-18.2	-16.99/-10.92	-8.67/-11.19	-17.71/-12.33	-16.3/-9.65	-13.25/-18.89	-5.69/-4.4	-10.49/-10.13	-8.58/-7.67	-17.49/-17.1	-14.51/-12.41	-13.14/-15.48	-13.26/-19.17	-11.17/-18.29	-15.97/-15.96	
Θ(127.5°)	-18.73/-14.39	-13.91/-10.07	-18.61/-11.36	-8.84/-8.68	-16.25/-12.75	-7.95/-6.18	-7.24/-11.49	-15.3/-17.28	-15.49/-12.05	-13.94/-8.93	-9.6/-11.12	-10.4/-17.29	-12.96/-17.3	-18.73/-11.25	-13.3/-13.53	-8.88/-10.87	-12.27/-13.69	-11.79/-13.75	-18.58/-18.86	-18.59/-18.12	-10.75/-15.51	-14.73/-11.45	-14.8/-19.06	-15.46/-17.34
Θ(135°)	-18.12/-18.52	-13.98/-9.97	-13.65/-19.22	-15.29/-18.6	-18.92/-17.83	-17.31/-15.15	-18.17/-19.4	-16.23/-11.25	-7.3/-8.76	-11.3/-9.36	-9.33/-15.53	-19.04/-17.56	-13.11/-11.85	-16.9/-10.72	-11.79/-16.98	-13.73/-14.34	-10.74/-13.33	-16.42/-18.93	-18.64/-18.42	-10.62/-7.51	-10.86/-18.19	-17.89/-18.51	-17.65/-18.77	-19/-18.73
Θ(142.5°)	-17.71/-18.36	-19.07/-12.88	-12.7/-16.72	-14.9/-11.48	-14.73/-19.33	-17.56/-18.19	-19.24/-18.81	-15.47/-8.64	-7.76/-6.63	-9.04/-8.31	-8.02/-12.61	-18.21/-17.75	-17.97/-13.48	-13.18/-18.97	-19.08/-14.24	-15.65/-18.12	-15.54/-11.51	-8.19/-11.03	-18/-17.32	-11.57/-9.58	-11.93/-17.63	-16.08/-10.81	-18.55/-15.54	-18.98/-18.79
Θ(150°)	-18.91/-17.36	-18.66/-18.78	-17.95/-16.33	-11.42/-10.95	-14.7/-16.36	-10.96/-9.88	-12.11/-15.42	-18.13/-18.21	-12.99/-12.92	-14.7/-12.6	-11.91/-13.22	-18.6/-18.35	-18.77/-17.4	-18.05/-17.78	-18.6/-17.37	-17.88/-18.78	-17.51/-15.1	-17.95/-18.53	-17.19/-19.3	-13.76/-11.98	-12.98/-18.36	-16.82/-18.26	-16.01/-17.1	-17.09/-16.01
Θ(157.5°)	-18.8/-18.3	-17.02/-14.88	-13.28/-12.2	-11.23/-9.86	-9.65/-10.53	-9.83/-10.32	-13.59/-17.92	-17.56/-18.11	-13.58/-13.38	-14.01/-14.38	-14.75/-15.57	-18.59/-19.04	-18.86/-18.38	-18.45/-17.72	-15.13/-14.13	-14.25/-11.37	-9.73/-11.25	-15.48/-16.23	-15.33/-16.88	-17.9/-18.96	-18.96/-18.76	-19.29/-19.18	-18.33/-18.26	-18.88/-18.41
Θ(165°)	-17.2/-18.24	-17.34/-17.37	-18.76/-17.28	-18.46/-18.81	-18.02/-18.63	-19.2/-18.45	-18.14/-17.76	-14.7/-13.39	-11.55/-9.99	-10.32/-11.8	-15.77/-18.61	-18.86/-18.02	-18.28/-17.74	-18.09/-19.02	-18.79/-17.33	-16.89/-18.29	-17.7/-18.54	-19.2/-18.1	-17.4/-18.99	-18.12/-15.6	-15.06/-15.62	-16.82/-18.11	-18.87/-18.62	-18.23/-18.65
Θ(172.5°)	-15.28/-18.16	-17.54/-17.37	-17.64/-17.97	-18.54/-18.88	-18.98/-16.03	-13.96/-12.36	-12.14/-12.47	-12.92/-12.75	-12.98/-13.76															



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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	1.05	4.02	4.78	3.61	2.68	3.33	2.51	1.64	1.01
Ant. 2 Max Gain (dBi)	4.57								
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/142.5/277.5	Phi/37.5/15	Phi/37.5/337.5	Phi/37.5/337.5	Theta/37.5/22.5	Phi/75/7.5	Phi/82.5/15	Theta/52.5/37.5	Phi/15/90
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/157.5/0								

Gain Result

Freq(Hz)	2.45GPol.	Phi(Ant.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-17.88/-17.02	-13.51/-11.57	-10.25/-9.2	-7.97/-6.48	-5.14/-4.2	-3.78/-3.65	-3.74/-3.97	-4.28/-4.48	-4.74/-5.18	-5.92/-6.97	-8.4/-10.34	-13.11/-17.9	-17.99/-18.63	-14.87/-11.23	-8.8/-11	-5.73/-4.76	-3.97/-3.36	-2.92/-2.59	-2.43/-2.5	-2.97/-3.66	-4.53/-5.38	-6.23/-7.22	-8.56/-10.4	-13.11/-17.18
Θ(7.5°)	-17.23/-15.73	-11.94/-9.31	-7.43/-6.12	-5.04/-4.11	-3.37/-2.76	-2.41/-2.29	-2.44/-3.01	-3.73/-4.41	-5.04/-5.76	-6.8/-8.15	-9.8/-11.99	-15.06/-17.73	-18.1/-18.84	-18.26/-15.06	-13.01/-11.61	-10.47/-9.3	-7.9/-6.63	-5.75/-5.17	-4.84/-4.64	-4.52/-4.4	-4.46/-4.75	-5.3/-6.22	-7.4/-8.99	-11.34/-14.62
Θ(15°)	-17.35/-15.67	-10.93/-7.99	-6.03/-4.7	-3.89/-3.43	-3.11/-2.79	-2.48/-2.32	-2.49/-3.07	-3.96/-4.85	-5.73/-6.76	-8.01/-9.63	-11.49/-13.45	-15.77/-19.05	-17.89/-18.31	-17.93/-15.02	-18.71/-15.02	-12.88/-11.58	-10.23/-8.63	-6.98/-5.73	-4.81/-4.2	-3.69/-3.16	-2.91/-3.03	-3.68/-4.71	-6.02/-7.59	-9.79/-13.21
Θ(22.5°)	-17.93/-16.45	-10.87/-7.69	-5.56/-4.25	-3.67/-3.55	-3.42/-3	-2.71/-2.12	-2.18/-2.86	-4.02/-5.4	-6.93/-8.41	-10.14/-12.09	-14.12/-15.79	-16.91/-17.86	-16.87/-17.9	-18.73/-18.46	-15.91/-11.59	-9.40/-7.85	-6.84/-6.07	-5.01/-3.82	-2.86/-2.26	-1.86/-1.48	-1.24/-1.28	-1.81/-2.89	-4.45/-6.36	-8.87/-12.56
Θ(30°)	-16.42/-16.96	-11.77/-8.39	-6.02/-4.4	-3.62/-3.12	-2.54/-1.8	-1.36/-1.29	-1.6/-2.46	-3.83/-5.62	-7.81/-9.94	-12.14/-14.17	-15.29/-15.37	-15.22/-15.43	-16.09/-17.38	-18.19/-17.9	-18.42/-14.83	-11.07/-8.97	-7.67/-7.02	-6.59/-5.93	-4.88/-3.88	-3.01/-2.21	-1.49/-0.99	-1.06/-1.92	-3.48/-5.53	-8.03/-14.3
Θ(37.5°)	-15.99/-15.2	-11.25/-9.69	-7.29/-5.37	-4.05/-2.77	-1.53/-0.73	-0.76/-1.52	-2.69/-4.12	-5.69/-7.38	-9.12/-10.22	-10.77/-10.69	-10.36/-10.4	-10.99/-11.83	-12.28/-12.42	-12.56/-13.99	-17.1/-11.58	-15.78/-11.66	-9.82/-7.84	-8.36/-10.33	-12.77/-11.45	-9.98/-6.27	-4.79/-3.19	-2.46/-2.87	-4.41/-6.75	-9.41/-12.56
Θ(45°)	-18.14/-13.87	-12.33/-9.74	-7.94/-6.37	-4.99/-3.3	-1.94/-1.46	-2.19/-4.06	-6.19/-5.5	-9.24/-7.35	-15.88/-5.29	-5.52/-6.34	-7.45/-8.84	-10.65/-11.98	-11.34/-10.18	-9.77/-10.4	-11.93/-12.91	-11.74/-9.44	-7.52/-5.56	-6.53/-7.48	-3.32/-11.95	-13.88/-12.33	-9.08/-6.05	-4.23/-4.01	-5.61/-9.02	-14.27/-18.9
Θ(52.5°)	-17.32/-12.63	-10.46/-8.79	-7.25/-6.08	-4.98/-3.71	-2.84/-3.01	-4.52/-7.46	-12.37/-11.88	-6.43/-3.34	-1.87/-1.81	-3.05/-5.83	-9.91/-5.9	-17.28/-14.69	-11.72/-10.13	-11.45/-12.53	-13.3/-13.1	-12.71/-12.55	-12.09/-11.28	-9.99/-9.01	-8.91/-10.17	-12.09/-11.38	-8.41/-5.53	-3.49/-2.77	-3.82/-7.16	-14.01/-17.67
Θ(60°)	-18.3/-15.68	-11.31/-8.51	-6.41/-4.85	-3.45/-2.26	-1.75/-2.18	-3.58/-5.88	-8.97/-5.86	-4.62/-2.09	-1.11/-1.74	-4.58/-11.76	-19.02/-11.52	-9.69/-10.29	-12.82/-18.01	-18.01/-16.8	-16.64/-14.09	-15.81/-18.9	-17.16/-9.01	-5.5/-3.99	-3.83/-4.82	-7.10/-28	-11.95/-8.93	-5.09/-2.67	-2.35/-4.35	-8.94/-17.87
Θ(67.5°)	-16.74/-16.55	-13.37/-9.63	-7.07/-5.23	-3.46/-2.13	-1.55/-1.61	-2.26/-3.69	-6.17/-5.4	-5.21/-8.24	-12.53/-6.8	-8.96/-13.1	-6.75/-5.27	-7.36/-13.53	-18.92/-14.5	-	-	-	-	-	-	-	-	-	-	-
Θ(75°)	-12.42/-10.74	-9.45/-8.66	-8.05/-7.17	-5.81/-6.47	-3.97/-3.41	-3.43/-4.61	-7.09/-7.38	-3.57/-1.05	-0.56/-2.18	-6.42/-10.32	-6.78/-6.04	-9.62/-14.9	-14.21/-10.85	-14.21/-18.22	-11.71/-7.34	-6.55/-9.15	-14.75/-13.58	-8.21/-6.2	-5.21/-4.32	-3.31/-3.03	-3.77/-5.18	-7.07/-8.41	-7.16/-6.64	-8.33/-11.41
Θ(82.5°)	-15.32/-14.43	-9.77/-9.01	-9.48/-9.17	-7.93/-6.61	-5.29/-3.97	-3.48/-4.1	-4.1/-2.47	-0.210.51	-0.72/-4.08	-12.61/-9.72	-3.43/-3.53	-8.13/-18.52	-14.69/-12.02	-14.3/-16.76	-11.24/-7.59	-11.77/-11.26	-11.04/-7.56	-5.65/-5.26	-5.44/-4.18	-2.31/-0.12	-1.32/-3	-5.71/-7.89	-7.17/-6.21	-6.59/-9.19
Θ(90°)	-9.96/-13.87	-10.02/-8.89	-11.01/-10.45	-9.3/-8.44	-7.49/-5.66	-4.4/-3.82	-2.86/-1.6	-1.09/-2.16	-5.32/-7.93	-5.79/-2.95	-1.7/-3.94	-13.79/-12.59	-6.63/-12.05	-9.08/-19.93	-9.73/-5.02	-7.28/-9.92	-12.16/-6.6	-3.44/-2.87	-4.96/-7.09	-3.98/-1.11	-0.01/-0.53	-2.76/-5.56	-6.05/-6.34	-6.9/-7.43
Θ(97.5°)	-8.95/-16.76	-9.62/-6.29	-6.04/-5.95	-5.33/-5.16	-5.55/-5.14	-3.69/-2.41	-1.69/-1.64	-2.55/-3.49	-5.19/-4.04	-3.58/-3.3	-4.27/-10.66	-10.69/-5.87	-5.81/-7.9	-14.7/-12.36	-5.01/-1.32	-5.07/-10.71	-7.97/-2.93	-0.050.81	-0.28/-2.61	-3.52/-2.4	-1.34/-1.35	-3.64/-6.95	-4.44/-2.94	-3.99/-5.96
Θ(105°)	-5.35/-9.92	-16.61/-9.02	-6.6/-5.26	-3.86/-2.88	-2.7/-2.7	-2.21/-7.6	-1.95/-2.86	-4.38/-5.33	-3.95/-2.9	-3.32/-3.76	-5.53/-9.8	-6.33/-4.62	-4.64/-7.53	-13.23/-9.61	-4.23/-3.13	-5.07/-14.97	-10.67/0.63	0.18/-1.4	-1.65/-1.22	-0.87/-0.64	-1.86/-3.77	-10.72/-8.42	-7.16/-5.92	-6.59/-9.19
Θ(112.5°)	-7.855	-13.42/-10.57	-7.24/-5.25	-3.34/-1.92	-1.39/-1.56	-1.87/-2.26	-3.25/-4.84	-6.05/-4.54	-2.79/-3.05	-4.35/-5.28	-6.7/-4.47	-2.71/-4.22	-5.67/-13.34	-11.96/-5.69	-2.79/-3.56	-8.02/-14.43	-6.68/-2.51	-0.150.84	-1.43/-1.93	-2.56/-2.36	-1.94/-3.86	-8.95/-8.43	-7.32/-7.51	-7.41/-11.01
Θ(120°)	-8.34/-8.15	-10.93/-13.15	-11.14/3	-5.95/-3.96	-3.02/-2.99	-3.71/-5.05	-7.32/-9.5	-7.22/-1.48	-3.02/-3.3	-3.58/-4.49	-6.29/-5	-4.41/-6.8	-9.44/-13.35	-19.22/-8.66	-7.52/-9.34	-17.97/-13.22	-5.84/-2.76	-0.840.32	0.03/-0.29	-1.39/-1.33	-3.23/-3.34	-5.88/-8.72	-8.82/-9.19	-8.82/-9.19
Θ(127.5°)	-14.64/-11.61	-9.89/-8.88	-7.84/-7.37	-6.88/-6.02	-5.39/-5.55	-6.7/-8.3	-8.87/-6.94	-4.55/-3.17	-2.73/-2.9	-4.22/-8.79	-8.01/-3.34	-2.08/-2.61	-4.2/-8.23	-16.38/-12.75	-9.22/-9.82	-16.02/-11.4	-9.67/-5.6	-2.9/-1.24	-0.66/-0.96	-1.53/-1.98	-3.15/-5.26	-4.84/-2.47	-2.38/-4.21	-7.16/-11.56
Θ(135°)	-7.75/-12.4	-18.36/-14.06	-9.46/-7.44	-6.77/-6.64	-6.51/-6.29	-6.23/-6.19	-5.85/-5.03	-3.86/-2.86	-2.43/-1.5	-6.56/-13.4	-5.52/-1.33	-0.32/-1.19	-3.49/-7.23	-10.78/-1.3	-7.8/-9.38	-16.67/-16.41	-7.83/-3.76	-1.340.08	0.71/0.6	-0.09/-1.3	-3.66/-9.62	-15.99/-5.46	-2.39/-2.01	-9.22/-8.88
Θ(142.5°)	-5.74/-6.47	-10.16/-12.96	-12.18/-9.74	-8.26/-7.46	-6.76/-5.87	-5.14/-4.66	-4.22/-3.3	-3.12/89	-3.75/-6.98	-18.09/-3.85	-2.21/-0.11	-0.17/-1.82	-4.74/-8.78	-12.19/-10.25	-9.86/-12.96	-5.75/-9.251	-0.530.55	0.981.05	0.890.35	-1.04/-4.24	-12.04/-16.07	-7.35/-4.81	-4.39/-4.83	-4.39/-4.83
Θ(150°)	-10.18/-10.82	-11.92/-11.41	-11.32/-9.68	-8.27/-6.47	-7.08/-6.49	-6.12/-5.88	-4.62/-5.38	-5.44/-6.44	-9.28/-12.85	-7.94/-7.07	-0.450.47	0.04/-1.57	-4.11/-7.37	-10.57/-11.9	-12.53/-16.09	-17.73/-14.13	-7.57/-2.54	-2.27/-1.34	-1.02/-0.92	-0.79/-0.83	-1.52/-3.32	-7.01/-14.66	-17.04/-11.62	-10.9/88
Θ(157.5°)	-10.84/-12.03	-13.95/-15.12	-15.57/-14.2	-12.21/-10.27	-8.59/-7.16	-6.32/-8.53	-5.74/-6.13	-7.24/-8.92	-9.3/-6.58	-3.57/-1.53	-0.59/-0.67	-1.64/-3.43	-8.55/-8.98	-12.56/-16.09	-17.6/-18.53	-17.9/-12.23	-8.47/-6.35	-5.15/-4.59	-4.51/-5.48	-4.44/-2	-2.48/-5.02	-6.59/-6.41	-6.91/-9.31	-9.24/-9.88
Θ(165°)	-6.9/-7.56	-8.19/-8.53	-8.46/8	-7.16/-6.13	-5.12/-4.29	-3.83/-3.74	-3.98/-4.66	-5.51/-5.95	-5.49/-3.49	-3.31/-2.62	-2.43/-2.79	-3.64/-5.07	-7.03/-9.58	-12.91/-16.97	-18.65/-16.74	-13.41/-11.18	-9.9/-9.28	-9.34/-9.85	-9.88/-8.91	-7.79/-7.26	-7.42/-7.75	-7.52/-8.67	-6.42/-6.51	-6.42/-6.51
Θ(172.5°)	-5.23/-5.89	-6.84/-7.2	-7.41/-7.31	-6.67/-6.38	-5.66/-4.99	-4.6/-4.43	-4.27/-4.27	-4.39/-4.39	-4.1/-3.78	-3.6/-3.73	-4.11/-4.7	-5.47/-6.48	-7.97/-9.36	-10.93/-12.28	-13.98/-13.26	-12.99/-12.89	-13.21/-14.14	-15.48/-17.32	-18.36/-18.51	-14.98/-11.73	-9.58/-8.61	-7.81/-7.2	-6.38/-5.6	-5.28/-4.99
Θ(180°)	-8.41/-5.62	-6.74/-7.98	-9.19/-10.2	-11.01/-11.22	-10.66/-9.69	-8.79/-7.92	-7.11/-6.47	-6.23/-6.12	-5.89/-5.69	-5.65/-5.88	-6.28/-6.67	-7.04/-7.44	-7.79/-8.66	-9.65/-10.97	-12.6/-14.4	-15.9/-16.55	-16.8/-16.94	-16.17/-14.23	-11.77/-9.72	-8.15/-7.03	-6.52/-6.89	-5.25/-4.85	-5.4/-2.8	-5.4/-2.8
Freq(Hz)	2.45GPol.	Theta(Ant.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.19/-5.1	-5.1/-5.2	-5.59/-6.3	-7.36/-8.66	-10.05/-11.83	-13.99/-17.76	-18.23/-17.46	-17.98/-15.6	-12.86/-10.73	-9.02/-7.68	-6.58/-5.68	-4.99/-4.53	-4.2/-4.08	-4.21/-4.7	-5.39/-6.25	-7.51/-9.4	-12.06/-15.17	-18.34/-18.1	-17.82/-18.44	-14.71/-11.83	-9.9/-8.74	-8.02/-7.46	-6.82/-6.21	-5.75/-5.45
Θ(7.5°)	-3.57/-3.22	-3.1/-3.22	-3.68/-4.51	-5.66/-6.96	-8.47/-10.44	-13.02/-12.67	-17.99/-16.3	-14.28/-12.52	-10.75/-9.33	-8.35/-7.72	-7.26/-6.89	-6.64/-6.49	-6.39/-6.48	-6.81/-7.5	-8.49/-9.58	-10.74/-11.74	-12.81/-13.42	-16.83/-18.27	-18.86/-17.67	-17.84/-17.09	-13.3/-10.72	-9.97/-7.67	-6.61/-5.7	-4.9/-4.9
Θ(15°)	-2.74/-2.36	-2.31/-2.62	-3.31/-4.33	-5.53/-6.76	-7.95/-10.23	-10.59/-11.52	-11.75/-11.76	-11.59/-10.95	-9.91/-8.98	-8.47/-8.4	-8.5/-8.78	-9.02/-9.1	-9.04/-8.94	-8.86/-8.98	-9.37/-9.75	-10.88/-11.78	-12.61/-13.92	-15.96/-18.27	-15.96/-18.7	-16.18/-15.09	-11.06/-10.32	-8.97/-7.62	-6.41/-5.36	-4.39/-3.46
Θ(22.5°)	-2.36/-1.97	-1.95/-2.38	-3.24/-4.39	-5.65/-6.8	-7.76/-8.61	-9.21/-9.7	-10.31/-11.07	-11.55/-11.13	-10.07/-9.14	-8.68/-8.59	-8.61/-8.45	-8.05/-7.45	-6.78/-6.19	-5.74/-5.52	-5.44/-5.47	-5.56/-5.78	-6.16/-6.91	-8.26/-10.27	-12.94/-15.55	-17.52/-18.47	-16.67/-13.1	-9.84/-7.55	-5.96/-4.86	-3.92/-3.07
Θ(30°)	-2.75/-2.18	-1.99/-2.19	-2.83/-3.77	-4.84/-6.11	-7.58/-9.13	-10.27/-11.4	-12.57/-13.66	-13.41/-11.98	-10.14/-8.56	-7.5/-6.86	-6.32/-5.73	-5.08/-4.45	-3.93/-3.63	-3.52/-3.67	-3.56/-3.67	-3.55/-4.87	-5.39/-6.4	-8.13/-10.47	-13.07/-14.67	-14.9/-14.6	-13.75/-12.23	-10.02/-7.95	-6.32/-5.12	-4.22/-3.44
Θ(37.5°)	-3.82/-2.9	-2.29/-2.02	-2.14/-2.6	-3.34/-6.87	-5.88/-10.15	-14.11/-18.31	-18.27/-19.05	-15.86/-11.89	-9.03/-6.96	-5.59/-4.9	-4.6/-3.41	-3.98/-3.7	-3.63/-3.8	-4.23/-4.85	-4.57/-4.64	-4.82/-8.21	-10.42/-13.17	-17.01/-16.77	-17.12/-16.79	-15.07/-13.35	-11.38/-9.35	-6.49/-6.21	-5.36/-4.62	-5.36/-4.62
Θ(45°)	-6.03/-4.48	-3.27/-2.44	-1.94/-1.86	-2.41/-3.8	-6.43/-11.2	-18.08/-18.75	-18.51/-19.32	-16.37/-11.																



Radiated Composite Gain Data of Scan Radio and BT2

Appendix C

Θ(22.5°)	3.313/3.4	3.483/6.9	3.462/8.6	1.790/2.4	-1.723/3.98	-6.72/-8.22	-8.18/-6.58	-4.38/-2.59	-1.66/-1.01	-0.080/7.2	1.251/1.51	1.421	0.28/-0.6	-0.79/-0.4	-0.24/-0.49	-1/-1.62	-2.57/-3.93	-5.55/-8.39	-0.18/-7.38	-3.78/-1.24	0.55/1.92	2.863/5	3.313/5.9	3.223/17
Θ(30°)	4.094.12	4.033/61	2.688/7.6	0.61/-1.05	-3.05/-5.19	-6.59/-6.94	-7.19/-5.84	-3.78/-2.04	-1.33/-0.95	0/1.25	1.610/9.4	-0.09/-0.6	-0.8/-0.92	-0.570/0.2	0.04/-0.57	-1.04/-1.62	-1.46/-3.46	-7.08/-11.66	-11.98/-8.26	-5.29/-2.22	-0.460/9.2	2.653/63	3.473/35	3.073/41
Θ(35°)	3.794.32	4.223/25	2.391/-1	-0.34/-1.82	-3.86/-6.01	-5.02/-4.76	-5.46/-4.33	-2.36/-1.13	-0.690/15	0.670/7.1	0.28/-0.93	-2.55/-2.74	-1.87/-1.74	-1.95/-2.02	-2.51/-3.7	-4.96/-6.71	-8.89/-8.76	-6.71/-3.62	-1.89/-9.91	0.090/38	1.313/4	4.554/7.8	4.494/0.8	
Θ(45°)	3.4/3.6	3.732/98	2.531/13	-0.72/-2.87	-5.11/-5.84	-5.51/-5.39	-5.78/-5.54	-4.53/-3.45	-2.49/-1.81	-2.22/-2.91	-0.550/5.2	-0.16/-1.19	-1.19/-1.51	-4.25/-7.14	-5.08/-2.9	-3.28/-3.56	-4.81/-8.6	-13.26/-10.22	-6.01/-4.48	-2.55/-0.24	1.532/66	2.71/8.7	2.313/26	3.584/4
Θ(52.5°)	3.193/66	2.982/61	1.93/-0.5	-1.88/-3.4	-4.52/-5.82	-6.36/-4.62	-3.41/-4.14	-4.54/-4.42	-5.81/-8	-5.33/-3.55	-1.15/-1.46	-2.48/-2.28	-0.58/-2.03	-5.92/-9.35	-9.41/-8.76	-5.37/-6.25	-8.85/-11.86	-17.3/-9.85	-6.27/-5.39	-3.71/-0.71	1.211/9.9	1.642/13	2.664/38	4.644/11
Θ(60°)	3.014.36	4.163/69	1.84/-0.98	-4.12/-7.37	-8.95/-8.24	-5.68/-4.24	-4/-4.1	-3.68/-4.68	-7.58/-8.64	-7.6/-8.96	-6.64/-4.4	-4.15/-3.18	-2.09/-3.95	-9.21/-14.12	-12.18/-5.72	-4.21/-5.8	-9.96/-19.05	-15.73/-10.88	-7.68/-4.7	-2.04/-0.91	-0.610/13	1.932/47	2.262/61	3.062/97
Θ(67.5°)	3.072.37	3.012/93	1.79/-0.76	-4.73/-9.33	-13.56/-10.51	-6.55/-4.95	-5.07/-5.28	-4.53/-5.66	-6.62/-7.92	-11.77/-14.01	-10.36/-8.24	-6.99/-6.22	-4.43/-5.88	-8.73/-9.91	-8.15/-5.26	-5.77/-11.32	-18.43/-15.13	-13.28/-12.01	-10.68/-8.62	-8.61/-3.62	-1.650/0.1	1.611/9.7	1.82/35	4.043/9
Θ(75°)	3.192/24	2.622/16	1.23/-1.09	-5.17/-10.63	-15.58/-13.42	-8.62/-4.93	-4.95/-5.97	-4.97/-6.45	-7.38/-8.31	-11.77/-10.8	-11.17/-18.6	-10.08/-7.85	-6.52/-9.7	-9.44/-10.7	-18.01/-11.33	-8.97/-15.54	-18.67/-19.02	-18.07/-18.91	-13.8/-10.93	-8.03/-5.27	-3.16/-1.5	1.3/31	0.981/21	1.833/16
Θ(82.5°)	2.222/0.1	2.292/49	0.84/-2.24	-6.76/-15.38	-18.59/-18.23	-12.11/-7.44	-6.16/-4.8	-4.23/-6.83	-9.07/-7.69	-12.23/-19.17	-17.98/-18.45	-12.68/-9.3	-8.68/-8.61	-13.18/-18.17	-18.72/-17.85	-18.59/-18.17	-13.07/-11.9	-15.54/-11.45	-6.64/-4.89	-4.44/-4.83	-3.95/-2.12	0.40/53	0.24/14	2.42/76
Θ(90°)	1.71/75	1.791/72	0.36/-3.13	-8.09/-17.94	-17.42/-18.33	-11.59/-6.04	-8.22/-9.05	-5.6/-9.25	-6.78/-9.82	-11.59/-13.32	-17.76/-17.04	-12.81/-17.67	-12.51/-11.33	-18.35/-18.79	-18.42/-16.68	-17.98/-18.78	-14.03/-13.6	-9.99/-6.7	-5.93/-4.07	-4.27/-4.18	-4.65/-2.55	-0.980/24	1.06/-0.27	0.911/39
Θ(97.5°)	0.710/36	0.09/-0.53	-1.81/-2.68	-5.22/-10.41	-18.32/-17.8	-18.29/-12.9	-7.06/-6.38	-7.78/-8.14	-14.12/-3.67	-10.23/-18.41	-10.24/-16.66	-11.7/-16.19	-15.68/-18.37	-14.99/-10.53	-10.47/-9.75	-15.18/-17.1	-12.86/-10.45	-18.47/-11.96	-7.49/-4.19	-2.87/-3.28	-5.66/-6.2	-1.42/-0.03	-0.770/42	-0.350/94
Θ(105°)	-0.26/-0.77	-0.92/-0.88	-1.79/-1.65	-4.33/-8.33	-12.47/-13.94	-16.16/-17.67	-16.48/-15.53	-8.71/-10.7	-11.31/-9.77	-10.64/-17.65	-11.03/-17.32	-10.87/-17.99	-12.01/-8.6	-6.15/-8.81	-15.55/-10.32	-18.15/-17.76	-18.66/-16.07	-18.89/-16.27	-10.44/-5.42	-3.86/-4.06	-8.44/-6.82	-1/-1.66	-0.2/-0.93	0.51/-0.1
Θ(112.5°)	-1.67/-2.98	-3.32/-2.8	-3.41/-3.95	-5.81/-10.17	-14.35/-13.71	-14.89/-18.22	-18.15/-19.03	-12.32/-13.29	-9.03/-9.2	-18.46/-13.45	-14.5/-7.55	-11.41/-16.84	-10.37/-9.3	-5.76/-10.14	-9.85/-9.02	-12.4/-11.66	-18.69/-17.78	-14.51/-12.89	-8.38/-6.24	-4.18/-5.24	-9.2/-5.68	-4.49/-2.32	-2.9/-0.12	-2.53/-0.51
Θ(120°)	-3.25/-4.19	-6.04/-3.89	-2.57/-2.44	-4.38/-7.56	-12.32/-13.16	-11.1/-10.86	-13.68/-17.62	-18.01/-14.74	-12.65/-16.75	-19.15/-12.7	-16.86/-10.6	-12.99/-16.58	-10.15/-9.13	-9.51/-10.81	-7.62/-5.34	-8.55/-10.47	-17.04/-16.73	-12.57/-18.3	-8.87/-7.82	-4.68/-4.18	-8.64/-11.52	-2.21/-2.37	-1.28/-0.85	-1.62/-1.81
Θ(127.5°)	-3.56/-6.92	-4.73/-6.42	-6.73/-6.37	-7.5/-9.96	-11.34/-12.28	-15.59/-17.39	-16.1/-12.98	-10.13/-11.95	-18.69/-19.1	-13.97/-12.79	-9.96/-8.95	-13.85/-11.42	-19.05/-10.48	-9.43/-11.27	-12.06/-9.63	-13.7/-11.81	-12.39/-12.98	-10.65/-18.41	-11.86/-13.47	-13.37/-9.54	-10.42/-8.83	-7.52/-3.69	-4.98/-4.66	-0.32/-0.77
Θ(135°)	-5.84/-5.91	-6.99/-9.9	-8.4/-7.46	-8.96/-13.92	-15.64/-12.09	-11.03/-13.19	-16.12/-13.88	-13.19/-15.82	-15.56/-11.32	-13.8/-13.99	-7.44/-9.47	-12.46/-10.4	-18.56/-6.73	-6/-10.19	-8.97/-5.75	-6.06/-6.91	-7.49/-8.51	-9.58/-11.46	-12.5/-12.04	-12.63/-8.76	-9.73/-17.91	-15.58/-5	-2.39/-2.41	-4.97/-6.67
Θ(142.5°)	-3.43/-6.76	-6.1/-7.39	-10.29/-14.16	-15.17/-13.91	-14.78/-17.34	-17.92/-18.45	-16.44/-17.93	-18.46/-14.02	-11.83/-11.63	-10.91/-5.43	-3.71/-3.83	-3.58/-5.37	-14.85/-6.74	-4.88/-6.34	-8.07/-10.49	-16.93/-16.13	-12.19/-11.01	-8.93/-8.7	-5.88/-9.77	-16.76/-15.99	-8.47/-6.91	-5.26/-3.07	-11.82/-6.39	-5.25/-3.77
Θ(150°)	-8.95/-9.66	-12/-17.26	-18.54/-13.64	-15.45/-13.68	-10.77/-11.02	-10.57/-10.36	-10.47/-10.53	-10.95/-12.12	-15.36/-19.3	-16.94/-9.02	-5.35/-3.71	-0.40/-6.7	-16.95/-13.24	-7.78/-7.72	-9.96/-12.27	-12.97/-13.11	-13.76/-14.42	-14.83/-13.54	-11.68/-11.3	-16.12/-18.31	-8.4/-5.26	-3.67/-12.33	-5.88/-7.56	-7.69/-8.28
Θ(157.5°)	-7.35/-7.47	-6.49/-7.36	-9.38/-12.59	-18.25/-18.7	-17.5/-18.41	-18.11/-19.32	-18.12/-18.49	-17.88/-17.85	-17.52/-17.91	-12.96/-8.81	-5.83/-4.26	-4.43/-6.17	-10.32/-17.94	-16.3/-13.07	-13.21/-12.6	-10.53/-9.04	-8.09/-7.9	-8.8/-10.21	-10.85/-11.28	-11.78/-10.06	-7.23/-5.18	-3.52/-2.41	-2.38/-3.02	-4.89/-5.77
Θ(165°)	-4.67/-5.23	-6.19/-7.3	-8.07/-8.42	-8.54/-9.08	-9.85/-10.36	-11.12/-12.58	-14.57/-14.94	-14.2/-12.27	-10.24/-3.62	-6.77/-5.88	-5.35/-5.64	-7.38/-10.54	-15.54/-18.28	-17.95/-12.47	-10.83/-10.63	-10.39/-10.39	-10.67/-11.13	-11.11/-10.57	-10.19/-10.93	-12.71/-13.56	-13.28/-18.88	-9.75/-7.61	-6.65/-6.18	-5.32/-4.84
Θ(172.5°)	-18.34/-17.43	-18.17/-15.99	-14.55/-14.67	-15.82/-17.97	-18.49/-18.94	-17.85/-17.78	-18.15/-16.04	-15.33/-15.5	-13.59/-11.18	-9.87/-9.43	-9.45/-10.4	-13.08/-16.49	-16.81/-14.59	-12.68/-11.72	-11.92/-12.34	-12.81/-14.16	-16/-18.29	-18.97/-16.65	-18.11/-18.19	-19.25/-18.5	-17.8/-18.22	-19.01/-17.34	-17.73/-18.24	-18.29/-17.56
Θ(180°)	-10.85/-10.18	-9.45/-10.3	-11.33/-11.25	-10.29/-10.29	-11.98/-15.05	-15.07/-15.83	-18.54/-18.95	-18.66/-17.64	-17.68/-18.49	-15.71/-14.7	-14.96/-16.55	-18.17/-18.33	-16.09/-12.71	-10.49/-9.54	-9.51/-9.64	-9.51/-9.47	-9.96/-10.95	-11.64/-12.03	-12.32/-11.84	-11.47/-11.68	-11.77/-10.52	-11.9/-12.65	-13.25/-13.4	-12.35/-10.99
Freq(Hz)	5.3GPol	ThetaAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.99/-6.85	-8.7/-8.84	-7.54/-6.06	-5.08/-4.11	-1.790/54	1.411/44	1.54/1.91	2.16/2.21	2.09/0.27	1.877/1.38	0.56/-0.5	-1.68/-3.08	-4.94/-7.28	-8.07/-8.65	-7.17/-4.83	-2.37/-0.67	0.52/1.16	1.54/2.15	2.83/0.8	3.12/8.8	2.532/25	1.89/1.32	0.47/-0.66	-2.1/-3.75
Θ(7.5°)	-5.32/-7.91	-10.95/-11.24	-7.98/-2.42	-1.91/-1.43	-1.340/4	2.252/62	2.051/72	2.192/56	2.291/7	1.150/57	-0.05/-8.07	-1.47/-2.16	-3.11/-4.27	-5.18/-5.48	-5.65/-5.74	-1.85/-6.69	0.221/0.5	1.882/2.7	2.32/27	2.081/7.8	1.460/9	0.04/-1.06	-2.72/-4.09	
Θ(15°)	-7.09/-10.06	-12.56/-10.21	-6.22/-3.34	-1.53/-0.74	-0.480/35	1.712/63	2.82/53	2.241/95	1.290/59	-0.21/-1.11	-2.11/-3.06	-3.5/-3.6	-3.94/-4.65	-5.31/-4.97	-4.03/-3.8	-3.48/-2.13	2.462/91	1.371/74	2.912/68	2.221/21	-0.03/-1.43	-2.86/-1.49	-5.46/-5.95	
Θ(22.5°)	-8.15/-9.22	-10.22/-8.35	-4.6/-2.18	-1.13/-0.34	-0.010/1	0.71/44	1.79/1.71	1.410/72	-0.48/-1.56	-2.27/-2.96	-4.23/-5.8	-6.67/-7.07	-7.04/-6.48	-5.85/-5.44	-4.97/-4.77	-4.58/-3.87	-2.53/-1.14	-0.210/48	1.241/54	1.250/59	-0.12/-1.08	-2.54/-4.37	-6.03/-6.96	-8.04/-8.17
Θ(30°)	-7.45/-8.84	-8.16/-5.44	-3.17/-1.57	-0.570/42	0.70/14	0.141/0.7	1.751/0.9	-0.31/-1.31	-2.4/-3.88	-3.8/-3.37	-3.81/-4.68	-5.19/-4.73	-3.87/-3.49	-3.95/-4.83	-5.63/-7.27	-9.22/-7.59	-4.66/-3.14	-2.33/-2.19	-2.88/-3.08	-2.52/-2.36	-3.51/-5.16	-6.05/-7.62	-8.71/-8.77	-8.82/-1.3
Θ(37.5°)	-6.24/-6.97	-7.94/-6.61	-3.89/-1.53	-0.390/0.8	-0.15/-0.86	-0.89/-0.47	-0.11/-0.48	-1.65/-3.02	-3.48/-4.35	-5.21/-6.23	-7.6/-10.43	-12.46/-10.65	-8.1/-6.22	-6.16/-7.47	-8.3/-9.06	-9.52/-8.32	-4.32/-3.47	-2.26/-2.32	-4.32/-5.04	-6.4/-6.16	-6.94/-6.9	-7.88/-10.01	-8.04/-5.91	
Θ(45°)	-5.9/-5.46	-6.72/-7.47	-4.36/-2.88	-2.37/-2.24	-2.71/-3.76	-3.71/-3.05	-2.78/-2.68	-2.51/-3.46	-5.06/-7.46	-8.56/-8.64	-12.12/-12.39	-18.56/-16.84	-16.37/-11.46	-7.75/-6.6	-7.53/-9.06	-10.92/-11.4	-9.03/-6.6	-4.12/-2.78	-6.03/-6.95	-8.07/-11.81	-12.04/-8.05	-8.28/-8.13	-5.77/-6.67	-6.88/-6.17
Θ(52.5°)	-4.95/-2.74	-7.09/-4.57	-4.02/-3.69	-4.08/-4.83	-5.26/-5.32	-5.46/-5.31	-4.13/-3.99	-5.29/-7.47	-7.16/-5.86	-8.34/-6.69	-13.07/-10.57	-9.41/-11.88	-19.14/-11.6	-7.32/-5.85	-6.78/-9.67	-11.47/-8.54	-6.45/-5.98	-7.03/-9.04	-9.87/-8.76	-9.49/-11.18	-12.29/-13.55	-10.78/-10.01	-7.16/-6.44	-4.12/-4.4
Θ(60°)	-4.16/-5.57	-7.42/-6.91	-5.56/-4.4	-4.39/-4.92	-5.39/-4.77	-4.59/-5.58	-5.91/-7.23	-10.98/-16.66	-9.34/-6.62	-6.92/-10.55	-12.78/-8.77	-9.08/-8.76	-13.38/-12.17	-8.09/-8.38	-9.17/-11.36	-18.01/-11.56	-11.47/-13.84	-18.52/-18.61	-15.63/-15.42	-12.23/-11.14	-18.98/-15.14	-10.98/-13.11	-8.16/-6.99	-5.82/-4.83
Θ(67.5°)	-6.69/-9.54	-7.79/-6.26	-5.4/-6.08	-7.09/-7.92	-9.11/-10.61	-9.69/-8.06	-8.51/-9.57	-10.02/-10.86	-12.64/-12.62	-9.47/-10.62	-14.09/-11.98	-11.66/-11.77	-16.63/-11.67	-11.84/-10.03	-12.14/-15.96	-18.18/-12.62	-13.89/-11.72	-12.58/-15.21	-17.83/-18.42	-15.57/-18.77	-18.92/-14.82	-18.61/-9.08	-12.94/-7.05	-5.96/-6.67
Θ(75°)	-8.48/-9.41	-7.44/-5.08	-6.25/-8.26	-9.99/-10.55	-10.2/-10.87	-9.24/-9.1	-13.25/-16.98	-18.56/-16.27	-10.44/-11.5	-10.74/-17.3	-15/-9.71													



Radiated Composite Gain Data of Scan Radio and BT2

Appendix C

Θ(67.5°)	-0.28/-0.69	-0.8/-1.6	-3.52/-5.22	-5.55/-5.04	-4.79/-6.09	-8.58/-7.67	-4.76/-6.81	-7.15/-8.06	-15.97/-12.27	-10.22/-11.61	-15.02/-9.14	-9.05/-10.15	-17.77/-19	-14.85/-14.93	-18.15/-16.94	-12.38/-11.35	-11.5/-12.05	-16.99/-18.74	-16.81/-13.92	-10.8/-7.61	-6.33/-3.17	-1.56/-1.67	-0.61/0.26	0.83/0.4
Θ(75°)	-0.21/-0.47	-0.64/-1.7	-4.09/-4.95	-5.33/-5.86	-6.56/-6.99	-8.15/-8.23	-5.89/-7.4	-8.92/-7.9	-13.37/-15.45	-15.79/-14.71	-12.83/-13.09	-12.64/-10.91	-17.93/-13.83	-18.67/-13.72	-14.88/-14.74	-14.07/-11.89	-10.83/-13.88	-18.49/-19.05	-18.73/-12.67	-11.81/-11.62	-9.25/-4.16	-2.2/-3.97	-2.32/-0.07	1.28/-1.03
Θ(82.5°)	-0.37/-0.39	-1.46/-2.4	-3.92/-6.67	-6.24/-5.41	-6.67/-8.22	-12.54/-9.35	-6.14/-7.77	-9.34/-10.56	-13.34/-17.52	-17.9/-18.71	-15.69/-13.59	-13.02/-17.68	-19.05/-15.55	-14.09/-12.66	-18.29/-17.67	-15.69/-14.08	-14.4/-16.88	-17.7/-12.59	-9.39/-6.81	-7.92/-9.42	-8.63/-5	-2.61/-1.93	-1.22/-0.17	0.19/0.52
Θ(90°)	-1.19/-1.28	-1.53/-2.82	-5.13/-5.64	-5.3/-6.41	-8.63/-11.27	-13.85/-11.84	-8.13/-7.54	-10.32/-12.7	-16.7/-18.76	-18.32/-18.19	-15.52/-19.34	-14.03/-16.68	-16.43/-18.25	-13.47/-13.81	-17.91/-13.35	-14.09/-18.51	-15.03/-16.37	-14.79/-11.26	-8.78/-6.22	-8.52/-6.33	-8.63/-5.84	-3.75/-2.69	-2.19/-0.94	-0.26/0.64
Θ(97.5°)	-1.84/-1.49	-2.15/-3.56	-4.34/-5.05	-5.81/-5.3	-9.68/-11.92	-13.14/-10.19	-12.85/-10.6	-10.98/-13.79	-15.63/-18.05	-17.72/-18.16	-18.4/-15.39	-17.25/-18.69	-10.51/-17	-16.64/-13.96	-15.15/-18.96	-16.86/-11.84	-10.24/-11.15	-10.12/-6.55	-5.68/-7.83	-10.43/-6.4	-3.56/-3.1	-1.24/-0.94	-0.24/-0.42	
Θ(105°)	-1.44/-1.98	-2.55/-3.84	-5.23/-5.91	-5.43/-7.47	-11.88/-12.76	-11.74/-16.4	-13.29/-12.98	-18.2/-17.74	-17.42/-18.83	-18.64/-18.54	-16.89/-13.91	-14.79/-15.77	-10.21/-17.73	-16.45/-17.64	-10.83/-10.11	-13.08/-17.88	-12.4/-9.46	-11.92/-6.01	-6.62/-6.24	-9.66/-7.6	-4.3/-2.99	-1.62/-1.5	-1.27/-1.14	
Θ(112.5°)	-2.98/-3.01	-3.26/-3.78	-6.27/-6.3	-6.43/-7.03	-8.61/-14.04	-10.88/-11.38	-17.45/-16.37	-16.02/-18.53	-18.6/-14.36	-17.98/-18.73	-19.12/-17.41	-17.79/-17.98	-17.65/-11.37	-16.56/-13.63	9.84/-12.03	-12.21/-18.94	-14.24/-8.99	-10.18/-12.47	-8.65/-6.42	-5.98/-8.01	-9.37/-6.53	-4.46/-5.35	-1.77/-2.26	-1.41/-2.28
Θ(120°)	-3.05/-5.07	-3.4/-5.42	-6.12/-8.41	-9.94/-14	-11.05/-13.85	-16.84/-17.19	-16.97/-18.22	-18.15/-18.19	-16.85/-17.58	-18.34/-17.21	-12.2/-14.02	9.51/-14.82	-18.76/-11.42	-19.13/-74	-14.12/-9.58	-17.29/-16.64	-16.66/-9.26	-12.55/-14.74	-8.09/-5.93	-5.76/-5.87	-12.98/-9.7	-2.03/-3.92	-3.64/-2.17	-3.63/-3.11
Θ(127.5°)	-4.97/-4.07	-5.25/-5.11	-6.46/-9.06	-9.6/-8.94	-8.72/-11.47	-13.87/-14.15	-19.06/-17.77	-18.8/-18.05	-16.53/-17.37	-17.8/-18.02	-18.6/-13.91	-10.78/-17.65	-16.93/-10.64	-10.23/-8.15	-9.9/-16.85	-17.86/-15.17	-18.97/-12.28	-14.42/-18.1	-12.37/-6.65	-8.85/-7.59	-11.66/-11.31	-5.43/-4.81	-3.24/-1.35	-2.65/-2.81
Θ(135°)	-4.73/-8.59	-7.07/-5.77	-5.94/-6.7	-8.06/-9.04	-11.61/-13.39	-12.71/-14.53	-13.06/-13.17	-18.49/-19.05	-17.1/-18.22	-18.44/-18.33	-16.04/-8.31	-6.92/-14.52	-18.85/-14.17	-11.95/-11.78	-12.07/-12.35	-12.48/-17.46	-17.51/-17.73	-13.33/-15.54	-15.35/-8.25	-6.61/-11.32	-12.95/-15.07	-12.07/-9.3	-7.18/-5.93	-4.29/-3.45
Θ(142.5°)	-7.17/-6.9	-7.85/-6.9	-7.05/-7.72	-8.37/-8.35	-8.48/-10.75	-13.37/-13.14	-15.82/-17.13	-17.95/-18.03	-14.55/-14.19	-14.06/-18.28	-16.21/-10.15	-8.88/-10.13	-14.12/-19.49	-18.05/-18.42	-18.15/-19.07	-19.06/-18.59	-18.85/-18.02	-14.46/-14.64	-12.97/-9.87	-8.26/-10.76	-8.42/-8.04	-13.03/-18.73	-8.55/-6.36	-6.16/-6.98
Θ(150°)	-8.5/-8.72	-0.88/-8.55	-9.98/-9.49	-10.5/-12.26	-13.94/-16.28	-17.84/-18.23	-18.71/-17.13	-17.98/-17.94	-18.04/-18.33	-18.65/-11.5	-6.45/-4.62	-5.44/-8.05	-12.88/-18.92	-18.48/-18.21	-17.88/-17.22	-18.48/-18.89	-18.28/-15.82	-11.16/-12.34	-12.71/-10.16	-10.12/-16.45	-10.178/-6.37	-5/-6.17	-10.78/-12.7	-11.22/-8.83
Θ(157.5°)	-12.28/-14.3	-16.5/-15.85	-14.73/-14.4	-15.34/-14.8	-12.6/-10.95	-10.97/-10.99	-10.24/-10.42	-11.8/-15.41	-18.71/-15.82	-11.15/-7.29	-5.66/-6.17	-8.31/-11.35	-16.13/-17.74	-18.44/-18.03	-19.18/-15.24	-14.18/-17.01	-18.86/-16.27	-12.6/-10.71	-10.3/-10.35	-11.65/-17.57	-16.36/-8.77	-5.58/-4.6	-5.04/-6.25	-8.65/-11.32
Θ(165°)	-11.86/-13.16	-14.76/-13.1	-11.37/-11.59	-13.28/-13.07	-10.82/-10	-12.09/-16.3	-14.21/-13.43	-15.77/-16.21	-14.06/-11.74	-9.81/-9.11	-9.47/-10.5	-11.89/-15.15	-17.9/-18.74	-17.67/-18.24	-17.69/-16.11	-15.83/-16.95	-16.16/-14.09	-12.26/-10.78	-10.45/-19.91	-13.26/-18.69	-17.25/-12.16	-8.62/-7.8	-7.74/-7.99	-9.01/-10.25
Θ(172.5°)	-15.13/-16.55	-17/-17.66	-18.67/-18.46	-18.25/-15.4	-13.74/-13.75	-13.85/-12.13	-10.9/-10.44	-10.35/-10.48	-10.61/-11.58	-12.36/-12.98	-13.89/-15.11	-16.38/-18.26	-17.88/-18.64	-18.1/-18.91	-18.57/-17.66	-18.1/-18.44	-18.35/-17.36	-17.76/-17.71	-18.4/-18.57	-18.74/-15.95	-15.37/-15.49	-15.08/-13.74	-13.1/-13.54	
Θ(180°)	-18.82/-18.49	-18.05/-19.05	-18.32/-16.64	-16.01/-17.88	-18.07/-13.56	-11.71/-12.15	-11.51/-10.14	-10.3/-11.42	-13.32/-14.45	-14.6/-14.82	-14.88/-16.5	-18.21/-18.53	-18.57/-18.01	-17.59/-17.89	-18.96/-18.87	-17.96/-19.13	-18.32/-18.52	-19.1/-18.57	-18.39/-19.45	-18.19/-17.86	-19.41/-18.28	-18.59/-18.25	-17.72/-18.87	-17.73/-18.24
Freq(Hz)	5.785GPol.	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.7/-4.87	-4.32/-4.45	-4.62/-4.69	-4.79/-5.62	-6.17/-5.53	-5.75/-7.72	-9.51/-9.68	-10.72/-11.58	-13.19/-13.1	-13.21/-11.86	-10.15/-8.63	-7.49/-6.39	-5.56/-4.71	-3.83/-3.43	-3.23/-3.19	-3.24/-3.33	-3.58/-4.14	-4.74/-5.57	-6.47/-7.77	-9.91/-11.65	-12.88/-12.09	-11.69/-11.38	-10.07/-8.73	-7.54/-6.4
Θ(7.5°)	-3.74/-3.11	-2.32/-1.4	-1.15/-1.33	-1.31/-1.18	-1.7/-2.74	-2.9/-2.74	-3.42/-4.73	-8.9/-8.98	-9.95/-11.82	-13.3/-12.69	-11.39/-10.15	-9.19/-8.23	-7.84/-7.7	-7.32/-6.85	-6.61/-6.91	-7.45/-7.5	-8.94/-9.54	-10.06/-10.87	-11.18/-11.64	-12.26/-11.7	-11.38/-10.28	-8.64/-6.53	-5.13/-4.31	
Θ(15°)	-2.6/-1.75	-0.88/-0.49	-0.24/-0.1	-0.10/-0.51	-1.05/-1.59	-1.89/-2.5	-3.24/-4.1	-7.3/-9.93	-11.51/-13.59	-15.8/-14.57	-12.83/-10.94	-10.71/-9.52	-9.75/-10.43	-10.66/-9.7	-11.01/-11.05	-13.32/-10.92	-10.45/-11.24	-12.64/-14.18	-15.07/-14.3	-13.02/-11.63	-10.17/-9.45	-8.92/-8.84	-5.56/-5.21	-4.3/-3.22
Θ(22.5°)	-0.74/0.25	0.85/0.77	0.47/0.53	0.52/-0.21	-1.41/-1.34	-0.32/-1.41	-4.01/-5.31	-5.99/-9.14	-11.39/-13.98	-17.95/-18.71	-14.36/-11.63	-10.17/-8.66	-9.56/-11.64	-10.72/-10.26	-11.36/-13.54	-16.24/-14.55	-12.53/-12.48	-13.91/-18.3	-18.52/-14.33	-11.08/-9.55	-8.43/-8.16	-8.54/-7.46	-5.35/-3.23	-2.08/-1.27
Θ(30°)	12.01	2.11/8.7	1.67/1.51	0.66/-0.99	-2.21/-2.1	-1.79/-3	-4.08/-4.93	-7.38/-7.53	-7.59/-11.4	-17.79/-18.89	-19.07/-18.51	-15.78/-14.38	-9.96/-4.99	-11.6/-17.68	-14.14/-17.72	-18.02/-16.17	-14.43/-13.77	-14.48/-18.99	-17.18/-11.42	-8.33/-7.75	-13.79/-12.81	-3.53/-2.3	-1.36/-1.02	
Θ(37.5°)	0.621/89	2.62/2.68	2.25/1.4	-0.08/-1.08	-1.44/-2.37	-3.27/-1.4	-5.4/-9.22	-8.12/-6.55	-7.77/-10	-15.23/-17.47	-18.71/-13.8	-15.27/-13.25	-15.75/-17.22	-13.76/-15.28	-18.19/-13.98	-14.06/-19.41	-16.68/-18.69	-16.87/-14.06	-14.2/-13.98	-11.65/-10.1	-8.55/-11.1	-5.26/-3.96	-3.54/-2.47	-1.82/-0.89
Θ(45°)	0.631/1.52	2.25/2.21	1.6/0.47	-0.52/-1.42	-1.85/-3.19	-5.57/-7.72	-8.07/-8.78	-6.42/-5.67	-6.89/-9.65	-17.26/-16.46	-15.78/-18.76	-16.96/-17.81	-17.64/-14.6	-11.78/-13.69	-12.25/-11.5	-14.57/-18.01	-17.81/-17.45	-10.91/-11.22	-16.09/-15.26	-12.17/-10.12	-9.4/-9.15	-6.28/-4.57	-3.43/-2.49	-2.26/-0.33
Θ(52.5°)	0.54/1.55	1.87/1.48	0.72/-0.35	-1.1/-3.08	-4.03/-4.53	-6.39/-3.84	-6.39/-5.62	-8.73/-10.05	-8.63/-10.44	-14.83/-10.91	-10.05/-14.61	-12.78/-12.72	-17.95/-16.19	-13.9/-13.13	-12.98/-12.84	-12.55/-10.4	-10.79/-15.15	-14.85/-11.97	-12.04/-13.03	-11.33/-11.75	-9.79/-7.2	-4.47/-3.87	-4.37/-3.14	-2/-0.85
Θ(60°)	0.631/69	1.85/1.01	0.04/-1.01	-1.69/-3.68	-3.72/-3.51	-4.21/-6.13	-6.79/-7.53	-8.75/-11.36	-10.24/-8.9	-12.02/-11.14	-7.89/-8.52	9.54/-10.52	-13.18/-16.26	-11.04/-11.36	-10.80/-10.52	-9.69/-9.62	-11.78/-12.42	9.65/-10.57	-9.34/-8.86	-9.98/-11.39	-11.97/-8.54	-4.92/-4.17	-4.51/-3.48	-2.52/-1.6
Θ(67.5°)	0.19/1.2	1.62/0.28	-0.78/-1.46	-2.25/-3.57	-3.87/-4.27	-4.54/-5.26	-5.63/-6.29	-8.12/-13.08	-16.19/-8.78	-10.18/-10.75	-7.13/-6.5	-8.65/-8.77	-8/-9.7	-10.41/-7.8	-6.66/-6.69	-6.42/-4.54	-6.27/-8.09	-5.77/-6.16	-8.31/-7.92	-8.7/-12.48	-9.08/-6.12	-4.57/-5.63	-5.5/-5.33	-2.78/-1.97
Θ(75°)	-1.36/0.66	1.29/0.31	-1.65/-2.91	-3.8/-5.12	-5.45/-4.69	-4.55/-7	-6.9/-7.39	-9.1/-12.72	-18.03/-11.85	-13.69/-12.7	-6.36/-5.73	-9.84/-9.1	-4.74/-6.95	-6.82/-7.52	-6.11/-5.43	-4.17/-4.38	-6.46/-6.87	-6.23/-6.23	-5.95/-4.74	-7.78/-10.2	-7.5/-7.87	-7.76/-9.95	-6.35/-4.04	-3.42/-4
Θ(82.5°)	-3.85/-0.74	-0.01/-1.62	-3/-2.85	-3.48/-4.44	-5.01/-4.54	-3.85/-6.47	-7.84/-9.53	-14.33/-18.62	-18.69/-15.17	-19.06/-11.21	-6.55/-7.76	-12.76/-8.45	-5.3/-7.25	-8.88/-8.33	-7.26/-7.63	-6.83/-6.25	-6.46/-6.34	-6.47/-6.34	-7.19/-5.17	-6.98/-6.46	-5.97/-6.63	-11.83/-8.95	-6.25/-4.32	-4.18/-5.43
Θ(90°)	-5.5/-2.11	-2.89/-3.38	-4.07/-3.17	-3.73/-4.26	-5.01/-6.54	-6.45/-7.65	-11.74/-13.9	-13.91/-18.02	-17.4/-14.37	-16.6/-12.41	-9.08/-8.95	-18.11/-17.08	-7.86/-8.93	-13.03/-9.44	-11.66/-14.64	-14.88/-10.56	-7.44/-7.16	-8.62/-8.74	-7.74/-6.41	-6.98/-7.88	-5.07/-10.45	-11.66/-7.41	-7.41/-5.88	-5.91/-7.53
Θ(97.5°)	-1.13/-4.01	-4.12/-3.94	-4.55/-3.1	-4.16/-5.45	-6.14/-6.69	-7.54/-9.69	-11.07/-12.67	-17.68/-18.65	-11.02/-11.41	-13.84/-11.02	-12.38/-17.86	-17.46/-12.74	-19.29/-12.02	-16.96/-14.87	-14.47/-14.09	-9.08/-6.82	-6.17/-7.1	-5.56/-6.06	-9.76/-9.44	-8.51/-11.24	-8.06/-12.03	-9.39/-9.23	-8.63/-6.04	-6.11/-10.63
Θ(105°)	-14.14/-7.06	-6.24/-6.54	-5.62/-3.78	-4.81/-6.09	-5.85/-7.8	-8.16/-7.27	-10.12/-12.85	-14.92/-17.79	-9.3/-6.65	-9.47/-13.71	-19.15/-14.38	-15.55/-17.74	-16.16/-17.35	-17.13/-18.66	-11.46/-10.78	-6.32/-5.04	-6.42/-8.44	-6.97/-8.46	-15.09/-9.72	-8.68/-16.49	-9.88/-11.81	-8.7/-10.1	-10.17/-8.91	9.02/-9.97
Θ(112.5°)	-19.43/-9.5	-7.23/-8.3	-6.22/-4.12	-3.48/-4.76	-4.73/-5.46	-7.58/-8.74	-7.37/-7.83	-13.43/-18.33	-8.28/-7.86	-11.99/-16.54	-11.67/-9.27	-18.53/-10.77	-9.87/-10.3	-18.24/-10.96	-10									



Radiated Composite Gain Data of Scan Radio and BT2

Appendix C

Θ(105°)	1.14/-1.2	0.27/-0.38	-1.04/-2.09	-4.93/-11.49	-16.44/-10.48	-11.69/-10.01	-8.74/-9.45	-8.35/-9.32	-6.79/-5.39	-5.76/-10.44	-10.18/-18.45	-13.02/-10.41	-17.57/-11.33	-12.19/-12.07	-19.23/-8.84	-9.64/-13.56	-16.71/-12.73	-12.19/-18.79	-11.56/-13.19	-10.95/-11.49	-17.31/-13.95	-8.56/-3.69	-3.76/-1.29	0.03/0.15
Θ(112.5°)	0.31/0.39	-0.3/-1.17	-0.98/-1.99	-2.83/-5.09	-9.6/-18.22	-10.84/-14.97	-7.66/-18.1	-12.57/-11.88	-7.13/-11.34	-5.59/-9.98	-10.55/-17.2	-9/-12.89	-18.88/-16.98	-8.03/-8.78	-7.32/-9.62	-10.77/-12.52	-18.06/-9.76	-7.48/-17.7	-13.73/-12.01	-15.71/-9	-18.61/-11.27	-9.89/-4.17	-3.04/-2.27	-1.20/0.3
Θ(120°)	-0.61/0.4	-0.34/-0.79	-0.23/-0.03	-2.11/-5.18	-6.65/-8.64	-9.63/-11.1	-18.87/-11.54	-18.04/-14.75	-11.52/-12.66	-5.33/-13.4	-14.36/-12.67	-5.68/-8.61	-14.41/-16.98	-12.69/-12.26	-10.49/-13.86	-11.14/-15.26	-13.88/-8.84	-9.29/-11.87	-11.53/-7.79	-10.23/-9.03	-17.77/-15.4	-8.97/-7.86	-3.29/-4.48	-2.75/-2.81
Θ(127.5°)	-1.92/-1.25	-0.67/-0.9	-2.07/-2.24	-1.42/-2.01	-4.78/-10.6	-13.14/-17.04	-11.56/-16.53	-18.91/-17.54	-13.38/-19.05	-15.18/-8.84	-11.59/-13.95	-7.46/-10.31	-18.22/-16.63	-12.25/-10.31	-11.4/-18.43	-15.28/-18.06	-17.01/-12.9	8.07/-10.85	-18.61/-11.85	-14.03/-9.34	-18.92/-9.28	-8.11/-5.95	-3.01/-4.61	-2.9/-1.68
Θ(135°)	-3.86/-2.23	-1.16/-1.35	-0.85/-0.35	-0.44/-1.97	-3.45/-4.33	-4.07/-7.58	-13.33/-18.47	-13.42/-10.99	-14.57/-12.53	-17.7/-8.62	-7.98/-9.66	-5.74/-9.5	-14.8/-10.42	-6.04/-4.12	-6.01/-8.98	-13.65/-13.47	-16.61/-18.33	-17.16/-7.31	-9.23/-6.04	-11.82/-13.14	-18.16/-19.03	-7.62/-13.7	-0.71/-3.66	-3.1/-5.75
Θ(142.5°)	-8.2/-4.99	-3.75/-2.9	-3.06/-4.08	-4.55/-4.72	-4.27/-4.93	-4.72/-4.81	-7.94/-7.93	-5.4/-9.8	-17.97/-9.42	-3.96/-6.81	-18.71/-5.95	-5.08/-8.06	-2.55/-12.81	-7.93/-7.42	-6.09/-9.37	-17.53/-10.3	-8.96/-14.34	-13.85/-13.71	-16.62/-9.16	-11.96/-16.98	-13.52/-15.94	-16.79/-9.31	-8.24/-10.56	-8.14/-8.46
Θ(150°)	-5.9/-5.04	-4.43/-4.87	-4.65/-3.86	-3.77/-3.69	-3.74/-3.55	-2.85/-3.16	-5.18/-6.04	-9.68/-15.25	-10.67/-5.79	-5.66/-13.48	-9.97/-5	-5.9/-8.08	-9.38/-16.35	-8.98/-5.47	-7.03/-15.31	-17.85/-15.24	-8.28/-6.23	-8.58/-11.62	-10.01/-6.49	-8.51/-17.01	-9.99/-10.9	-16.63/-12.56	-7.84/-7.85	-12.62/-9.18
Θ(157.5°)	-6.73/-6.37	-4.48/-3.33	-3.52/-4.24	-3.56/-2.61	-1.94/-2.11	-3.18/-5.43	-7.05/-5.25	-5.05/-5.9	-6.41/-9.4	-18.44/-17.33	-9.25/-7.09	-7.98/-9.75	-11.6/-13.7	-13.99/-12.12	-11.78/-12.9	-14.63/-7.17	-4.33/-5.49	-7.91/-8.21	-6.56/-6.18	-10.79/-15.89	-7.18/-5.3	-6.53/-13.92	-17.89/-9.88	-6.95/-6.38
Θ(165°)	-6.25/-4.83	-4.21/-3.85	-3.62/-3.73	-4.22/-4.96	-5.34/-4.92	-4.02/-3.49	-3.18/-3.09	-4.13/-6.61	-10.01/-10.21	-10.11/-12.79	-15.66/-16.81	-17.08/-15.45	-13.31/-11.71	-12.26/-15.3	-17.29/-12.99	-10.73/-10.27	-9.74/-8.91	-8.47/-9.07	-10.47/-14.39	-17.81/-11.89	-7.04/-6.07	-6.81/-9.88	-16.09/-15.23	-10.94/-8.46
Θ(172.5°)	-11.94/-10.3	-8.36/-7.28	-6.44/-5.6	-4.75/-4.11	-3.69/-4.3	-5.35/-6.49	-8.46/-12.21	-18.6/-18.06	-19.26/-18.5	-18.64/-19.47	-18.63/-18.99	-14.76/-12.57	-11.69/-10.95	-10.66/-11.99	-14.9/-15.6	-16.56/-18.6	-16.21/-15.32	-16.03/-15.87	-17.41/-16.25	-13.54/-11.35	-10.81/-12.94	-16.21/-18.93	-18.75/-15.38	-13.34/-12.96
Θ(180°)	-12.29/-12.35	-11.44/-10.22	-9.07/-8.73	-7.69/-6.58	-7.16/-8.8	-6.37/-5.29	-7.58/-9.72	-9.21/-11.88	-17.03/-14.18	-11.58/-10.76	-11.25/-13.08	-15.3/-16.86	-17.25/-15.74	-13.03/-10.7	-9.12/-8.75	-6.93/-6.82	-6.75/-6.57	-7.32/-8.75	-10.55/-11.57	-13.38/-15.34	-17.49/-18.63	-18.09/-17.83	-16.25/-14.08	-13.27/-12.37
Freq(Hz)	6.475GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-2.04/-1.89	-1.75/-1.42	-1.4/-1.63	-1.63/-1.5	-1.83/-2.3	-3.44/-5.02	-6.48/-8.21	-9.92/-12.97	-15.79/-15.15	-11.35/-8.52	-6.4/-7.9	-3.67/-2.66	-1.86/-1.28	-0.66/-0.33	-0.29/-0.48	-0.69/-1.23	-1.74/-2.38	-3.33/-4.55	-6.44/-8.83	-12.09/-15.84	-17.96/-14.92	-10.99/-8.24	-6.52/-4.86	-3.44/-2.54
Θ(7.5°)	-0.75/-2.01	0.11/0.3	0.06/-0.32	-0.66/-0.99	-1.63/-2.2	-3.18/-5.01	-7.31/-9.03	-9.43/-12.24	-14.21/-12.59	-10.97/-8.31	-6.32/-5.31	-3.49/-2.81	-1.89/-1.86	-1.98/-2.55	-3.11/-3.48	-4.4/-5.39	-6.6/-8.13	-10.68/-14.82	-18.71/-15.4	-10.68/-14.82	-18.71/-15.4	-10.68/-14.82	-18.71/-15.4	-10.68/-14.82
Θ(15°)	0.11/1.02	1.36/1.49	1.52/1.49	1.12/0.49	-0.4/-0.86	-1.9/-4.62	-8.36/-10.02	-11.64/-15.81	-15.01/-10.7	-7.86/-6.53	-6.17/-6.98	-7.31/-6.68	-5.95/-5.45	-5.12/-4.69	-4.17/-3.51	-3.39/-3.07	-2.92/-3.14	-4.02/-5.45	-7.65/-10.51	-14.45/-17.87	-16.97/-12.3	-9.67/-7.59	-5.96/-4.85	-2.94/-1.3
Θ(22.5°)	-0.14/0.71	0.95/1.03	1.19/1.09	0.3/-0.69	-1.35/-1.67	-2.73/-4.31	-6.2/-8.96	-12.28/-18.53	-18.97/-12.06	-10.21/-8.86	-5.89/-8.14	-7.39/-6.9	-7.35/-7.23	-6.32/-5.24	-4.7/-4.2	-3.82/-3.36	-2.79/-3.01	-3.89/-4.53	-5.28/-7.35	-10.41/-15.62	-17.71/-16.22	-10.81/-7.76	-5.18/-4.3	-2.93/-1.35
Θ(30°)	-0.21/1.37	1.63/1.18	1.01/0.83	0.01/-1.56	-2.31/-1.64	-2.22/-4.84	-6.60/-7.21	-13.24/-17.92	-18.08/-16.33	-10.48/-8.72	-5.4/-5.11	-6.47/-7.62	-10.2/-12.7	-11.78/-9.02	-8.08/-7.44	-5.02/-3.81	-3.76/-3.57	-4.29/-5.59	-7.82/-10.02	-9.83/-10.08	-15.53/-15.27	-14.09/-7.71	-6.64/-4.11	-1.68/-1.39
Θ(37.5°)	-0.53/1.37	1.84/1.55	1.480/8.7	0.63/0.62	-0.05/-1.16	-1.83/-3.24	-6.34/-7.87	-11.99/-18.28	-19/-15.81	-7.76/-7	-6.07/-5.45	-5.08/-6.97	-8.14/-10.71	-14.46/-14.27	-9.74/-7.39	-8.35/-9.87	-11.77/-14.67	-17.73/-17.68	-16.91/-12.29	-12.81/-11.51	-13.91/-14.98	-15.22/-9.89	-6.71/-5.5	-2.99/-1.4
Θ(45°)	0.52/-18	2.31/1.4	0.28/-0.17	0.84/0.93	-0.26/-2.08	-2.47/-4.07	-8.54/-10.5	-12.86/-18.7	-16.57/-12.76	-11.95/-11.87	-6.67/-4.26	-5.41/-6.65	-7.24/-11.79	-13.44/-13.68	-10.6/-10.32	-9.33/-10.85	-11.66/-11.4	-14.9/-17.47	-18.31/-18.47	-18.22/-14.09	-10.58/-10.48	-14.55/-9.07	-5.88/-3.56	-2.53/-1.66
Θ(52.5°)	-0.66/0.78	1.84/1.88	0.9/-0.12	-0.66/-0.5	-1.35/-3.59	-5.11/-5.61	-13.56/-14.53	-16.65/-17.34	-13.51/-13.01	-10.07/-9.78	-9.77/-5.31	-6.83/-6.69	-12.62/-16.78	-18/-16.71	-16.99/-14.17	-13.58/-13.27	-14.06/-13.86	-18.92/-18.75	-18.14/-17.47	-15.79/-9.21	-7.5/-7.1	-9.03/-7.64	-4.98/-3.07	-2.19/-1.49
Θ(60°)	-0.21/1.1	1.19/1.03	0.62/-0.29	-1.27/-1.17	-1.86/-2.85	-4.98/-9.27	-10.7/-16.02	-14.42/-10.83	-16.88/-10.64	-8.22/-9.16	-10.57/-6.84	-4.65/-4.42	-9.74/-12.89	-14.21/-19.26	-14.83/-11.59	-12.47/-12.54	-10.8/-13.86	-14.79/-14.44	-11.9/-14.4	-17.92/-8.8	-6.45/-6.84	-6.59/-6.12	-4.35/-2.8	-1.47/-1.21
Θ(67.5°)	0.69/1.38	0.85/0.39	-0.12/-1.05	-2.54/-3.93	-3.54/-3.13	-5.57/-7.21	-6.08/-13.69	-11.11/-15.23	-16.52/-9.78	-7.25/-6.78	-8.22/-5.88	-4.07/-4.75	-7.36/-7.66	-17.18/-18.28	-19.09/-13.22	-9.92/-11.04	-13.15/-12.45	-10.8/-9.25	-5.89/-5.39	-5.51/-4.44	-5.49/-3.33	-0.81/-0.08		
Θ(75°)	1.92/1.55	0.32/-1.14	-1.29/-2.18	-2.62/-3.61	-4.59/-5.07	-4.87/-6.26	-6.01/-6.57	-11.13/-7.64	-12.94/-9.34	-7.32/-8.87	-8.61/-6.65	-3.69/-4.62	-6.35/-3.47	-15.78/-18.44	-17.55/-10.82	-14.75/-17.87	-14.26/-11.5	-7.86/-6.33	-7.27/-8.53	-10.41/-10.37	-8.08/-6.5	-3.63/-3.1	-3.95/-3.39	-1.42/-1.04
Θ(82.5°)	2.02/2.08	0.34/-1.71	-2.02/-3.46	-5.01/-6.4	-5.76/-4.9	-5.3/-5.8	-7.49/-8.48	-9.19/-11.31	-13.05/-14.91	-9.66/-11.31	-8.42/-5.71	-5.21/-8.74	-4.66/-4	-14.69/-16.89	-13.35/-15.82	-18.15/-15.6	-17.4/-17.32	-10.41/-8.03	-6.04/-6.1	-6.16/-10.83	-10.79/-5.97	-2.45/-2.7	-5.62/-4.65	-1.65/0.67
Θ(90°)	2.34/2.14	0.01/-2.18	-4.19/-6.08	-6.6/-6.72	-6.89/-6.12	-6.14/-6.55	-10.54/-9.72	-11.78/-10.2	-17.43/-15.23	-14.35/-9.83	-9.34/-6.73	-9.41/-12.53	-6.9/-8.07	-18.78/-18.6	-10.98/-12.68	-14.06/-12.29	-14.04/-11.38	-10.53/-8.25	-7.77/-7.33	-7.73/-7.35	-15.18/-7.1	-3.79/-2.66	-4.92/-3.48	-2.49/0.87
Θ(97.5°)	1.482/4	0.61/-2.92	-6.7/-8.65	-9.95/-8.97	-9.03/-7.77	-10.79/-11.48	-15.82/-12.69	-17.73/-18.38	-18.23/-12.43	-7.18/-10.69	-9.4/-10.43	-17.93/-18.85	-13.68/-12.53	-16.21/-14.53	-11.92/-11.31	-10.08/-6.51	-6.49/-9.23	-10.15/-10.58	-9.45/-9.86	-18.98/-14.68	-3.35/-2.49	-3.83/-2.99	-3.08/-0.65	
Θ(105°)	0.65/2.2	0.46/-1.92	-6.92/-10.22	-12.35/-13.29	-12.86/-13.78	-14.69/-17.58	-17.45/-16.34	-18.64/-17.58	-15.07/-13.07	-5.25/-7.04	-8.45/-19.62	-13.04/-18.24	-9.95/-7.8	-16.08/-13.94	-7.52/-5.59	-5.84/-7.89	-11.01/-7.34	-4.9/-12.79	-11.5/-17.2	-10.5/-8.69	-19.11/-8.25	-5.65/-3.38	-2.41/-5.17	-2.92/-0.45
Θ(112.5°)	-0.23/2.22	0.03/-2.58	-5.5/-9.08	-9.84/-13.6	-15.5/-18.13	-18.01/-11.56	-10.88/-16.77	-13.11/-9.32	-8.21/-6.52	-6.98/-6.74	-15.93/-7.48	-8.66/-13.29	-3.23/-4.78	-15.93/-10.28	-7.6/-6.21	-4.2/-3.49	-8.72/-9.74	-8.26/-11.82	-18.37/-18.57	-9.69/-11.05	-15.65/-8.55	-4.04/-4.79	-2.35/-2.48	-2.14/-3.1
Θ(120°)	-0.49/0.76	-0.78/-3.13	7.54/-6.66	9.91/-10.52	-14.84/-18.74	-15.08/-12.12	-11.19/-11.46	-9.19/-6.59	-7.99/-5.34	-4.95/-6.79	-18.9/-8.53	-4.71/-7.6	-3.27/-4	-14.08/-6.84	-9.69/-14.51	-5.95/-6.32	-7.18/-8.62	-10.47/-6.41	-18.47/-16.55	-7.79/-9.75	-18.44/-8.97	-3.88/-4.16	-1.22/-2.12	-3.39/-5.14
Θ(127.5°)	-0.9/-0.96	-1.39/-4.08	-5.49/-7.82	-9.78/-13.14	-13.76/-18.77	-14.74/-10.92	-11.81/-7.49	-5.87/-5.24	-5.56/-10.85	-6.47/-8.17	-18.32/-7.85	-4.61/-7.09	-8.59/-11.06	-13.05/-10.65	-13.13/-9.53	-5.67/-7.77	-8.74/-14.95	-15.69/-17.58	-13.17/-18.07	-8.34/-10.64	-15.89/-15.73	-4.48/-3.42	-0.97/-0.93	-6.83/-3.12
Θ(135°)	-3.81/-1.88	-2.74/-5.07	-7.58/-9.57	-12.47/-17.89	-17.68/-17.45	-15.28/-13.4	-12.01/-9.33	-7.46/-4.43	-6.43/-10.52	-9.15/-9.06	-14.16/-16.77	-8.28/-7.75	-14.13/-14.25	-18.4/-18.41	-15.08/-18.23	-11.48/-10.26	-8.85/-12.8	-12.42/-10.32	-16.34/-11.8	-14.05/-17.18	-10.41/-16.09	-6.95/-5.91	-4.19/-2.36	-4.25/-4.56
Θ(142.5°)	-4.76/-5.56	-6.28/-5.91	-5.53/-7.18	9.88/-13.27	-17.84/-18.45	-18.21/-11.37	-7.86/-6.53	-9.21/-12.96	-7.77/-8.42	-17.21/-8.58	-3.72/-3.52	-8.41/-18.99	-12.66/-8.3	-7.71/-12.08	-17.93/-18.46	-15.37/-17.6	-18.84/-18.48	-18.82/-15.22	-7.64/-8.37	-18.93/-18.83	-9.18/-8.7	-7.74/-8.24	-7.89/-8.59	-6.41/-3.09
Θ(150°)	-5.8/-3.82	-2.58/-3.49	-4.67/-5.85	-8.19/-11.09	-15.03/-16.39	-15.87/-16.4	-18.11/-18.82	-13.08/-10.17	-9.36/-10.45	-13.81/-17.69	-7.5/-4.32	-5.37/-5.18	-12.95/-14.44	-10.56/-11.39	-10.85/-8.66	-10.81/-11.45	-10.85/-11.17	-9.78/-12.46	-12.84/-17.85	-11/-6.43	-4.8/-4			



Radiated Composite Gain Data of Scan Radio and BT2

Appendix C

Θ(157.5°)	-12.95/-9.82	-8.91/-8.42	-8.25/-9.83	-11.37/-11.82	-10.39/-9.34	-10.8/-11.93	-12.88/-14.94	-12.97/-14.67	-15.32/-15.78	-15.24/-13.72	-14.2/-18.13	-17.94/-18.19	-16.53/-14.97	-17.57/-17.77	-18.3/-18.17	-18.58/-16.81	-12.98/-13.88	-18.02/-18.87	-18.13/-14.23	-14.37/-14.37	-12.86/-14.78	-18.31/-19.46	-16.14/-13.76	-14.03/-15.71
Θ(165°)	-12.36/-10.67	-9/-8.82	-8.59/-8.85	-8.85/-8.8	-9.47/-10.99	-11.57/-11.18	-13.41/-11.21	-12.96/-15.93	-13.95/-12.89	-13.81/-15.79	-18.25/-18.07	-18.13/-18.89	-16.8/-15.94	-18.7/-17.85	-18.74/-18.52	-16.35/-15.16	-15.13/-15.83	-16.37/-14.58	-13.78/-13.7	-16.7/-18.6	-16.85/-17.17	-18.63/-18.99	-18.77/-17.75	-16.16/-14.21
Θ(172.5°)	-16.62/-14.44	-12.63/-11.5	-11/-10.87	-11.21/-10.98	-10.44/-10.32	-10.11/-12.01	-11.97/-12.63	-16.45/-18.12	-17.44/-17.78	-18.07/-18.62	-19.2/-18.94	-18.31/-17.52	-18.45/-17.26	-16.88/-17.46	-17.14/-16.13	-18.24/-17.78	-18.12/-18.17	-18.12/-17.39	-18.4/-18.67	-17.83/-19.23	-19.09/-17.99	-18.09/-18.9	-19.11/-17.58	-17.66/-18.22
Θ(180°)	-15.78/-15.38	-15.65/-13.8	-13.32/-13.2	-11.55/-10.2	-10.3/-11.77	-13.7/-12.42	-12.6/-14.89	-15.99/-15.13	-18.13/-17.5	-19.15/-18.29	-17.65/-17.87	-19.18/-18.59	-18.51/-18.45	-19.34/-15.55	-14.35/-14.78	-13.79/-12.69	-13.34/-13.63	-14.41/-14	-14.43/-13.85	-14.91/-16.57	-17.79/-19.23	-17.49/-18.53	-17.85/-19.09	-18.58/-16.32
Freq(Hz)	6.995GHz	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.11/-3.22	-3.45/-3.67	-4.48/-5.66	-6.35/-7.7	-9.84/-11.81	-14.59/-18.57	-17.5/-14.95	-12.18/-8.55	-6.4/-5.95	-5.56/-4.66	-3.92/-3.28	-3.09/-3.05	-3.26/-3.24	-2.99/-3.68	-4.7/-5.36	-7.14/-8.01	-10.31/-13.83	-18.89/-17.64	-18.33/-15.8	-12.2/-9.2	-7.72/-6.18	-5.06/-4.43	-4.04/-3.67	-3.35/-3.16
Θ(7.5°)	-3.06/-3.6	-3.77/-4.24	-4.69/-5.66	-7.18/-8.6	-9.81/-12.13	-15.67/-19.06	-18.85/-17.57	-15.02/-11.79	-8.67/-7.08	-6.19/-5.43	-4.84/-4.51	-4.37/-4.24	-4.43/-4.35	-4.39/-4.91	-6.15/-6.94	-8.28/-9.47	-11.37/-15.01	-16.99/-16.58	-13.94/-10.6	-8.83/-7.1	-6.1/-5.18	-4.25/-3.55	-3.27/-3.09	-3.05/-2.96
Θ(15°)	-3.41/-3.72	-3.99/-4.35	-4.63/-5.29	-6.51/-7.55	-9.04/-11.96	-14.25/-18.11	-18.58/-14.63	-13.2/-10.42	-9.04/-7.6	-6.24/-5.43	-5.16/-5.16	-5.52/-6.07	-6.28/-6.4	-7.14/-7.52	-8.3/-10.72	-13.08/-16.94	-17.99/-17.44	-13.33/-11.09	-8.71/-6.91	-4.78/-4.81	-4.51/-4.16	-3.9/-3.79	-3.36/-3.18	
Θ(22.5°)	-2.82/-2.6	-2.6/-2.81	-2.96/-3.18	-3.9/-4.63	-6.08/-7.73	-10.46/-16.76	-18.58/-13.93	-10.33/-9.07	-7.42/-5.47	-4.38/-4.12	-3.69/-3.65	-4.04/-5.33	-6.09/-6.89	-8.44/-10.11	-10.91/-11.28	-11.8/-14.44	-17.5/-18.04	-15.26/-11.9	-8.25/-6.52	-5.81/-5.51	-4.89/-4.69	-4.53/-4.37	-4.1/-3.52	-2.77/-2.57
Θ(30°)	-3.05/-3.07	-2.99/-2.8	-2.87/-2.99	-3.48/-4.78	-6.07/-8.08	-11.74/-18.03	-17.93/-13.63	-12.1/-8.7	-6.81/-6.07	-4.82/-4.29	-3.76/-3.9	-4.51/-5.59	-7.21/-8.27	-9.92/-12.1	-13.87/-13.66	-12.59/-13.02	-17.08/-18.49	-12.14/-9.29	-8.68/-8.19	-8.1/-8.63	-8/-7.04	-6.08/-5.77	-5.22/-4.56	-4.34/-3.38
Θ(37.5°)	-4.51/-3.47	-3.63/-3.13	-2.82/-2.96	-3.93/-5.24	-7.41/-10.12	-14.86/-18.81	-16.91/-13.58	-13.23/-10.69	-8.82/-8.27	-7.41/-6.48	-6.17/-7.59	-7.76/-8.38	-8.41/-9.64	-11.19/-12.4	-16.01/-17.91	-19.36/-18.38	-17.77/-18.98	-14.83/-10.37	-9.17/-10.57	-10.51/-10.43	-11.47/-9.39	-7.92/-6.47	-6.96/-7.19	-6.67/-5.11
Θ(45°)	-4.57/-3.93	-3.36/-3.01	-3.02/-3.2	-3.93/-5.06	-6.49/-9.67	-12.42/-11.22	-12.3/-11.55	-12.39/-13.77	-13.88/-11.86	-12.43/-12.58	-7.17/-5.76	-5.39/-7.37	-9.63/-12.59	-13.75/-12.53	-13.57/-16.68	-17.71/-19	-18.57/-18.79	-16.56/-10.68	-10.82/-12.74	-14.07/-12.02	-11.67/-11.22	-11.41/-9.34	-8.16/-7.34	-6.59/-5.93
Θ(52.5°)	-4.75/-4.1	-3.96/-3.73	-3.56/-3.76	-4.29/-4.77	-6.82/-9.82	-8.74/-10.12	-9.81/-13.16	-12.21/-15.5	-17.39/-16.75	-10.23/-9.1	-9.56/-7.46	-5.73/-7.29	-9.6/-13.5	-17.91/-18.55	-18.58/-17.67	-18.1/-18.98	-18.48/-17.06	-17.14/-12.1	-11.81/-17.84	-13.97/-12.91	-12.81/-13.17	-11.55/-9.25	-7.16/-6.74	-6.22/-5.36
Θ(60°)	-4.47/-5.06	-5.1/-4.46	-3.75/-3.64	-4.08/-5.01	-6.6/-7.13	-6.9/-7.68	-8.77/-12.74	-17.97/-18.32	-18.91/-13.83	-13.08/-11.56	-9.15/-9.09	-8.79/-9.05	-9.13/-12.62	-16.16/-18.04	-18.25/-17.65	-18.62/-18.17	-15.49/-18.17	-15.78/-13.4	-18.39/-17.6	-17/-14.76	-14.24/-10.71	-10.29/-8.24	-6.47/-6.29	-6.81/-5.61
Θ(67.5°)	-5.42/-5.66	-5.57/-5.25	-4.28/-3.68	-3.96/-4.64	-5.93/-6.43	-5.68/-7.47	-8.37/-11.16	-19.01/-13.42	-13.64/-11.58	-12.03/-14.54	-12.41/-10.38	-10.58/-8.66	-9.38/-14.53	-17.8/-18.13	-16.85/-16.04	-18.23/-17.05	-16.45/-18.73	-17.98/-17.26	-18.06/-18.89	-18.23/-17.82	-14.13/-11.42	-9.24/-8.33	-7.42/-7.95	-8.81/-7.32
Θ(75°)	-5.81/-6.06	-6.4/-6	-4.74/-3.78	-4.57/-5.1	-5.97/-6.62	-4.91/-7.15	-10.13/-14.89	-18.42/-13.98	-11.22/-13.51	-11.99/-16.63	-15.58/-11.85	-11.78/-10.1	-8.7/-17.01	-17.83/-17.51	-17.15/-16.64	-17.22/-17.96	-17.23/-17.91	-17.84/-14.51	-15.48/-18.84	-16.98/-18.68	-14.73/-10.94	-9.9/-11.04	-8.9/-11.35	-11.66/-10.08
Θ(82.5°)	-6.5/-6.28	-6.89/-6.63	-5.93/-4.26	-4.79/-4.24	-5.09/-6.35	-4.92/-9.93	-12.63/-17.1	-14.06/-13.3	-11.75/-15.32	-18.42/-16.43	-18.57/-16.22	-12.49/-8.96	-13.58/-18.16	-18.28/-18.72	-17.84/-18.59	-17.57/-17.92	-18.24/-16.64	-16.23/-13.27	-13.69/-15.14	-14.24/-17.98	-15.58/-12.44	-11.25/-11.89	-10.53/-12.7	-10.78/-8.94
Θ(90°)	-6.95/-6.29	-8.51/-9.51	-6.64/-6.16	-5.43/-4.57	-4.77/-7.39	-6.39/-11.86	-14.9/-18.33	-17.37/-15.18	-14.72/-16.26	-17.73/-17.77	-18.19/-18.09	-15.93/-12.32	-17.65/-17.97	-16.25/-18.21	-18.06/-16.64	-18.71/-17.83	-18.2/-17.93	-17.01/-15.68	-18.17/-17.27	-15.88/-18.69	-13.31/-18.07	-12.59/-11.6	-12.34/-11.83	-10.82/-10.66
Θ(97.5°)	-6.83/-7.45	-10.52/-10.99	-7.97/-6.27	-5.73/-4.63	-6.07/-8.3	-6.9/-17.64	-15.51/-17.82	-18.12/-19.05	-15.52/-19.03	-17.93/-19.35	-18.64/-18.69	-18.88/-17.68	-18.14/-15.84	-18.21/-18.04	-17.86/-16.16	-17.68/-17.83	-19.26/-19.24	-18.65/-18.34	-15.96/-15.86	-14.99/-17.86	-11.85/-13.83	-12.72/-11.95	-8.9/-12.6	-9.19/-11.22
Θ(105°)	-7.62/-8.36	-11.33/-10.49	-8.47/-7.72	-6.94/-5.8	-5.76/-10.63	-9.05/-14.63	-18.53/-17.03	-17.26/-15.48	-18.13/-77	-17.32/-14.16	-17.53/-18.21	-17.45/-13.88	-10.7/-13.15	-17.97/-17.15	-18.58/-15.72	-18.52/-16.04	-18.1/-16.72	-17.64/-11.94	-13.63/-18.02	-16.41/-14.46	-12.9/-12.57	-10.45/-10.15	-10.24/-9.01	
Θ(112.5°)	-8.47/-10.03	-11.62/-10.63	-9.49/-7.9	-8.09/-6.56	-7.64/-9.84	-11.8/-15.35	-18.99/-18.58	-15.49/-16	-15/-12.23	-12.18/-14.03	-15.99/-12.11	-11.6/-7.48	-7.69/-14.92	-17.58/-13.86	-12.28/-15.03	-16.97/-17.58	-18.08/-13.75	-12.16/-8.44	-13.99/-18.12	-12.88/-13.55	-19.08/-17.09	-10.3/-15.46	-7.71/-9.11	-9.26/-7.85
Θ(120°)	-11.74/-10.14	-10.94/-11.48	-10.41/-9.73	-8.75/-7.52	-9.29/-13.46	-11/-18.03	-18.3/-17.77	-15.57/-11.96	-9.43/-11.11	-11.04/-11.9	-14.34/-12.51	-16.31/-12.95	-18.39/-16.73	-16.31/-12.95	-18.39/-16.73	-14.05/-10.76	-14.95/-18.83	-14.2/-12.88	-18.26/-16.02	-10.51/-15.14	-8.9/-12.6	-9.19/-11.22		
Θ(127.5°)	-10.92/-10.24	-10.8/-10.09	-12.16/-14.19	-12.07/-9.6	-10.56/-14.29	-15.22/-16.99	-18.3/-18.77	-12.99/-10.3	-8.9/-8.55	-11.42/-12.55	-11.27/-18.1	-9.87/-10.57	-18.6/-18.13	-18.63/-16.12	-18.95/-17.59	-18.7/-15.05	-18.31/-19.34	-12.37/-18.55	-18.45/-18.18	-18.53/-19.04	-17.94/-13	-10.09/-13.18	-7.84/-11.05	
Θ(135°)	-10.02/-9.53	-9.79/-11.79	-14.18/-17.05	-16.92/-15.48	-16.97/-18.1	-17.01/-17.74	-17.92/-18.85	-14.85/-14.04	-11.06/-7.69	-10.26/-17.36	-12.44/-16.53	-18.7/-18.35	-16.55/-15.1	-11.19/-10.63	-12.71/-14.2	-18.27/-18.65	-17.84/-17.94	-14.29/-18.19	-18.96/-19.31	-17.52/-18.31	-16.91/-16.4	-15.7/-14.74	-10.73/-10.1	-9.28/-10.92
Θ(142.5°)	-9.48/-10.18	-11.15/-13.53	-18.38/-17.85	-17.61/-16.87	-18.91/-15.81	-15.14/-17.79	-18.68/-13.77	-14.62/-17.27	-17.57/-11.46	-11.74/-13.42	-11.92/-10.73	-12.15/-13.78	-13.28/-12.28	-14.63/-14.68	-15.01/-18.09	-18.38/-15.98	-18.03/-19.07	-18.65/-18.16	-17.94/-17.94	-19.43/-18.99	-17.47/-13.99	-16.48/-17.41	-14.95/-11.34	-9.56/-9.33
Θ(150°)	-8.75/-9.52	-12.55/-14.91	-17.72/-18.98	-17.61/-18.12	-18.91/-17.83	-13.89/-13.18	-16.72/-18.85	-18.86/-14.23	-17.1/-18.26	-14.14/-14.64	-13.63/-15.29	-17.93/-16.52	-14.1/-15.12	-15.87/-18.26	-17.93/-18.72	-18.54/-18.74	-18.42/-18.39	-15.39/-17.17	-17.9/-18.65	-17.25/-12.16	-9.33/-9.8	-12.54/-12	-12.25/-12.06	-11.67/-9.16
Θ(157.5°)	-9.75/-10.1	-12.71/-15.71	-18.5/-18.81	-18.39/-18.65	-18.1/-18.38	-16.73/-18.26	-15.47/-12.32	-13.57/-14.68	-13.22/-15.49	-17.26/-13.67	-9.46/-8.66	-9.49/-12.18	-16.87/-18.91	-17.85/-18.51	-17.93/-18.64	-18.2/-18.66	-19.28/-18.7	-17.89/-18.07	-18.63/-18.56	-15.93/-10.94	-8.32/-7.99	-8.1/-9.22	-10.5/-8.7	-8.41/-9.79
Θ(165°)	-9.23/-9.83	-11.54/-14.09	-17.73/-18.75	-18.63/-17.43	-14.21/-11.47	-10.4/-10.74	-12.64/-13.12	-12.64/-12.45	-11.73/-10.98	-11.29/-11.29	-11.75/-12.91	-13.85/-14.5	-16.9/-18.51	-19.33/-18.54	-18.12/-17.68	-17.37/-17.29	-18.84/-18.02	-18.63/-18.91	-18.19/-19.44	-16.5/-15.47	-13.88/-11.32	-9.86/-9.2	-9.23/-9.52	-9.1/-8.78
Θ(172.5°)	-12.06/-12.62	-13.53/-14.73	-16.91/-17.53	-18.38/-19.12	-18.96/-18.8	-16.71/-13.42	-10.78/-11.12	-9.41/-8.6	-8.78/-10.47	-14.38/-18.6	-18.46/-18.44	-17.16/-17.57	-19.23/-18.44	-18.01/-18.63	-18.65/-18.87	-18.68/-18.7	-18.35/-18.96	-17.39/-17.65	-18.7/-18.7	-18.36/-16.08	-14.09/-13.79	-15.15/-15.93	-14.63/-13.85	-13.24/-11.94
Θ(180°)	-15.05/-15.01	-15.89/-18.32	-18.25/-17.5	-18.83/-17.98	-17.99/-16.63	-17.73/-17.14	-16.26/-13.4	-12.05/-11.92	-13.71/-16.77	-17.21/-16.7	-17.23/-17.95	-18.23/-19.9	-18.69/-18.25	-16.35/-16.67	-16.29/-17.93	-17.25/-17.73	-17.89/-18.18	-18.53/-19.14	-18.21/-17.65	-15.33/-14.2	-13.32/-12.89	-13.38/-13.3	-12.62/-12.01	-12.53/-13.55
Freq(Hz)	2.45GHz	PhiAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.92/-3.64	-3.67/-3.98	-4.53/-5.43	-6.93/-9.27	-12.25/-15.72																			

Total Gain Data

[illegible]



Antenna Pattern of 2.4GHz and 5GHz

Appendix D

Θ(22.5°)	0.240/3.90	0.690/7.73	1.181/20.10	0.800/0.07	0.481/6.33	2.432/9.90	3.273/1.11	2.763/1.33	2.522/2.25	1.700/1.17	0.281/1.02	-1.92/-3.22	-4.14/-4.19	-3.99/-3.24	-2.55/-2.54	-2.26/-2.27	-2.21/-1.69	-1.93/-1.98	-2.05/-2.20	-1.58/-0.91	-0.68/-0.78	-0.97/-0.33	-0.100/-4.7	0.860/4.4	
Θ(30°)	0.910/66	0.980/1.0	1.361/29	0.48/-0.07	0.521/4.3	2.523/2.4	3.633/9.3	3.672/8.5	1.941/0.0	1.210/4.3	-0.68/-0.91	-1.99/-2.7	-2.92/-3.63	-6.03/-7.86	-7.71/-5.51	-3.96/-3.22	-3.17/-3.54	-4.05/-4.52	-4.23/-2.67	-1.75/-1.59	-1.88/-1.46	-1.00/-1.29	-1.38/-0.41	0.410/8.5	
Θ(142.5°)	0.210/03	-0.221/11	2.452/05	0.820/51	0.771/43	2.263/61	4.824/98	4.483/79	2.932/18	1.712/15	1.05/-1.05	-1.59/-0.71	-0.95/-5.17	-10.68/-7.12	-4.90/-3.88	-3.96/-4.29	-4.76/-6.08	-5.60/-6.29	-5.33/-5.06	-6.23/-5.81	-5.86/-4.90	-4.09/-3.48	-1.41/-0.22		
Θ(45°)	-3.18/-1.48	-1.70/-0.38	1.191/91	1.421/24	1.320/61	1.823/71	4.985/17	4.733/95	3.483/19	2.502/84	2.110/46	-0.47/-0.93	-3.48/-5.81	-5.28/-7.52	-11.10/-9.31	-6.45/-5.08	-5.46/-5.36	-6.56/-7.81	-7.45/-8.31	-11.15/-11.78	-13.16/-12.08	-9.81/-8.10	-8.03/-6.57	-5.89/-4.57	
Θ(52.5°)	-9.95/-5.73	-3.44/-3.06	-1.06/-1.06	1.971/42	0.270/8.0	3.084/84	5.394/99	4.073/61	3.823/64	2.651/66	1.800/0.0	-1.32/-2.94	-3.47/-9.39	-8.12/-10.11	-14.39/-8.36	-5.88/-4.82	-5.56/-6.40	-8.77/-8.54	-8.61/-9.39	-10.00/-12.66	-11.63/-15.18	-9.28/-6.84	-5.53/-6.11	-8.44/-9.00	
Θ(60°)	-2.22/-9.42	-4.80/-4.57	-4.35/-1.23	1.062/45	1.090/82	3.285/23	5.795/43	4.233/28	3.223/58	2.631/27	0.84/-1.10	-3.44/-4.29	-4.33/-11.34	-9.17/-8.27	-11.17/-8.40	-6.27/-4.75	-4.95/-6.09	-10.81/-10.66	-7.01/-8.23	-11.55/-8.05	-11.91/-9.72	-6.55/-6.95	-7.19/-5.11		
Θ(67.5°)	-4.95/-5.02	-3.23/-4.56	-5.47/-2.92	-0.022/0.7	1.480/82	2.984/47	5.445/72	5.133/65	3.113/52	2.710/11	-0.56/-2.89	-5.56/-4.70	-5.97/-11.09	-12.46/-15.78	-13.92/-9.10	-6.26/-3.75	-5.98/-7.79	-11.71/-7.56	-5.47/-7.37	-12.07/-7.98	-7.38/-8.02	-10.28/-11.83	-12.90/-8.27	-7.14/-2.65	
Θ(75°)	-1.95/-2.13	-3.48/-2.06	-5.78/-3.34	-0.96/-1.14	0.530/60	2.263/37	4.895/62	5.273/88	3.362/89	2.32/-0.19	-1.56/-2.59	-6.68/-6.86	-6.20/-10.66	-13.65/-13.35	-14.85/-9.09	-7.61/-6.94	-7.32/-9.00	-9.22/-5.00	-5.73/-6.20	-9.08/-4.08	-5.17/-9.86	-10.94/-12.11	-10.67/-8.02	-5.31/-3.29	
Θ(82.5°)	-1.44/-1.79	-2.07/-2.17	-4.80/-3.18	-2.11/0.65	0.800/08	1.483/55	4.194/94	4.743/14	2.622/58	2.21/-1.02	-1.15/-3.52	-7.90/-6.24	-8.15/-7.36	-11.62/-11.77	-14.98/-12.33	-7.12/-6.23	-8.78/-9.45	-8.47/-5.18	-4.57/-1.78	-3.67/-13.40	-12.94/-9.90	-9.42/-4.77	-4.54/-4.84		
Θ(90°)	-1.85/-2.45	-2.36/-1.76	-4.93/-3.45	-3.71/-0.33	0.86/-0.08	0.492/95	3.763/94	3.852/83	1.731/76	0.960/33	-1.83/-2.08	-8.94/-4.39	-11.23/-6.48	-8.57/-10.89	-15.29/-9.79	-8.70/-8.63	-7.55/-7.40	-9.22/-4.42	-11.09/-5.50	-5.20/-2.00	-4.94/-15.13	-12.65/-9.18	-10.30/-4.51	-5.11/-5.52	
Θ(97.5°)	-3.35/-4.51	-2.31/-2.84	-4.57/-5.08	-4.93/-0.94	0.70/-0.42	-0.092/62	2.652/45	2.572/12	1.151/44	0.34/-1.28	-2.67/-1.22	-7.38/-6.43	-8.57/-8.12	-7.18/-9.95	-10.50/-11.46	-10.85/-8.11	-10.43/-8.96	-8.06/-3.56	-6.90/-4.18	-3.85/-5.68	-7.99/-13.04	-8.25/-7.97	-9.90/-5.72	-4.92/-6.93	
Θ(105°)	-5.39/-4.96	-4.01/-3.47	-6.33/-7.45	-6.02/-1.89	-0.05/-1.33	-0.691/89	2.562/99	2.590/96	1.590/96	1.300/76	0.36/-0.52	-2.25/-2.08	-4.54/-3.86	-8.78/-8.03	-12.71/-8.44	-11.00/-7.01	-11.25/-8.05	-4.62/-1.66	-4.19/-3.29	-8.04/-8.84	-10.46/-14.60	-7.39/-7.15	-11.34/-5.95	-6.02/-5.85	
Θ(112.5°)	-5.27/-6.07	-5.59/-4.59	-8.72/-8.12	-5.69/-3.02	-0.67/-1.23	-0.401/38	1.670/98	-0.310/28	0.20/-0.00	-1.43/-2.32	-2.14/-2.22	-4.43/-5.30	-5.07/-9.74	-8.60/-8.01	-8.75/-10.17	-9.06/-6.34	-10.19/-7.06	-6.77/-2.38	-6.32/-4.68	-9.55/-7.66	-13.80/-7.86	-8.19/-14.18	-11.52/-5.29	-4.78/-6.10	
Θ(120°)	-5.22/-8.22	-4.87/-8.67	-9.89/-8.99	-5.38/-3.97	-2.54/-2.85	-2.490/0.7	0.52/-0.34	-0.73/-1.13	-0.14/-0.76	-2.27/-3.70	-3.57/-3.44	-3.81/-6.19	-6.52/-7.79	-10.97/-5.45	-13.03/-10.32	-3.02/-4.18	-11.27/-6.86	-8.96/-4.72	-8.09/-11.40	-9.65/-9.27	-9.44/-7.23	-10.02/-10.22	-6.82/-8.44	-6.62/-5.45	
Θ(127.5°)	-6.81/7.38	-10.66/-9.63	-10.59/-8.91	-5.57/-2.97	-2.60/-3.23	-3.81/-1.72	-0.140/0.0	-1.08/-1.80	-1.70/-1.25	-2.19/-4.65	-5.84/-3.14	-3.82/-9.87	-4.41/-6.53	-9.54/-6.15	-11.30/-8.15	-6.07/-12.42	-16.11/-12.98	-13.01/-6.66	-7.44/-12.96	-11.00/-14.60	-14.38/-11.43	-10.24/-8.47	-10.57/-6.81	-5.63/-6.10	
Θ(135°)	-10.43/-12.06	-13.63/-9.45	-8.28/-9.14	-5.07/-3.49	-4.29/-5.20	-3.58/-2.44	-1.42/-1.58	-2.09/-2.26	-2.22/-2.11	-2.90/-3.65	-3.69/-5.11	-6.55/-3.88	-3.95/-10.72	-4.40/-5.96	-6.87/-5.83	-12.07/-12.32	-5.05/-5.08	-9.42/-10.91	-11.29/-14.33	-10.25/-8.64	-13.04/-13.22	-13.33/-11.08	-10.50/-11.44	-11.84/-12.59	
Θ(142.5°)	-8.59/-6.46	-8.79/-9.51	-4.26/-4.09	-6.67/-9.14	-7.35/-5.08	-3.52/-3.08	-3.83/-3.48	-3.85/-3.17	-2.05/-2.44	-3.74/-4.53	-2.44/-1.33	-1.81/-4.28	-6.95/-3.11	-1.16/-5.92	-13.85/-6.22	-6.33/-11.14	-7.98/-6.31	-8.60/-7.90	-8.92/-9.45	-10.19/-10.05	-10.95/-9.41	-9.97/-10.11	-11.01/-8.39	-11.68/-12.65	-9.14/-9.72
Θ(150°)	-11.78/-11.73	-8.48/-7.96	-8.38/-8.80	-8.42/-7.02	-5.69/-5.01	-4.04/-3.19	-2.93/-3.30	-3.81/-4.11	-4.82/-4.89	-5.48/-4.87	-4.47/-3.56	-2.52/-2.36	-4.25/-4.50	-5.91/-7.91	-4.15/-4.05	-8.29/-8.78	-4.54/-4.05	-6.28/-9.45	-10.16/-6.06	-3.52/-3.37	-4.73/-7.44	-8.06/-9.73	-7.43/-7.14	-8.59/-10.39	
Θ(157.5°)	-11.38/-10.92	-10.72/-8.59	-7.28/-6.33	-11.67/-5.72	-5.28/-4.94	-4.73/-5.16	-5.95/-6.33	-6.71/-7.38	-6.56/-6.26	-5.88/-5.00	-5.86/-7.05	-7.97/-6.34	-3.73/-2.53	-3.75/-6.38	-10.36/-15.83	-12.19/-9.21	-7.08/-6.66	-7.71/-11.07	-12.51/-10.43	-8.93/-9.28	-8.62/-7.64	-8.56/-9.03	-9.59/-11.63	-13.61/-13.38	
Θ(165°)	-13.96/-13.23	-11.70/-10.92	-11.40/-10.87	-10.07/-9.69	-8.90/-7.56	-6.47/-6.64	-6.20/-6.00	-7.20/-6.30	-5.83/-6.35	-5.70/-6.17	-6.20/-6.00	-6.55/-5.93	-4.70/-5.09	-8.13/-11.54	-10.59/-8.10	-6.74/-8.31	-11.32/-13.42	-15.50/-15.44	-14.97/-15.40	-15.08/-15.43	-14.04/-11.32	-10.82/-10.04	-9.37/-10.33	-12.53/-14.80	
Θ(172.5°)	-11.67/-10.73	-9.13/-7.29	-6.46/-6.05	-5.39/-5.15	-5.22/-4.50	-5.95/-6.09	-5.75/-5.98	-5.53/-6.54	-7.01/-6.76	-7.22/-6.55	-7.72/-8.82	-7.91/-7.57	-7.83/-8.11	-7.71/-6.90	-6.30/-6.23	-7.54/-10.02	-12.03/-11.75	-10.00/-8.94	-8.20/-8.35	-8.74/-8.72	-8.65/-9.28	-10.49/-10.32	-8.90/-9.70	-9.49/-10.42	
Θ(180°)	-6.93/-6.79	-6.39/-5.58	-5.20/-4.91	-4.74/-4.88	-5.28/-5.31	-5.37/-5.57	-5.89/-6.51	-6.11/-6.68	-5.91/-6.11	-6.34/-7.75	-8.02/-9.41	-7.13/-10.00	-9.62/-9.79	-9.37/-9.60	-10.37/-11.98	-13.81/-11.03	-7.53/-6.30	-8.80/-7.69	-8.25/-8.95	-9.89/-9.04	-8.97/-8.72	-8.07/-7.42	-7.56/-7.53	-6.66/-6.50	
Freq(Hz)	2.45GPol	TotalAnt.2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)	
Θ(0°)	-1.36/-1.42	-1.49/-1.62	-1.75/-1.94	-2.19/-2.41	-2.47/-2.41	-2.66/-2.28	-2.12/-1.96	-1.91/-1.87	-1.60/-1.25	-1.03/-1.01	-1.17/-1.35	-1.47/-1.49	-1.45/-1.34	-1.28/-1.31	-1.43/-1.62	-1.82/-1.88	-1.82/-1.83	-1.98/-2.10	-2.10/-1.85	-1.51/-1.30	-1.12/-1.21	-1.26/-1.32	-1.31/-1.33	-1.33/-1.42	
Θ(7.5°)	-0.93/-0.79	-0.61/-0.48	-0.43/-0.52	-0.76/-1.09	-1.40/-1.67	-1.76/-1.56	-1.06/-0.87	-1.00/-1.29	-1.38/-1.12	-0.86/-0.86	-1.09/-1.42	-1.71/-1.88	-1.99/-2.10	-2.24/-2.40	-2.62/-2.92	-3.24/-3.50	-3.66/-3.81	-3.96/-4.09	-3.92/-3.55	-3.03/-2.54	-2.22/-2.05	-2.01/-1.97	-1.87/-1.72	-1.46/-1.15	
Θ(15°)	-0.25/-0.03	0.10/-0.16	0.15/0.06	0.14/-0.45	-0.94/-1.61	-2.19/-2.32	-1.86/-1.36	-1.25/-1.49	-1.62/-1.37	-0.96/-0.78	-0.90/-1.28	-1.23/-1.73	-2.54/-2.95	-3.40/-3.76	-3.93/-4.02	-4.08/-3.98	-4.05/-3.86	-3.63/-3.69	-3.95/-4.16	-4.03/-3.55	-2.94/-2.43	-2.09/-1.88	-1.64/-1.36	-0.99/-0.56	
Θ(22.5°)	0.750/7.7	0.670/5.0	0.330/2.1	0.13/-0.04	-0.45/-1.13	-2.00/-2.70	-2.79/-2.46	-2.30/-2.36	-2.32/-1.94	-1.41/-1.07	-1.10/-1.48	-2.25/-3.01	-3.78/-4.58	-5.08/-4.84	-4.01/-3.10	-2.37/-1.88	-1.57/-1.40	-1.40/-1.64	-2.19/-2.89	-3.54/-3.69	-3.13/-2.23	-1.46/-0.93	-0.58/-0.22	0.200/5.7	
Θ(30°)	1.591/4.9	1.190/7.8	0.400/2.5	0.280/3.3	0.27/-0.03	-0.63/-1.43	-2.04/-2.34	-2.47/-2.63	-2.76/-2.66	-2.41/-2.15	-2.09/-2.30	-2.97/-3.82	-4.62/-5.14	-4.89/-3.80	-2.68/-1.92	-1.42/-1.09	-0.93/-0.91	-0.96/-1.07	-1.36/-2.00	-3.13/-4.47	-4.91/-3.96	-2.53/-4.14	-0.74/-0.05	0.751/3.6	
Θ(37.5°)	1.871/9.2	1.520/8.5	0.21/-0.05	0.120/4.0	0.570/5.6	0.26/-0.27	-0.87/-1.39	-1.80/-2.10	-2.38/-2.75	-3.27/-3.58	-3.54/-3.37	-3.85/-4.37	-4.85/-4.91	-4.37/-3.65	-3.12/-2.78	-2.37/-1.86	-1.32/-0.85	-0.44/-0.21	-0.14/-0.32	-0.88/-1.84	-2.93/-3.40	-2.91/-2.22	-1.78/-1.06	0.201/3.0	
Θ(45°)	1.521/7.0	1.230/3.7	-0.48/-0.66	-0.290/1.3	0.400/5.9	0.560/2.7	-0.23/-0.86	-1.41/-1.64	-1.74/-2.16	-3.00/-3.71	-3.72/-3.52	-4.09/-5.06	-6.13/-6.52	-6.02/-5.55	-4.96/-4.12	-3.14/-2.26	-1.55/-1.15	-0.97/-1.00	-1.16/-1.25	-1.16/-1.02	-0.88/-0.68	-0.42/-0.15	-0.34/-0.79	-0.340/7.9	
Θ(52.5°)	1.421/3.8	0.70/-0.41	-1.23/-1.03	-0.52/-0.15	0.090/3.5	0.490/3.7	-0.02/-0.70	-1.32/-1.40	-1.17/-1.29	-1.87/-2.41	-2.73/-3.58	-5.90/-9.42	-10.34/-7.22	-5.09/-4.57	-4.65/-4.79	-4.96/-4.97	-4.68/-4.31	-3.90/-3.49	-3.39/-3.80	-4.54/-4.52	-3.22/-1.79	-0.86/-0.07	0.480/4.6	0.491/0.7	
Θ(60°)	1.661/6.5	0.69/-0.85	-1.60/-0.96	-0.41/-0.16	0.030/2.3	0.370/3.9	0.28/-0.01	-0.38/-0.52	-0.53/-0.76	-1.24/-1.97	-3.24/-5.64	-10.19/-12.57	-7.23/-3.77	-2.83/-3.95	-6.35/-8.16	-7.31/-5.33	-3.91/-3.26	-2.78/-2.21	-1.80/-1.86	-2.50/-3.58	-3.71/-2.60	-2.02/-2.27	-1.90/-1.07	-0.191/0.0	
Θ(67.5°)	0.351/1.4	0.76/-0.67	-1.40/-0.75	-0.250/0.8	0.500/7.7	0.710/5.7	0.430/3.4	0.26/-0.07	-0.76/-1.44	-1.92/-3.17	-5.88/-10.32	-4.13/-2.42	-2.89/-4.65	-5.79/-4.71	-2.87/-1.70	-1.46/-1.75	-2.13/-2.57	-3.28/-3.96	-4.17/-3.97	-3.09/-1.40	-0.15/-0.40	-1.68/-2.61	-2.51/-1.11		
Θ(75°)	-1.07/-0.38	-0.15/-1.19	-1.63/-0.55	0.080/6.8	2.102/4.7	2.260/8.5	0.29/-0.09	-0.22/-0.50	-1.33/-2.38	-2.88/-3.61	-5.47/-8.60	-12.93/-8.00	-3.61/-2.45	-3.34/-5.15	-6.22/-5.86	-4.35/-3.51	-3.26/-2.80	-1.99/-1.42	-1.69/-3.01	-4.96/-6.00	-5.32				

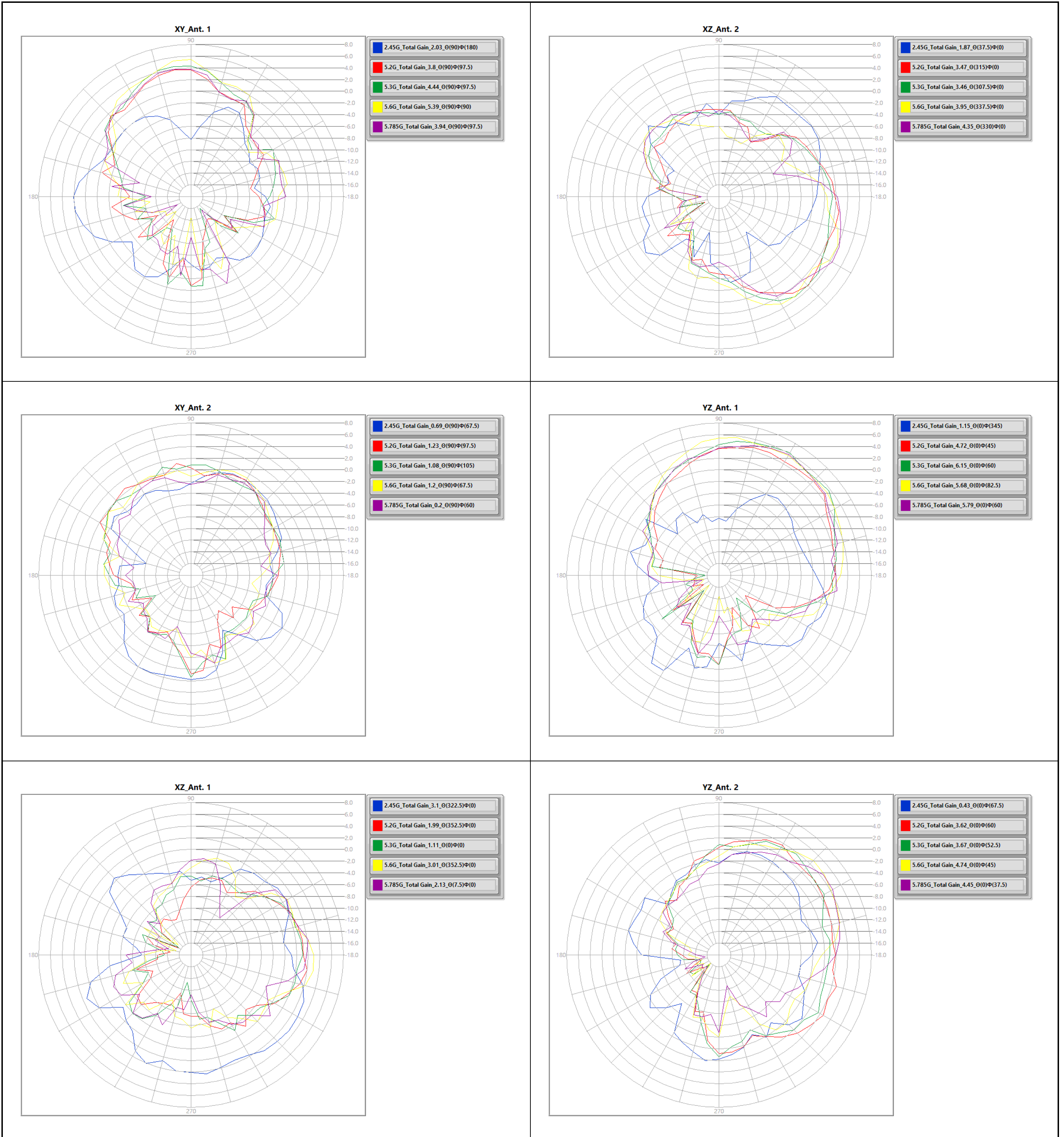


Antenna Pattern of 2.4GHz and 5GHz

Appendix D

Θ (75°)	-7.75/-5.47	-4.16/-1.93	-0.50/0.08	0.93/1.75	1.65/1.51	0.62/0.81	1.58/2.17	2.91/3.23	2.53/2.08	-0.21/0.26	-0.34/-0.59	-3.28/-0.34	-0.01/-0.40	-0.41/-0.53	-1.78/-3.67	-5.59/-9.01	-10.18/-4.59	-4.25/-6.72	-10.78/-10.02	-3.80/-2.76	-4.00/-2.61	-1.60/-3.24	-5.44/-7.47	-7.49/-8.87
Θ (82.5°)	-7.61/-5.37	-4.08/-2.37	-1.33/-0.77	0.41/1.04	1.49/1.56	0.65/0.41	0.62/1.32	1.50/2.20	1.24/0.29	-0.58/-0.61	-0.87/-2.30	-4.79/-2.06	-2.24/-2.54	-4.20/-2.51	-4.00/-5.23	-6.93/-8.71	-9.64/-5.57	-5.14/-6.74	-8.91/-7.50	-3.14/-2.74	-5.16/-4.67	-3.77/-4.42	-6.22/-6.21	-6.64/-7.70
Θ (90°)	-6.00/-4.39	-4.25/-2.84	-1.87/-1.24	-0.24/0.50	1.14/1.20	0.68/-0.28	-1.09/0.02	-0.34/0.27	0.17/-1.10	-1.64/-0.20	-1.42/-1.73	-5.44/-3.10	-3.16/-4.05	-6.44/-4.78	-7.01/-8.34	-8.11/-6.91	-7.14/-7.61	-8.57/-6.44	-4.02/-5.19	-2.52/-2.48	-6.31/-5.36	-4.83/-4.36	-6.59/-5.97	-5.88/-7.49
Θ (97.5°)	-5.89/-4.40	-5.12/-2.58	-2.14/-2.46	-1.10/-0.58	-0.00/-0.21	0.11/-0.57	-2.13/-1.82	-1.56/-2.40	-1.00/-1.31	-2.36/-0.86	-1.06/-2.18	-4.62/-2.76	-4.08/-4.92	-7.39/-6.59	-10.92/-8.94	-12.47/-6.52	-8.99/-8.60	-9.71/-7.45	-5.09/-7.10	-6.03/-3.68	-8.05/-6.48	-5.30/-5.39	-5.81/-6.40	-5.15/-6.61
Θ (105°)	-5.39/-3.92	-4.67/-3.37	-2.16/-2.98	-2.92/-1.87	-0.95/-1.03	-1.82/-1.32	-2.81/-3.90	-3.86/-4.26	-4.10/-2.39	-2.50/-0.93	-2.22/-1.84	-4.04/-3.15	-3.55/-6.13	-7.12/-7.06	-12.91/-11.18	-14.58/-9.30	-9.36/-6.97	-10.23/-15.39	-6.91/-7.36	-6.61/-3.39	-8.82/-8.81	-4.60/-6.07	-7.04/-5.37	-4.19/-6.76
Θ (112.5°)	-4.63/-4.04	-4.45/-2.42	-1.90/-3.01	-3.35/-3.24	-2.56/-2.07	-2.62/-2.86	-3.67/-5.91	-7.53/-7.26	-4.88/-3.15	-2.53/-0.98	-3.92/-3.34	-4.50/-4.99	-4.62/-5.79	-8.36/-7.45	-8.81/-7.07	-7.74/-7.88	-14.62/-6.03	-13.04/-9.69	-6.46/-8.09	-6.55/-4.31	-9.42/-6.65	-3.14/-4.90	-6.26/-4.59	-4.76/-5.60
Θ (120°)	-2.73/-3.86	-3.00/-2.54	-1.71/-1.92	-4.00/-4.04	-4.05/-3.31	-2.74/-3.07	-4.09/-6.25	-9.19/-10.35	-5.81/-5.00	-5.20/-3.45	-4.26/-5.44	-6.50/-5.75	-7.94/-7.90	-7.43/-6.91	-8.15/-7.17	-8.23/-10.27	-11.96/-8.43	-11.51/-9.21	-10.22/-8.06	-4.72/-6.05	-9.23/-6.80	-4.46/-4.50	-4.85/-3.44	-4.82/-4.26
Θ (127.5°)	-2.24/-1.98	-2.25/-2.28	-1.96/-2.51	-4.15/-6.36	-6.17/-5.53	-4.53/-4.03	-4.85/-6.36	-9.91/-9.77	-9.09/-6.89	-5.12/-7.22	-8.16/-7.73	-7.48/-9.24	-10.36/-8.48	-9.34/-7.63	-5.93/-7.54	-7.00/-8.43	-13.57/-13.54	-10.32/-12.80	-12.65/-13.01	-8.57/-10.69	-10.64/-9.97	-7.71/-7.66	-6.60/-4.59	-4.48/-3.00
Θ (135°)	-1.53/-2.14	-2.57/-2.76	-1.83/-3.66	-5.60/-7.52	-9.02/-8.00	-6.66/-5.79	-5.48/-6.99	-9.12/-10.69	-12.18/-10.05	-7.02/-6.51	-8.98/-10.37	-9.09/-8.69	-9.75/-9.92	-8.23/-8.12	-7.25/-6.43	-9.06/-13.19	-12.37/-13.15	-11.46/-15.31	-16.06/-15.49	-8.07/-8.02	-10.46/-7.75	-7.20/-7.14	-6.28/-6.02	-5.57/-3.59
Θ (142.5°)	-1.90/-3.11	-3.14/-3.43	-3.23/-3.69	-7.04/-9.48	-11.31/-9.88	-7.02/-5.89	-5.83/-6.23	-7.33/-10.93	-11.23/-9.44	-8.34/-7.37	-8.75/-9.65	-9.68/-10.15	-11.98/-9.22	-8.09/-8.74	-10.87/-12.40	-13.75/-13.81	-9.95/-10.75	-15.19/-14.78	-12.09/-15.99	-11.12/-9.44	-7.82/-6.03	-5.47/-6.15	-6.97/-6.03	-5.46/-3.41
Θ (150°)	-3.53/-3.38	-4.48/-4.66	-6.24/-5.68	-5.64/-7.55	-8.76/-9.36	-8.48/-7.07	-6.40/-6.29	-6.33/-7.24	-8.50/-8.16	-7.18/-8.64	-10.02/-9.49	-7.36/-7.18	-8.45/-9.55	-12.42/-15.38	-15.62/-15.71	-14.85/-14.77	-13.01/-13.42	-14.67/-14.82	-15.09/-15.43	-12.88/-11.15	-8.66/-7.84	-6.45/-5.85	-6.51/-5.99	-6.22/-4.60
Θ (157.5°)	-4.76/-4.81	-7.00/-7.74	-6.93/-8.01	-7.83/-9.43	-12.13/-11.23	-9.83/-8.81	-8.68/-7.53	-8.41/-10.23	-12.29/-11.17	-8.01/-7.39	-7.65/-8.09	-9.33/-10.02	-11.54/-15.20	-15.50/-15.44	-15.51/-14.69	-11.92/-12.33	-15.06/-13.46	-14.47/-15.70	-13.73/-12.40	-11.01/-10.66	-9.37/-10.27	-9.56/-8.36	-7.79/-6.51	-5.71/-5.11
Θ (165°)	-6.43/-7.82	-8.59/-11.32	-11.72/-11.81	-14.57/-13.58	-12.23/-13.31	-12.13/-12.86	-12.69/-10.77	-9.59/-8.63	-8.38/-7.37	-7.73/-10.00	-10.51/-10.44	-10.79/-11.60	-13.36/-14.11	-14.46/-14.59	-14.95/-14.83	-14.81/-14.47	-15.66/-15.69	-15.02/-16.05	-15.10/-13.67	-14.48/-14.56	-15.43/-13.37	-11.48/-11.41	-10.53/-8.70	-6.88/-5.58
Θ (172.5°)	-9.81/-10.05	-9.18/-8.06	-8.29/-9.41	-9.58/-9.86	-10.53/-11.21	-12.19/-13.36	-13.32/-10.38	-10.67/-13.26	-11.99/-11.56	-13.93/-13.75	-11.94/-10.95	-11.06/-11.43	-12.79/-13.97	-14.63/-15.00	-15.62/-15.44	-16.02/-14.79	-14.43/-15.33	-15.42/-14.50	-14.27/-15.08	-14.67/-15.50	-15.72/-14.70	-13.41/-12.75	-12.52/-12.45	-11.09/-9.92
Θ (180°)	-14.60/-14.17	-15.14/-14.87	-15.06/-15.84	-15.75/-15.22	-14.63/-13.43	-13.99/-14.08	-12.70/-12.75	-13.63/-13.71	-14.34/-13.30	-12.21/-12.00	-11.29/-11.38	-12.40/-14.22	-15.18/-15.47	-14.97/-15.34	-12.39/-12.97	-14.96/-15.70	-15.56/-15.05	-14.37/-12.50	-12.75/-13.26	-13.58/-12.58	-12.35/-12.90	-13.78/-15.10	-15.04/-15.93	
Freq(Hz)	5.785GPol.	Total/Ant. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ (0°)	2.21/2.29	2.45/2.38	2.32/2.14	2.02/2.02	2.07/2.00	1.81/1.74	1.97/1.93	1.40/1.42	1.67/1.75	1.38/1.17	1.02/0.94	1.17/1.22	1.13/1.03	1.29/1.90	2.06/1.40	1.41/1.89	1.87/1.88	2.54/2.63	2.17/2.08	2.24/2.51	2.63/2.39			
Θ (7.5°)	-0.28/-0.03	0.14/0.35	0.85/1.28	1.66/1.95	2.21/2.34	2.60/2.71	2.76/3.04	3.01/3.05	3.49/3.75	3.62/3.54	3.45/3.40	3.38/3.13	2.83/2.67	2.51/2.37	2.42/2.08	1.32/1.21	1.33/0.69	0.44/0.24	0.15/0.25	-0.38/-0.26	-0.26/-0.11	-0.37/-0.63	-0.42/-0.11	-0.03/-0.13
Θ (15°)	-4.36/-3.27	-3.06/-2.45	-1.73/-1.08	-0.48/0.30	0.71/1.41	2.15/2.53	3.22/3.88	4.00/4.11	4.28/4.61	4.82/4.68	4.50/4.47	4.38/4.00	3.50/3.17	2.80/2.53	2.34/1.93	1.04/0.39	-0.30/-0.64	-1.20/-1.75	-2.15/-2.66	-3.75/-4.48	-4.75/-4.81	-5.34/-5.39	-5.24/-5.06	-4.98/-5.04
Θ (22.5°)	-7.96/-5.47	-4.50/-3.44	-2.27/-0.62	0.39/0.66	1.07/2.09	2.91/3.24	3.59/4.16	4.46/4.71	5.32/5.78	5.84/5.69	5.17/4.40	4.22/4.44	4.26/3.90	3.12/2.21	1.34/0.90	-0.09/-1.49	-1.84/-1.56	-2.65/-3.27	-3.32/-3.07	-2.69/-2.74	-2.44/-3.09	-4.63/-5.99	-8.89/-9.32	-9.54/-9.17
Θ (30°)	-4.05/-3.47	-2.97/-2.40	-1.37/-0.17	-0.25/-0.08	0.77/1.69	2.85/3.72	4.43/5.20	5.24/5.43	5.87/6.07	6.60/6.09	5.05/4.39	4.00/4.42	4.35/4.09	3.41/2.65	1.82/1.13	0.08/-1.35	-2.83/-4.22	-4.72/-4.97	-4.92/-3.79	-2.68/-2.27	-2.08/-2.41	-3.57/-6.21	-9.46/-10.17	-8.42/-5.27
Θ (37.5°)	-2.23/-1.02	-1.09/-1.31	-1.26/-1.73	-2.21/-1.69	-0.68/0.41	1.98/3.35	4.45/5.23	5.60/5.42	5.75/6.39	6.34/5.50	4.40/3.79	2.98/2.97	3.11/3.35	2.77/2.50	2.16/1.82	1.02/-0.87	-3.32/-6.07	-7.01/-6.46	-4.92/-3.78	-2.72/-2.38	-1.88/-2.47	-4.49/-7.28	-9.91/-8.41	-6.71/-4.00
Θ (45°)	-2.39/-1.73	-2.15/-1.44	-0.97/-1.33	-1.55/-1.06	-0.68/0.03	0.53/1.66	3.41/4.56	5.52/5.91	5.12/5.32	5.38/5.22	3.39/1.64	1.83/2.28	2.14/2.36	2.46/2.55	2.83/3.00	1.82/-0.15	-1.46/-2.74	-6.18/-8.67	-6.70/-4.30	-3.13/-2.60	-2.92/-4.39	-6.67/-9.57	-12.15/-8.20	-5.57/-3.59
Θ (52.5°)	-5.63/-4.30	-3.38/-1.35	-0.31/-0.24	0.09/0.20	-0.45/-1.02	0.02/0.87	2.03/4.09	5.41/5.53	5.01/4.21	4.40/3.16	0.47/1.28	1.08/0.65	2.12/2.44	2.39/1.69	1.98/2.04	0.78/0.74	-1.18/-4.50	-5.17/-5.06	-4.70/-3.99	-2.07/-2.13	-2.07/-2.69	-6.82/-9.94	-11.93/-9.24	-6.88/-6.36
Θ (60°)	-7.16/-6.34	-3.27/-1.57	-0.48/0.06	0.65/0.54	-0.57/-1.05	-0.58/0.36	1.75/3.25	4.20/4.99	4.41/3.03	2.75/1.53	-0.90/-0.13	0.01/0.07	1.61/1.86	1.53/0.82	0.06/-1.11	0.04/-1.08	-2.25/-3.95	-5.69/-7.60	-7.29/-6.30	-4.32/-3.67	-3.62/-4.29	-4.62/-9.47	-10.29/-10.56	-10.14/-11.45
Θ (67.5°)	-6.39/-6.30	-4.21/-1.58	-0.62/0.31	0.80/0.58	-0.70/-0.35	-0.02/0.08	0.99/3.09	3.73/3.98	2.94/1.62	0.83/-0.62	-3.52/-0.99	-1.65/-2.43	-0.27/0.65	0.22/-0.36	-1.56/-2.04	-3.54/-4.28	-4.76/-5.89	-7.00/-8.93	-8.74/-6.72	-5.31/-5.23	-4.30/-2.90	-4.71/-6.33	-8.18/-9.11	-9.16/-8.86
Θ (75°)	-5.04/-5.86	-3.96/-2.61	-1.59/-0.20	0.91/1.09	0.50/-0.11	-0.12/0.56	-0.00/1.00	2.91/2.87	1.98/-0.11	0.10/-2.37	-4.76/-2.77	-5.17/-5.13	-3.16/-2.90	-2.90/-2.22	-2.84/-5.48	-6.38/-7.29	-7.13/-4.74	-5.84/-9.90	-12.62/-7.35	-5.16/-6.77	-6.00/-4.02	-3.66/-5.83	-6.33/-7.56	-6.47/-7.09
Θ (82.5°)	-4.05/-3.31	-3.92/-3.60	-2.70/-1.11	0.41/0.41	0.50/0.26	-0.04/-0.98	-0.73/0.22	1.59/1.51	0.14/-1.18	-1.96/-2.01	-7.03/-3.28	-7.55/-7.44	-6.02/-6.87	-5.48/-3.26	-5.99/-4.84	-7.19/-6.95	-5.80/-5.38	-6.63/-6.52	-10.40/-5.85	-4.75/-5.89	-5.72/-5.31	-4.81/-4.86	-6.32/-5.39	-5.60/-5.36
Θ (90°)	-3.28/-5.95	-3.80/-4.23	-3.55/-2.21	-0.29/-0.16	0.20/-0.27	-0.29/-1.92	-2.43/-1.95	-0.72/-0.54	-0.92/-1.76	-3.37/-2.52	-3.98/-4.29	-5.30/-8.21	-6.81/-8.11	-8.23/-6.41	-8.57/-7.84	-7.47/-5.82	-6.53/-6.34	-9.04/-7.28	-4.70/-4.04	-2.49/-4.82	-5.01/-5.15	-4.09/-4.67	-5.75/-4.26	-5.02/-4.80
Θ (97.5°)	-4.18/-6.42	-3.32/-4.52	-4.54/-2.77	-1.61/-0.91	-0.78/-1.10	-0.92/-3.27	-3.15/-3.26	-1.33/-2.21	-2.80/-2.76	-2.43/-3.34	-2.50/-2.78	-4.84/-5.75	-6.18/-7.14	-8.52/-8.37	-12.96/-12.08	-9.83/-8.83	-10.17/-7.24	-14.58/-5.57	-7.75/-6.93	-4.78/-4.30	-6.22/-6.39	-3.89/-3.79	-5.73/-3.46	-5.58/-3.99
Θ (105°)	-2.83/-5.53	-3.55/-5.18	-5.32/-3.81	-2.33/-1.83	-1.18/-3.13	-1.75/-1.98	-4.74/-5.43	-3.48/-3.76	-3.89/-4.14	-2.15/-1.89	-2.44/-2.79	-2.62/-4.28	-5.55/-5.25	-9.09/-9.06	-16.15/-8.27	-10.72/-7.25	-11.15/-7.95	-12.71/-9.20	-7.05/-6.65	-4.29/-3.04	-7.70/-5.74	-2.68/-4.40	-4.68/-2.99	-3.92/-4.14
Θ (112.5°)	-2.96/-5.35	-3.77/-4.06	-4.90/-4.98	-4.00/-3.53	-2.74/-2.76	-3.98/-3.79	-4.94/-5.69	-5.38/-5.04	-5.36/-4.39	-3.20/-1.44	-2.03/-3.00	-2.86/-4.56	-5.92/-5.34	-8.79/-11.36	-8.60/-6.64	-6.75/-9.20	-13.31/-6.72	-11.89/-8.52	-6.94/-7.66	-5.48/-4.35	-7.93/-4.04	-1.50/-3.22	-5.61/-2.46	-3.55/-4.85
Θ (120°)	-1.82/-4.61	-4.26/-2.40	-4.59/-5.22	-5.49/-4.96	-5.65/-4.06	-3.35/-4.07	-5.72/-6.44	-7.37/-7.66	-6.21/-5.15	-3.98/-3.15	-2.20/-3.32	-4.70/-3.59	-7.30/-8.51	-6.73/-7.82	-9.50/-6.31	-6.03/-9.51	-7.68/-11.78	-7.74/-6.69	-10.93/-8.09	-3.45/-6.58	-6.91/-4.15	-2.73/-2.52	-2.30/-1.30	-2.96/-3.71
Θ (127.5°)	-2.01/-2.85	-3.32/-2.81	-4.61/-6.27	-7.33/-7.57	-6.42/-6.30	-7.25/-7.16	-6.13/-8.04	-10.16/-8.62	-7.73/-5.16	-4.24/-3.05	-5.51/-6.7													

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





Antenna Pattern of 6GHz

Appendix E

Total Gain Data

Freq(Hz)	6.1750Pol.	TotalAnt. 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ(0°)	-0.44-0.38	-0.45-0.41	-0.50-0.45	-0.60-0.32	-0.75-0.80	-0.76-0.52	-0.66-1.28	-0.96-0.98	-1.14-1.03	-1.12-1.16	-0.96-0.76	-0.79-1.04	-0.89-0.32	0.01-0.08	0.23-0.23	0.15-0.25	0.26-1.07	-0.19-0.11	-0.16-0.07	0.02-0.48	0.29-0.49	-0.06-0.14	-0.51-0.80	-0.65-0.54
Θ(7.5°)	-0.32-0.04	0.14-0.36	0.43-0.59	0.34-0.62	0.47-0.46	0.44-0.28	0.28-0.02	-0.38-0.24	-0.51-0.75	-0.99-1.27	-1.31-1.05	-1.12-1.36	-1.07-0.33	-0.09-0.33	-0.62-0.88	-0.95-0.60	-0.45-0.48	-0.41-0.68	-1.07-1.03	-1.00-1.22	-1.75-2.29	-1.84-1.40	-1.38-1.22	-1.05-0.75
Θ(15°)	-3.05-2.40	-1.85-1.78	-1.67-1.57	-1.89-1.90	-1.54-1.05	-0.91-1.25	-1.56-1.75	-2.43-2.81	-3.30-3.09	-3.32-3.67	-3.05-2.49	-1.85-1.40	-0.69-0.31	-0.62-0.64	-0.12-0.59	1.30-1.95	2.59-2.87	2.64-2.18	1.49-1.00	1.15-1.05	0.40-0.37	-1.13-2.13	-3.67-4.23	-4.59-4.23
Θ(22.5°)	-8.42-7.33	-5.24-2.40	-3.82-3.41	-3.39-3.06	-2.64-3.10	-3.60-3.20	-1.94-0.63	0.40-0.76	0.90-0.65	0.24-0.26	-0.60-0.57	-0.14-0.44	1.00-0.93	0.12-0.05	1.09-2.39	3.55-4.47	4.94-0.56	5.73-3.74	2.47-1.47	1.02-1.35	1.92-1.52	0.70-0.09	-1.34-3.85	-5.42-2.47
Θ(30°)	-5.24-2.65	-0.83-0.40	-0.97-1.49	-1.89-1.21	-0.68-1.03	-0.81-0.57	1.81-3.12	4.05-4.31	0.40-3.16	1.96-0.63	-0.33-0.13	0.45-0.90	1.14-1.27	1.36-1.45	1.28-1.93	4.07-5.42	6.10-6.09	5.14-3.90	2.96-1.93	1.20-1.49	2.42-2.42	1.49-0.68	-0.74-2.78	-4.85-6.71
Θ(37.5°)	-3.03-2.07	-1.50-2.04	-3.36-4.11	-2.49-0.20	1.44-1.92	2.48-2.82	3.34-4.61	4.68-4.98	4.74-3.92	2.35-0.73	-0.07-0.44	0.78-0.77	0.21-0.05	0.47-1.24	1.58-2.10	3.48-4.37	4.54-3.67	3.57-3.31	2.84-1.56	-0.39-1.72	-1.62-0.76	-0.89-1.09	-0.87-1.43	-3.99-4.77
Θ(45°)	-4.10-4.97	-5.72-7.99	-7.50-5.05	-2.48-1.07	0.93-0.08	2.85-2.76	2.49-2.32	3.00-3.92	4.38-4.09	3.04-1.44	0.53-0.96	1.15-0.64	-0.63-0.17	1.21-1.83	2.16-1.54	1.41-2.46	1.94-1.62	1.63-3.19	2.93-1.26	-0.52-1.68	-2.36-3.55	-4.30-2.26	0.43-0.50	-1.84-5.04
Θ(52.5°)	-5.67-5.31	-6.71-8.99	-5.07-2.43	-1.27-1.07	-0.85-0.28	0.52-0.82	0.62-0.67	1.24-2.66	3.85-4.18	3.44-1.72	0.25-1.00	1.74-0.99	0.21-0.05	-0.04-2.29	3.03-1.29	0.22-0.97	-0.97-2.50	1.38-0.04	0.96-0.41	-3.30-5.40	-6.18-5.18	-1.96-0.11	-0.01-0.49	-1.47-4.53
Θ(60°)	-7.12-6.07	-6.24-7.92	-5.39-2.51	-0.76-0.93	-1.96-2.61	-2.89-2.18	-1.47-0.26	1.14-1.81	3.25-4.04	3.43-1.73	-0.05-0.81	2.15-1.59	-0.02-0.23	0.62-2.24	3.38-1.61	-1.01-1.13	-3.87-5.55	-4.09-1.93	-1.39-3.49	-7.03-6.81	-6.81-6.90	-2.89-0.98	-0.34-1.24	-1.38-9.05
Θ(67.5°)	-6.87-8.25	-9.94-13.17	-6.01-4.45	-2.37-2.63	-3.25-4.63	-5.17-4.38	-2.75-0.28	1.00-1.01	2.46-3.78	3.36-1.20	-0.60-0.43	1.79-1.42	-1.07-1.08	0.04-2.42	2.06-1.04	-2.09-2.12	-4.80-8.19	-4.45-2.70	-4.38-7.46	-7.85-8.02	-8.15-5.71	-2.07-1.45	-2.34-3.90	-2.67-3.48
Θ(75°)	-5.40-9.47	-12.10-12.38	-6.65-7.49	-5.71-5.36	-5.04-6.37	-8.23-5.59	-2.86-0.33	1.03-0.47	1.58-3.41	3.27-1.36	-0.50-0.86	2.39-1.44	-2.19-2.76	-1.87-1.87	0.45-0.68	-2.23-4.61	-7.13-8.34	-5.62-5.84	-6.27-6.87	-6.22-9.17	-9.35-5.93	-4.20-2.81	-5.87-8.77	-4.80-2.88
Θ(82.5°)	-3.71-8.95	-8.97-9.45	-7.84-8.78	-10.06-8.51	-6.16-7.34	-10.62-6.53	-3.77-0.25	1.67-0.87	0.73-2.71	2.68-0.70	-0.74-0.82	2.31-0.93	-3.34-4.37	-2.26-0.20	-1.88-2.61	-5.62-2.66	-4.71-14.32	-10.75-9.63	-7.90-5.36	-7.09-10.10	-7.15-6.90	-5.07-6.49	-11.70-13.96	-5.50-3.27
Θ(90°)	-4.19-9.38	-7.92-10.47	-9.06-10.84	-12.56-9.57	-8.27-8.05	-10.40-7.66	-4.26-0.17	2.55-1.77	-0.34-2.13	1.93-0.44	-1.41-0.22	2.05-0.79	-2.79-4.81	-5.23-0.92	-2.41-5.17	-7.38-4.32	-4.11-11.93	-9.87-6.18	-6.42-4.69	-8.75-9.66	-7.81-9.30	-7.55-9.94	-14.27-13.75	-5.89-2.69
Θ(97.5°)	-4.12-11.67	-7.64-11.92	-11.18-13.04	-11.09-9.38	-10.35-7.93	-11.30-9.20	-5.77-0.17	2.38-1.37	-1.55-0.16	0.82-1.04	-2.94-0.19	1.86-0.03	-2.89-3.27	-5.58-4.66	-2.78-7.09	-8.39-5.85	-6.26-14.94	-8.63-8.06	-7.08-9.40	-15.40-9.51	-10.14-9.41	-7.77-10.37	-9.19-11.06	-6.73-4.23
Θ(105°)	-6.17-13.13	-9.10-11.26	-12.92-13.08	-13.37-10.97	-12.18-13.15	-14.02-11.80	-6.25-0.39	1.76-0.70	-2.55-1.50	-0.12-2.24	-5.67-2.34	0.86-0.83	-2.69-2.24	-5.82-5.85	-2.09-4.13	-8.81-13.92	-13.21-11.57	-4.89-11.48	-10.39-7.59	-5.75-11.33	-9.27-10.28	-11.15-7.32	-6.70-5.81	-8.00-8.55
Θ(112.5°)	-7.54-14.66	-7.57-11.27	-12.98-14.34	-13.14-11.04	-14.18-12.23	-11.71-13.17	-8.94-0.96	1.65-0.59	-3.56-3.04	-1.52-3.30	-6.15-4.25	0.07-0.35	-2.53-4.00	-5.42-3.64	-2.75-10.12	-9.19-7.67	-8.70-15.98	-9.68-10.14	-11.27-11.28	-9.97-12.76	-13.12-5.48	-4.97-7.71	-10.27-11.33	-8.47-1.85
Θ(120°)	-11.32-8.67	-7.09-10.67	-11.82-14.41	-13.68-11.27	-10.86-8.14	-6.35-9.94	-9.31-2.15	0.60-0.90	-6.83-4.84	-1.93-2.74	-4.36-4.69	-2.04-0.79	-1.42-3.42	-6.92-5.26	-2.59-5.85	-8.92-13.66	-15.33-9.90	-7.10-6.20	-10.25-11.96	-7.22-11.44	-11.02-5.80	-6.50-9.36	-10.96-14.26	-12.29-9.89
Θ(127.5°)	-8.99-9.11	-7.07-8.60	-12.09-15.36	-14.95-13.81	-8.59-7.45	-6.96-7.79	-6.16-2.43	-0.84-3.37	-3.77-1.63	-3.77-1.05	-5.12-5.67	-2.82-4.78	-2.69-2.24	-5.22-5.85	-2.09-4.13	-8.81-13.92	-13.21-11.57	-4.89-11.48	-10.39-7.59	-5.75-11.33	-9.27-10.28	-11.15-7.32	-6.70-5.81	-8.00-8.55
Θ(135°)	-9.31-9.44	-9.75-11.56	-12.12-11.89	-10.65-11.67	-10.65-8.32	-7.49-8.77	-6.90-3.59	-3.29-5.98	-13.05-7.71	-4.33-3.86	-5.42-7.66	-8.19-6.42	-3.99-4.20	-4.04-3.38	-3.23-4.45	-9.38-11.46	-14.87-11.43	-10.18-13.35	-12.31-9.50	-10.93-15.33	-10.84-11.30	-12.61-11.19	-11.58-12.25	-10.90-8.66
Θ(142.5°)	-10.53-8.02	-11.19-11.46	-9.74-8.30	-7.69-9.80	-8.45-8.31	-12.08-14.68	-10.01-6.12	-5.06-7.07	-9.39-7.16	-5.02-4.27	-4.52-5.32	-7.33-8.25	-7.86-9.14	-7.17-7.96	-8.58-7.63	-5.97-9.31	-11.24-12.14	-5.05-6.06	-8.49-8.75	-10.55-13.42	-10.22-10.67	-12.00-9.10	-9.76-12.12	-12.30-10.62
Θ(150°)	-10.47-10.06	-10.64-11.79	-9.65-8.18	-7.47-7.70	-9.94-12.56	-13.32-15.04	-11.73-10.26	-10.34-10.17	-10.18-8.55	-6.21-4.42	-3.70-4.26	-5.11-5.41	-6.53-7.54	-8.57-10.21	-12.61-9.85	-12.02-7.03	-4.35-4.54	-5.74-7.72	-8.48-10.11	-11.95-10.11	-13.93-15.16	-11.60-8.44	-9.76-12.12	-7.40-8.01
Θ(157.5°)	-11.97-12.48	-12.30-11.04	-12.21-15.61	-14.29-12.67	-12.22-11.34	-11.20-12.78	-15.74-15.84	-15.61-14.61	-12.01-8.88	-7.06-5.07	-3.86-3.04	-3.88-7.40	-12.79-12.03	-10.85-10.30	-11.01-12.10	-12.85-9.76	-8.61-8.68	-7.32-7.33	-9.43-12.69	-14.62-14.75	-13.57-9.42	-9.19-9.95	-11.26-14.79	-15.87-13.52
Θ(165°)	-11.61-13.18	-13.90-15.15	-14.64-13.38	-11.92-10.26	-9.32-8.66	-9.16-10.20	-11.26-13.47	-13.33-12.36	-11.86-10.80	-8.13-6.69	-5.44-6.05	-7.59-8.48	-7.46-6.81	-7.63-9.12	-9.77-9.58	-10.45-12.51	-14.58-13.34	-9.58-8.39	-9.71-11.51	-12.62-10.53	-11.19-12.42	-14.20-14.32	-13.64-12.52	-11.55-10.77
Θ(172.5°)	-10.70-11.56	-12.95-14.68	-14.05-12.80	-12.95-10.44	-11.37-11.72	-12.95-12.10	-13.09-15.27	-15.05-15.29	-15.19-15.55	-12.74-9.29	-8.24-7.52	-7.52-8.34	-9.22-9.75	-11.91-14.60	-14.86-15.43	-14.83-11.45	-10.93-10.00	-9.67-9.08	-10.67-12.05	-12.77-11.31	-14.27-14.31	-10.81-10.00	-9.80-10.50	
Θ(180°)	-10.87-10.40	-9.72-9.53	-8.83-8.44	-8.19-8.26	-9.26-9.14	-8.82-9.18	-8.44-8.87	-9.14-8.56	-8.45-9.18	-9.69-9.77	-9.42-9.21	-9.92-10.34	-11.49-13.22	-14.91-14.47	-12.64-12.39	-13.53-13.52	-13.89-13.80	-13.97-13.51	-11.65-10.79	-11.35-12.03	-11.54-11.09	-10.90-10.94	-11.11-11.75	-11.83-11.62
Freq(Hz)	6.1750Pol.	TotalAnt. 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ(0°)	1.84-1.83	2.06-2.23	2.28-2.18	2.15-2.16	2.02-1.95	2.00-1.88	1.75-1.49	1.36-1.20	0.99-0.97	0.88-0.87	0.81-0.92	1.02-0.97	0.98-0.81	0.53-0.54	0.88-1.11	1.06-0.98	0.96-0.58	0.49-0.47	0.63-1.19	1.23-0.65	0.96-0.96	0.65-0.89	1.26-1.42	1.70-1.91
Θ(7.5°)	1.02-0.86	0.69-0.56	0.29-0.03	-0.09-0.10	-0.04-0.16	0.29-0.35	0.41-0.81	1.03-1.22	1.45-1.81	2.20-2.30	2.35-2.59	2.79-2.93	3.04-3.93	2.63-2.37	2.31-2.34	2.26-2.17	2.20-1.88	1.70-1.87	1.76-2.15	2.06-1.24	1.10-1.41	1.17-0.96	0.97-1.01	1.20-1.14
Θ(15°)	1.98-2.01	1.75-1.15	0.12-0.92	-0.17-2.25	-2.43-2.09	-1.43-0.96	-0.81-0.23	0.12-0.60	0.96-1.38	1.85-1.99	2.69-0.94	3.53-4.16	3.98-3.72	3.64-3.21	2.43-1.76	1.48-1.88	2.52-3.14	3.44-3.76	3.72-3.77	3.43-2.28	1.43-0.63	0.12-0.21	-0.50-0.13	0.90-1.47
Θ(22.5°)	0.75-0.97	0.49-0.03	-1.47-3.04	-3.92-5.30	-5.51-3.99	-2.44-1.74	-1.33-0.96	-0.81-0.89	-0.78-0.03	0.78-0.84	1.04-1.22	1.55-2.20	2.29-2.80	3.76-3.77	2.23-0.08	-0.53-0.07	3.18-4.62	4.89-4.30	2.81-1.37	0.57-0.89	-1.70-1.48	-2.20-3.11	-4.07-4.47	-2.60-0.67
Θ(30°)	-2.75-1.08	-1.06-1.66	-3.11-1.57	-6.07-6.41	-5.10-3.00	-1.30-0.16	0.48-0.51	-0.20-1.21	-1.58-0.81	0.34-1.31	1.68-1.52	1.59-1.50	1.12-2.16	2.99-3.37	3.24-1.76	-0.39-0.19	2.97-4.45	4.53-3.59	2.18-1.33	1.60-1.57	0.93-0.56	0.92-0.06	-2.04-4.64	-6.73-5.11
Θ(37.5°)	-3.68-2.68	-3.28-3.78	-5.35-6.07	-5.25-3.57	-1.58-0.01	0.18-0.22	0.10-0.58	0.71-0.58	0.33-1.16	0														

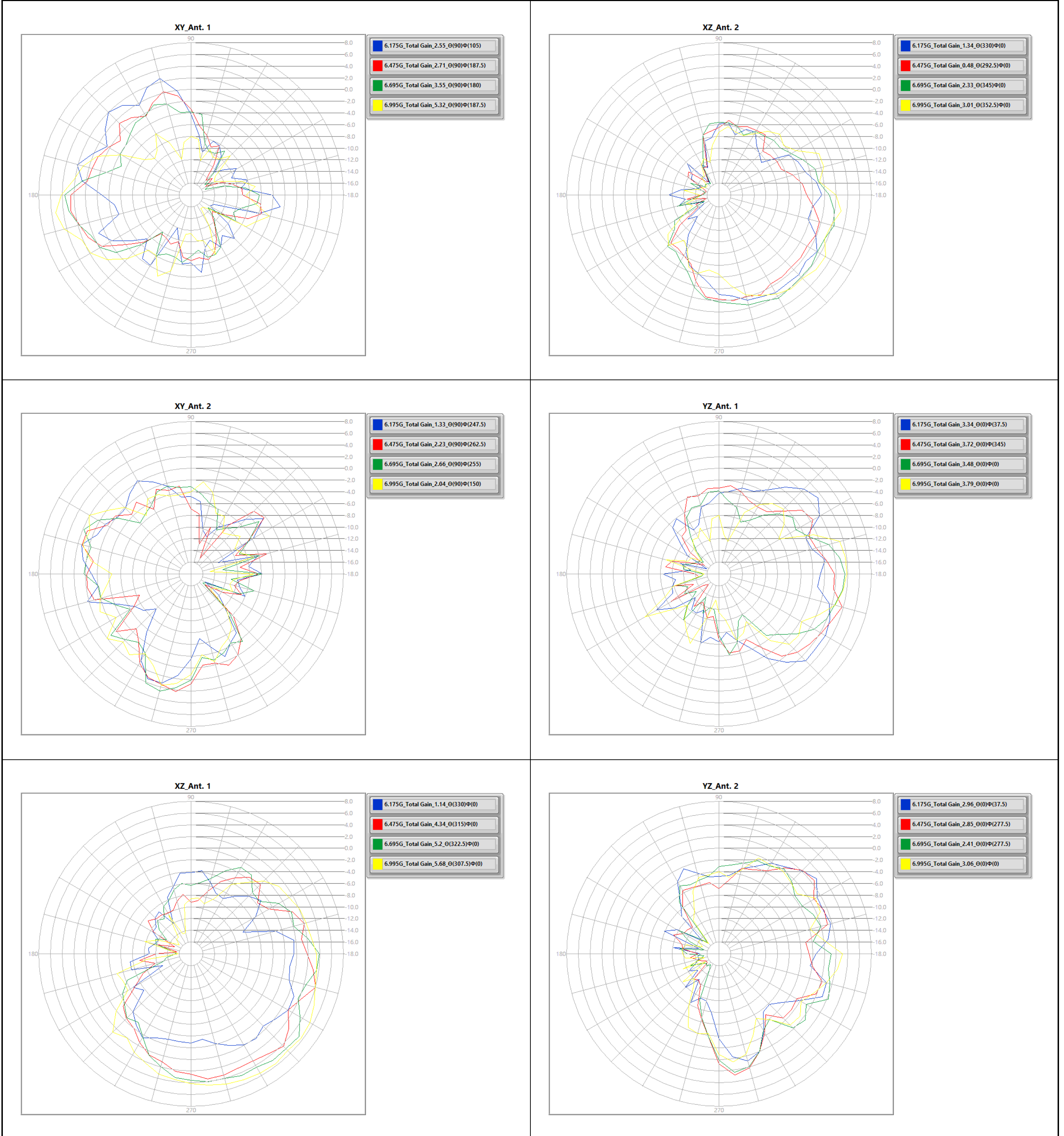


Antenna Pattern of 6GHz

Appendix E

Θ(22.5°)	-3.38/-3.62	-3.80/-3.73	-3.60/-2.86	-2.17/-1.65	-1.07/-0.76	-0.20/0.45	1.29/2.18	2.63/2.90	2.83/2.07	1.08/0.53	0.33/0.62	0.65/0.18	-0.11/0.54	1.47/2.25	2.55/2.71	2.65/2.60	2.18/1.86	1.40/1.18	1.07/0.74	0.57/0.49	0.28/-0.12	-0.51/-1.31	-2.53/-3.12	-2.71/-2.63
Θ(30°)	-4.30/-5.30	-5.80/-5.82	-4.49/-3.11	-1.74/-1.35	-1.09/-0.78	0.18/0.15	1.34/1.10	1.06/1.56	2.42/2.71	2.41/1.85	1.96/2.41	2.49/1.16	1.34/1.01	1.65/2.08	1.29/0.12	-0.50/-0.46	-0.50/-0.48	-1.40/-2.13	-2.11/-1.70	-1.47/-1.50	-1.52/-1.12	-0.33/-0.08	-1.32/-2.64	-2.87/-2.94
Θ(142.5°)	-8.84/-12.70	-10.21/-9.02	-6.43/-4.42	-1.90/-0.93	-0.82/-0.10	1.40/2.47	2.96/3.08	1.60/1.40	2.703.44	3.26/3.08	3.02/2.06	2.77/1.66	0.70/0.80	0.82/0.46	-0.03/-1.60	-2.15/-1.98	-1.43/-1.99	-3.03/-3.82	-4.41/-3.68	-2.94/-4.15	-6.01/-5.83	-3.16/-1.89	-2.92/-3.67	-3.59/-4.44
Θ(45°)	-8.16/-11.40	-9.20/-6.31	-6.03/-3.86	-2.10/-1.34	-0.71/0.01	0.50/0.98	1.98/2.30	1.53/1.20	3.104.14	3.43/3.09	3.44/2.91	1.88/1.57	1.23/0.71	0.85/0.38	0.61/-0.81	-0.97/-0.51	-0.39/-0.88	-1.33/-3.73	-5.81/-5.30	-4.09/-3.79	-5.68/-9.27	-6.58/-4.53	-4.01/-4.56	-4.72/-5.69
Θ(52.5°)	-7.47/-11.99	-8.17/-5.53	-5.15/-4.26	-3.43/-2.86	-2.33/-1.32	-0.54/-0.04	0.68/1.33	1.03/0.68	2.28/3.48	2.51/2.65	3.81/3.36	3.09/2.25	1.03/-0.12	-0.61/-0.24	0.64/0.39	-0.54/-1.55	-1.03/-0.31	-2.50/-4.45	-5.53/-4.04	-3.56/-5.84	-8.59/-10.72	-8.79/-7.51	-6.27/-6.54	-7.25/-8.12
Θ(60°)	-5.64/-14.49	-7.17/-4.73	-6.98/-5.97	-4.53/-3.93	-3.70/-2.80	-1.09/-0.23	-0.17/1.01	1.57/0.71	0.80/2.40	1.86/1.88	3.85/3.33	3.36/3.80	1.26/0.30	-0.19/-0.53	-0.71/-1.45	-1.91/-1.88	-0.23/-0.09	-1.04/-1.88	-2.63/-2.28	-1.84/-4.62	-10.18/-10.36	-13.66/-9.62	-6.05/-3.49	-5.53/-5.96
Θ(67.5°)	-5.87/-10.18	-4.85/-5.60	-7.99/-4.58	-3.99/-3.54	-4.68/-3.53	-1.43/-1.04	-1.91/-0.72	1.56/1.46	0.08/0.97	0.88/2.16	3.85/3.44	3.62/3.36	0.80/0.67	0.86/-0.96	-3.12/-4.00	-3.92/-2.79	-0.88/-0.08	0.88/0.77	-0.00/-0.52	-0.25/-1.82	-5.83/-9.22	-15.99/-13.00	-7.69/-3.58	-5.85/-5.96
Θ(75°)	-7.33/-10.67	-4.72/-7.81	-7.25/-3.41	-3.54/-4.86	-6.55/-6.80	-3.84/-2.11	-2.91/-2.63	0.14/0.95	-0.26/-0.29	-0.14/1.21	2.50/2.81	2.77/2.91	0.56/0.07	1.07/-2.62	-3.14/-7.34	-8.76/-3.37	0.19/0.74	1.85/1.87	0.89/-0.71	-0.53/-0.43	-3.15/-7.09	-14.82/-14.77	-10.75/-5.94	-7.42/-6.38
Θ(82.5°)	-5.60/-7.76	-5.27/-10.52	-6.48/-2.26	-3.85/-6.00	-7.11/-11.26	-5.87/-3.79	-4.53/-4.25	-1.35/0.14	0.14/-0.66	-1.17/0.34	1.16/1.60	2.18/1.66	-0.64/-0.07	-0.44/-4.79	-4.88/-10.05	-8.74/-3.07	0.57/1.95	2.01/1.72	-0.26/-2.49	-3.02/-1.24	-2.77/-6.17	-11.57/-11.89	-15.34/-6.86	-7.55/-7.48
Θ(90°)	-5.87/-8.09	-6.23/-12.94	-5.76/-2.50	-4.85/-7.30	-8.83/-11.15	-10.25/-5.56	-4.78/-4.80	-2.52/-1.02	0.29/-0.80	-2.15/-2.14	-1.04/-0.63	1.30/0.59	-1.03/-2.01	0.33/-4.54	-6.95/-7.77	-9.61/-5.56	-0.96/1.33	1.27/-0.56	-3.52/-6.84	-5.06/-2.78	-4.55/-5.34	-9.83/-12.00	-15.25/-8.04	-9.43/-9.93
Θ(97.5°)	-8.19/-9.86	-7.98/-15.13	-5.99/-3.66	-5.60/-9.58	-7.86/-7.24	-9.04/-4.68	-4.77/-5.34	-2.53/-1.83	-0.70/-1.94	-2.92/-3.57	-3.71/-2.08	-0.02/-0.21	-3.00/-1.96	-1.13/-3.62	-10.74/-8.70	-8.03/-8.18	-3.51/-0.02	-1.09/-3.69	-7.85/-13.96	-8.46/-5.63	-6.82/-6.19	-14.74/-12.37	-15.26/-8.23	-8.21/-9.46
Θ(105°)	-8.52/-12.61	-10.01/-15.10	-6.01/-6.80	-7.57/-13.50	-10.99/-6.61	-6.56/-3.97	-3.71/-4.61	-2.90/-3.02	-2.25/-3.49	-4.65/-5.03	-6.23/-2.62	-1.32/-0.67	-4.17/-4.81	-4.34/-5.34	-11.62/-10.10	-7.97/-12.56	-4.77/-1.44	-1.65/-5.17	-9.67/-15.43	-9.99/-6.23	-7.00/-8.66	-14.49/-15.39	-15.94/-8.31	-12.40/-10.58
Θ(112.5°)	-12.98/-13.80	-11.08/-9.90	-9.25/-10.33	-10.69/-15.74	-11.76/-7.42	-4.77/-3.00	-2.28/-3.65	-4.20/-6.21	-5.64/-6.09	-5.61/-7.00	-7.82/-3.15	-1.84/-2.47	-4.97/-6.34	-7.20/-6.75	-13.93/-9.78	-7.26/-14.47	-8.10/-4.44	-3.38/-5.61	-9.81/-13.92	-10.97/-7.55	-8.04/-14.08	-11.69/-15.59	-16.11/-9.29	-15.15/-9.14
Θ(120°)	-12.13/-12.80	-12.09/-10.16	-8.88/-15.37	-7.56/-9.55	-7.97/-10.24	-8.60/-3.69	-3.88/-5.91	-9.97/-12.06	-10.11/-11.15	-8.15/-7.26	-8.50/-4.73	-4.12/-4.69	-6.76/-8.58	-9.21/-8.03	-12.03/-15.16	-6.64/-9.84	-11.73/-7.54	-4.24/-7.05	-8.40/-15.02	-10.42/-5.23	-5.51/-8.75	-7.50/-9.84	-12.55/-14.11	-15.64/-11.40
Θ(127.5°)	-15.37/-13.98	-12.51/-9.37	-11.88/-15.51	-8.59/-6.47	-6.20/-9.03	-12.81/-8.76	-7.27/-8.01	-5.95/-15.12	-13.95/-13.79	-7.86/-7.59	-7.42/-4.30	-9.34/-10.91	-8.40/-7.35	-9.55/-15.40	-10.38/-7.57	-9.61/-8.93	-5.72/-6.14	-12.49/-12.97	-11.66/-4.58	-5.31/-4.87	-10.60/-10.20	-8.85/-15.46	-14.60/-11.55	
Θ(135°)	-10.41/-10.67	-14.73/-15.75	-12.45/-15.01	-11.39/-12.02	-8.13/-7.94	-10.49/-9.29	-8.95/-12.84	-15.66/-15.67	-14.26/-9.30	-7.14/-6.50	-6.83/-4.53	-4.13/-7.24	-12.87/-14.43	-8.82/-5.42	-10.23/-13.77	-15.94/-11.20	-14.82/-14.24	-9.27/-8.45	-9.75/-10.88	-8.13/-4.26	-7.00/-10.17	-15.58/-8.00	-10.89/-14.78	-14.79/-10.45
Θ(142.5°)	-12.21/-9.39	-13.21/-14.29	-12.66/-11.99	-12.37/-13.03	-11.44/-7.84	-9.39/-15.16	-14.46/-10.04	-8.46/-9.88	-13.55/-10.38	-8.04/-6.31	-6.60/-6.65	-5.89/-8.35	-11.27/-15.29	-14.21/-9.65	-11.05/-15.00	-13.79/-14.77	-9.79/-7.62	-9.60/-10.32	-13.43/-13.26	-10.07/-5.62	-8.90/-9.24	-9.75/-10.75	-14.32/-13.09	-11.99/-11.46
Θ(150°)	-12.60/-9.70	-10.51/-15.64	-11.70/-12.53	-10.28/-9.44	-5.64/-4.16	-4.94/-7.30	-9.80/-9.78	-9.26/-9.22	-10.12/-12.15	-10.31/-9.40	-9.84/-8.96	-9.07/-12.04	-15.16/-16.18	-15.08/-12.15	-9.82/-9.89	-13.11/-12.24	-10.42/-13.27	-15.38/-15.08	-12.17/-10.84	-10.70/-10.12	-11.76/-12.99	-15.04/-14.40	-15.05/-14.39	-11.39/-11.74
Θ(157.5°)	-14.57/-13.32	-10.71/-13.70	-14.48/-15.47	-15.57/-14.54	-12.73/-10.89	-9.64/-8.17	-7.86/-8.35	-8.64/-8.74	-4.87/-9.64	-9.49/-8.35	-8.33/-9.37	-12.67/-15.28	-14.94/-15.02	-14.55/-11.96	-11.42/-11.78	-10.72/-10.48	-11.22/-11.27	-10.49/-11.51	-13.67/-14.67	-12.45/-11.26	-10.36/-11.65	-12.08/-13.06	-14.50/-13.20	-12.91/-13.21
Θ(165°)	-13.97/-15.27	-12.31/-11.32	-11.76/-13.14	-14.63/-15.24	-14.93/-15.37	-14.98/-15.00	-14.49/-13.04	-11.81/-9.79	-8.50/-7.98	-8.05/-9.44	-10.59/-13.21	-15.13/-13.99	-10.91/-9.55	-9.27/-7.42	-6.44/-6.50	-7.33/-8.48	-10.47/-11.57	-12.91/-13.86	-14.53/-14.36	-12.64/-11.91	-12.09/-13.63	-15.13/-14.83	-14.84/-12.72	-13.72/-14.67
Θ(172.5°)	-11.51/-11.95	-11.03/-10.22	-10.00/-9.96	-10.36/-11.02	-10.66/-10.82	-11.53/-11.22	-10.21/-9.66	-10.16/-10.25	-10.32/-9.98	-10.51/-10.83	-11.08/-11.27	-10.12/-10.71	-12.25/-13.62	-13.34/-13.39	-14.91/-15.30	-14.50/-13.46	-11.86/-11.63	-11.62/-12.79	-14.34/-15.75	-15.08/-15.61	-15.40/-15.79	-15.48/-15.50	-15.20/-14.11	-13.18/-11.57
Θ(180°)	-9.38/-10.03	-10.81/-11.40	-10.90/-11.43	-12.76/-13.69	-15.27/-14.89	-14.24/-14.32	-14.87/-13.98	-14.10/-13.01	-12.83/-13.01	-12.29/-12.56	-12.86/-12.48	-13.22/-13.15	-13.22/-14.14	-10.08/-10.48	-10.08/-10.00	-10.47/-10.29	-9.86/-9.45	-9.36/-9.99	-10.67/-11.39	-11.93/-11.64	-11.05/-11.03	-12.16/-12.59	-12.92/-12.47	-11.38/-9.97
Freq(Hz)	6.475GPol.	TotalAnt.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-3.04/-3.17	-2.98/-2.63	-2.44/-2.60	-2.62/-2.29	-2.27/-2.21	-2.22/-2.45	-2.60/-2.93	-2.98/-2.89	-3.15/-3.06	-3.27/-3.03	-3.13/-3.32	-3.61/-3.78	-3.81/-4.17	-4.27/-4.05	-3.60/-3.60	-3.78/-3.86	-4.18/-4.61	-4.32/-3.63	-3.92/-3.29	-2.91/-2.73	-2.45/-2.97	-3.23/-2.98	-2.92/-3.16	-3.35/-3.07
Θ(7.5°)	-3.63/-4.10	-4.27/-4.35	-3.61/-3.34	-3.28/-3.25	-3.02/-2.68	-2.94/-3.25	-3.07/-3.31	-3.09/-3.07	-3.06/-2.85	-2.72/-2.55	-2.67/-2.34	-1.88/-1.75	-1.71/-1.65	-1.40/-1.24	-1.21/-1.33	-1.27/-1.33	-1.55/-1.87	-1.86/-1.84	-1.89/-1.84	-2.12/-2.15	-2.45/-2.91	-3.22/-3.27	-3.22/-4.04	-4.45/-3.87
Θ(15°)	-4.92/-4.27	-3.30/-2.59	-1.88/-1.30	-0.63/-0.10	0.43/0.81	0.90/1.00	1.16/0.84	0.46/-0.05	-1.09/-1.36	-1.93/-2.29	-2.14/-1.65	-1.08/-0.84	-0.28/-0.07	0.03/0.45	1.23/1.43	1.34/1.34	1.45/1.15	1.00/0.74	0.28/0.18	0.15/-0.27	-0.70/-1.16	-1.87/-3.13	-4.21/-4.86	-4.39/-5.10
Θ(22.5°)	-6.51/-4.49	-3.73/-2.83	-2.20/-1.40	-0.59/-0.27	0.16/0.46	0.69/1.06	1.42/1.66	2.10/2.20	1.89/1.43	0.74/-0.09	-0.50/-0.43	-0.34/-0.22	-0.18/-0.01	-0.02/0.15	1.72/1.51	0.87/0.85	0.92/0.68	0.26/0.22	-0.04/-0.32	-0.31/-0.30	0.12/0.15	-0.57/-1.91	-4.57/-7.99	-8.70/-7.82
Θ(30°)	-6.53/-5.16	-4.76/-4.35	-3.66/-3.64	-3.34/-3.28	-2.48/-1.08	-0.26/0.39	0.65/0.54	0.62/1.62	2.26/2.07	1.78/1.67	1.29/0.45	-0.18/-0.32	-0.66/-0.48	0.04/0.17	-0.44/-1.29	-2.40/-3.21	-3.64/-3.79	-2.76/-2.27	-2.64/-3.19	-3.61/-4.02	-3.93/-3.54	-2.89/-3.02	-5.18/-7.28	-8.15/-8.90
Θ(37.5°)	-6.95/-6.80	-7.14/-7.94	-7.94/-5.22	-3.08/-3.21	-0.58/1.33	2.14/2.72	2.53/1.54	1.86/3.34	3.47/2.20	1.34/2.26	2.80/1.57	0.27/0.31	-0.44/-0.24	-0.09/-0.00	-0.67/-0.22	-2.49/-1.84	-1.56/-1.63	-1.49/-1.40	-2.36/-3.23	-4.50/-4.02	-3.67/-4.57	-4.99/-4.93	-5.16/-5.49	-6.30/-7.83
Θ(45°)	-7.44/-7.21	-9.77/-10.28	-8.44/-3.63	-1.19/-0.41	0.91/2.28	2.34/2.27	2.12/1.66	2.02/3.39	4.37/3.18	0.86/2.41	3.69/3.04	2.25/0.86	-0.56/0.39	1.21/1.14	-0.58/-1.94	-1.40/-0.66	-1.36/-1.70	-1.44/-1.98	-2.53/-3.77	-4.93/-4.32	-3.92/-4.54	-5.71/-5.40	-4.90/-3.95	-5.35/-9.02
Θ(52.5°)	-5.01/-9.75	-7.79/-4.76	-5.15/-2.02	-1.13/-1.09	0.04/1.03	0.84/0.45	0.50/1.59	1.35/1.87	3.83/3.15	1.37/3.43	4.34/3.30	2.75/0.89	-0.39/1.77	1.51/0.17	-2.48/-3.49	-3.69/-3.41	-2.84/-1.05	-1.20/-3.41	-4.91/-5.92	-8.23/-7.05	-4.30/-4.38	-6.64/-7.06	-5.31/-3.69	-5.58/-7.04
Θ(60°)	-5.22/-11.87	-5.15/-3.85	-4.44/-3.08	-2.75/-3.69	-3.13/-0.19	0.10/-1.47	-1.64/0.54	0.55/-0.78	1.84/2.42	1.39/3.19	3.69/3.77	2.98/1.37	-0.39/2.57	2.21/1.07	4.55/-5.68	-4.29/3.40	-3.35/-0.66	0.71/-1.22	-2.44/-2.94	-3.57/-5.48	-8.70/-12.27	-11.21/-7.31	-5.56/-3.69	-5.70/-5.84
Θ(67.5°)	-5.37/-11.02	-3.54/-3.41	-6.49/-3.85	-3.10/-4.78	-3.63/-1.89	-3.03/-3.89	-2.53/-1.66	-1.59/-3.32	-0.14/1.36	0.85/2.67	2.37/3.59	2.55/0.56	0.48/2.98	0.83/-2.69	-4.64/-3.86	-2.73/-2.61	-1.91/-0.42	0.56/1.48	0.03/-1.25	-1.09/-2.63	-8.13/-14.29	-12.80/-7.53	-5.54/-4.17	-7.22/-5.89
Θ(75°)	-5.95/-9.75	-2.83/-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 $\Theta(0-180)\Phi(270)$



Total Gain Data

[illegible]



Antenna Pattern of Scan Ant1, BT Ant2

Appendix F

Θ(22.5°)	1.221/3.08	1.531/3.30	0.970/0.98	1.050/51	-0.37/-0.31	0.54/-0.03	-1.38/-2.24	-2.47/-3.26	-3.30/-2.93	-3.21/-3.52	-4.25/-5.60	-6.44/-7.27	-9.04/-10.97	-10.03/-9.34	-9.08/-8.67	-8.60/-8.86	-8.91/-8.14	-6.90/-5.38	-4.78/-4.36	-3.60/-3.25	-2.63/-2.27	-1.98/-1.02	0.07/0.88	1.24/1.30
Θ(30°)	2.63/3.08	2.95/2.50	2.15/1.91	1.18/-0.35	-1.46/-1.18	-0.80/-1.83	-2.76/-3.02	-4.35/-4.08	-3.10/-4.39	-4.63/-4.72	-4.55/-5.77	-6.66/-9.16	-13.95/-12.82	-9.40/-8.80	-8.08/-7.59	-7.17/-7.79	-8.60/-8.55	-7.86/-6.29	-4.99/-3.97	-2.83/-1.98	-1.19/-0.73	-0.02/0.54	0.76/1.05	1.56/1.29
Θ(37.5°)	2.39/3.12	3.48/3.45	2.94/2.10	0.70/-0.34	-0.63/-1.63	-0.34/-5.39	-3.64/-5.63	-4.53/-3.53	-4.28/-5.08	-6.44/-6.53	-5.02/-5.98	-8.23/-11.24	-14.35/-14.04	-12.39/-11.20	-9.36/-6.85	-6.21/-7.93	-10.07/-9.79	-8.84/-6.47	-4.59/-3.47	-2.65/-1.96	-1.25/-0.34	0.71/1.13	1.11/1.42	1.99/1.72
Θ(45°)	2.93/3.23	3.55/3.38	2.63/1.52	0.51/-0.22	-0.56/-2.04	-4.02/-4.39	-4.10/-4.66	-3.87/-4.10	-5.19/-5.32	-6.21/8.88	-6.14/-5.09	-8.57/-14.69	-13.74/-12.17	-10.54/-10.38	-9.08/-8.18	-10.73/-12.43	-11.65/-11.48	-8.55/-7.94	-6.51/-3.64	-2.13/-1.92	-2.22/-1.61	-0.32/0.89	1.71/2.39	2.36/2.73
Θ(52.5°)	2.81/3.29	3.60/3.12	2.19/1.03	0.15/-1.37	-2.07/-2.16	-3.27/-4.57	-3.05/-2.50	-5.32/-8.15	-6.33/-6.14	-7.39/-7.21	-6.04/-6.85	-8.27/-10.77	-12.83/-14.26	-10.20/-9.90	-11.71/-10.92	-9.99/-8.60	-9.03/-10.35	-9.88/-7.64	-6.07/-3.45	-2.70/-2.34	-2.36/-1.54	-0.14/0.40	0.90/2.24	2.51/2.41
Θ(60°)	3.39/3.73	3.75/2.88	1.72/0.54	-0.11/-1.25	-1.05/-1.10	-2.56/-3.61	-3.16/-4.68	-5.45/-5.75	-6.25/-6.14	-8.30/-9.20	-5.48/-4.17	-7.22/-7.89	-9.54/-12.79	-10.33/-9.73	-8.86/-7.88	-8.13/-8.31	-6.61/-5.70	-5.16/-4.79	-3.61/-5.13	-1.67/-2.70	-0.64/0.42	1.07/2.34	2.74/2.89	
Θ(67.5°)	2.97/3.37	3.59/2.45	1.07/0.07	-0.58/-1.23	-1.30/-2.08	-3.10/-3.29	-2.16/-3.53	-4.80/-6.87	-13.07/-7.17	-7.19/-8.15	-6.48/-4.61	-5.84/-5.85	-7.56/-9.28	-9.08/-7.03	-6.36/-6.30	-5.44/-3.72	-5.13/-6.62	-5.45/-5.94	-7.74/-6.95	-6.61/-6.39	-4.48/-1.39	0.20/-0.20	0.61/1.32	2.40/2.39
Θ(75°)	2.26/3.14	3.44/2.06	0.31/-0.80	-1.49/-2.46	-2.96/-2.68	-2.98/-4.66	-3.36/-3.48	-6.00/-5.68	-12.09/-10.28	-11.60/-10.62	-5.48/-5.00	-8.01/-6.90	-4.54/-6.15	-6.55/-6.63	-5.57/-4.95	-3.75/-3.67	-5.11/-7.53	-5.98/-6.01	-5.73/-4.11	-6.33/-7.84	-5.28/-2.62	-1.13/-2.80	-0.87/1.39	2.55/2.22
Θ(82.5°)	1.24/2.45	2.34/1.02	-0.43/-1.02	-1.63/-1.89	-2.75/-2.99	-3.30/-4.67	-3.90/-5.55	-8.14/-9.93	-12.23/-13.18	-15.43/-10.50	-6.05/-6.75	-9.88/-7.96	-5.12/-6.65	-7.74/-6.97	-6.93/-7.22	-6.30/-5.59	-5.81/-7.51	-6.15/-5.42	-5.14/-2.90	-4.41/-4.68	-4.09/-2.73	-2.10/-1.14	-0.03/1.24	1.54/1.50
Θ(90°)	0.18/1.34	0.85/-0.08	-1.56/-1.22	-1.43/-2.19	-3.44/-5.28	-5.72/-6.25	-6.56/-6.64	-8.74/-11.58	-14.03/-13.02	-13.06/-11.39	-8.19/-8.57	-12.61/-9.52	-7.29/-8.45	-10.23/-8.09	-10.74/-10.94	-11.46/-9.91	-6.74/-6.67	-6.18/-6.21	-5.22/-3.30	-3.73/-4.03	-4.75/-4.55	-3.10/-1.43	-1.05/0.27	0.79/1.26
Θ(97.5°)	-1.37/0.44	-0.01/-0.74	-1.43/-0.96	-1.90/-2.36	-4.55/-5.55	-4.68/-6.92	-8.86/-8.16	-10.14/-12.56	-9.86/-10.56	-12.35/-10.25	-11.41/-13.44	-14.34/-11.69	-12.43/-10.98	-9.62/-12.80	-12.41/-11.01	-8.12/-6.56	-5.81/-5.85	-4.29/-6.33	-6.93/-4.75	-3.86/-6.20	-6.07/-5.35	-2.55/-2.15	-0.51/0.23	0.76/-0.02
Θ(105°)	-1.21/-0.81	-1.00/-1.97	-2.41/-1.71	-2.10/-3.72	-4.88/-6.60	-6.58/-6.77	-8.61/-9.90	-13.25/-14.75	-6.68/-6.39	-8.97/-12.48	-14.86/-11.13	-12.14/-13.63	-9.23/-14.53	-13.77/-15.11	-8.12/-12.42	-5.49/-4.82	-5.44/-5.91	-5.76/-7.76	-9.59/-5.22	-3.88/-5.85	-6.76/-6.20	-2.95/-2.22	-1.05/-0.76	-0.60/-0.61
Θ(112.5°)	-2.88/-2.13	-1.80/-2.47	-3.23/-2.06	-1.70/-2.74	-3.24/-4.90	-5.91/-6.85	-6.93/-7.26	-11.52/-15.42	-7.89/-6.98	-11.01/-14.49	-10.95/-8.65	-15.13/-10.01	-9.20/-7.79	-14.31/-9.08	-7.11/-6.53	-4.73/-3.53	-5.07/-6.87	-6.63/-6.38	-8.20/-5.29	-4.59/-7.69	-6.67/-4.98	-3.94/-4.19	-1.22/-1.65	-1.11/-1.77
Θ(120°)	-2.90/-4.34	-2.60/-5.02	-5.05/-4.20	-3.94/-4.18	-4.40/-4.76	-5.55/-5.71	-6.46/-7.91	-8.54/-10.60	-9.13/-7.65	-10.37/-11.83	-6.31/-7.95	-7.88/-7.88	-8.46/-7.61	-13.38/-10.82	-3.77/-4.11	-5.51/-6.02	-5.71/-6.61	-7.72/-3.19	-1.08/-2.47	-6.89/-8.96	-1.08/-2.47	-3.48/-1.61	-3.11/-2.87	
Θ(127.5°)	-4.70/-3.31	-3.86/-4.19	-5.99/-6.31	-4.87/-3.49	-2.72/-3.58	-4.39/-5.34	-6.54/-4.47	-7.70/-9.12	-10.72/-11.86	-14.09/-12.33	-8.47/-9.26	-9.96/-10.39	-10.35/-7.08	-8.64/-7.63	-7.93/-12.35	-9.00/-11.69	-8.10/-8.58	-9.20/-9.80	-11.48/-5.90	-6.39/-6.93	-8.90/-10.49	-4.39/-3.98	-2.73/-1.12	-2.48/-2.69
Θ(135°)	-4.55/-7.00	-4.93/-3.85	-4.82/-6.33	-7.57/-7.95	-7.86/-6.14	-5.18/-6.29	-7.06/-8.01	-8.69/-9.31	-9.97/-11.27	-13.75/-10.43	-7.90/-5.99	-6.02/-12.54	-15.61/-12.40	-10.87/-10.98	-10.36/-11.26	-10.70/-12.46	-12.51/-11.67	-11.99/-11.09	-13.51/-7.03	-6.01/-10.53	-11.46/-13.31	-9.25/-8.75	-6.32/-5.72	-4.14/-3.33
Θ(142.5°)	-6.34/-4.52	-5.05/-4.62	-5.70/-6.79	-7.85/-9.72	-7.74/-8.00	-8.13/-8.86	-11.01/-13.71	-15.38/-11.13	-9.72/-14.29	-12.76/-14.85	-13.93/-9.51	-7.63/-7.19	-8.31/-11.01	-15.21/-12.99	-15.41/-15.32	-10.71/-15.09	-11.48/-11.33	-11.88/-9.95	-6.42/-8.46	-6.86/-6.07	-8.18/-13.27	-8.09/-6.12	-5.47/-6.70	
Θ(150°)	-7.48/-6.81	-6.63/-6.50	-6.65/-7.14	-7.70/-8.84	-9.77/-10.12	-8.89/-9.16	-10.60/-12.74	-15.23/-15.23	-14.07/-10.02	-8.36/-6.55	-3.97/-2.72	-7.35/-7.02	-11.72/-13.98	-13.20/-12.67	-13.12/-10.69	-7.72/-7.33	-7.77/-9.62	-8.87/-8.28	-7.29/-12.71	-9.39/-4.77	-2.48/-3.96	-8.11/-11.35	-10.43/-8.31	
Θ(157.5°)	-11.35/-10.59	-8.71/-7.11	-6.44/-6.89	-8.59/-10.13	-10.07/-9.37	-9.98/-9.96	-8.32/-7.79	-8.77/-11.43	-14.41/-10.84	-7.33/-5.13	-4.48/-5.18	-7.00/-9.36	-11.88/-11.42	-11.07/-12.84	-15.74/-12.74	-8.43/-6.70	-7.04/-8.64	-9.72/-8.58	-7.07/-6.81	-7.87/-10.06	-12.41/-7.90	-4.47/-3.64	-3.78/-4.69	-7.32/-10.65
Θ(165°)	-7.31/-7.58	-8.67/-8.39	-7.31/-6.89	-7.29/-7.22	-6.32/-5.83	-6.92/-7.82	-8.26/-9.14	-13.04/-12.70	-9.32/-8.70	-7.16/-6.91	-7.29/-8.14	-8.86/-10.79	-14.51/-15.15	-14.82/-15.23	-15.17/-13.92	-13.46/-13.63	-13.81/-12.63	-11.32/-9.95	-9.60/-9.91	-11.97/-16.06	-15.01/-10.57	-7.80/-7.15	-7.29/-7.36	-7.87/-9.59
Θ(172.5°)	-12.09/-11.53	-10.78/-9.60	-8.66/-9.02	-10.21/-10.65	-8.90/-8.68	-10.19/-10.74	-9.44/-8.68	-9.13/-8.85	-9.32/-10.69	-11.47/-11.90	-12.41/-13.53	-14.03/-15.09	-15.08/-14.85	-15.07/-15.48	-15.59/-15.46	-14.34/-12.97	-13.83/-15.12	-15.03/-15.06	-15.49/-15.34	-15.69/-13.58	-11.96/-11.72	-12.24/-12.43	-11.99/-12.28	
Θ(180°)	-15.65/-15.58	-15.00/-15.12	-14.46/-13.05	-12.93/-13.69	-13.28/-11.96	-10.94/-11.22	-10.45/-9.22	-9.77/-10.60	-12.13/-12.96	-13.17/-13.26	-13.15/-14.18	-15.06/-15.69	-15.55/-16.25	-15.09/-14.71	-12.77/-12.86	-12.63/-12.88	-13.77/-14.90	-15.58/-15.71	-15.25/-14.77	-15.91/-15.01	-15.54/-14.72	-15.29/-15.47	-15.34/-15.22	
Freq(Hz)	6.175GPol.	TotalAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-0.96/-0.78	-1.03/-1.15	-0.92/-1.02	-1.21/-0.67	-0.19/-0.61	-0.65/0.03	0.12/-0.87	-1.49/-1.02	-0.43/-0.10	-0.03/-0.23	-0.54/-0.44	-0.58/-0.88	-1.05/-0.89	-0.65/-0.33	-0.27/-0.29	-0.33/-0.46	-0.71/-0.78	-0.65/-0.70	-0.76/-0.92	-1.03/-1.00	-1.06/-0.96	-1.10/-1.14	-1.14/-1.29	-1.54/-1.20
Θ(7.5°)	0.04/0.26	0.22/0.01	-0.22/-0.46	-0.86/-0.74	-0.57/-1.09	-1.57/-0.94	-0.16/-0.98	-2.16/-2.73	-2.30/-1.78	-1.24/-1.08	-1.25/-1.21	-1.12/-1.31	-1.27/-1.00	-0.75/-0.45	-0.40/-0.41	-0.55/-0.57	-0.37/-0.22	0.04/0.09	0.12/0.13	0.05/0.18	0.18/0.23	0.30/0.17	0.12/-0.01	-0.11/-0.06
Θ(15°)	1.53/1.44	1.49/1.62	1.43/0.84	0.23/0.47	0.87/0.26	-1.11/-0.98	-0.05/-0.65	-2.14/-2.88	-3.24/-3.50	-3.16/-2.62	-2.73/-2.77	-2.79/-3.26	-3.62/-3.28	-2.70/-2.05	-1.58/-1.34	-1.18/-1.05	-0.69/-0.27	0.03/0.31	0.56/0.78	0.91/1.12	1.06/1.19	1.37/1.44	1.69/1.86	1.81/1.73
Θ(22.5°)	2.45/2.17	2.14/2.17	2.09/1.77	1.48/1.67	1.79/1.18	0.14/-0.56	-0.71/-1.52	-1.85/-1.13	-1.55/-2.76	-4.16/-5.38	-6.39/-5.74	-5.08/-6.00	-6.72/-4.12	-3.41/-2.98	-2.89/-3.06	-3.00/-2.49	-1.64/-0.64	0.06/0.49	0.74/0.93	1.19/1.45	1.39/1.33	1.46/1.33	1.44/1.92	2.34/2.78
Θ(30°)	2.65/2.50	2.66/2.86	2.73/2.42	2.19/1.75	1.29/1.15	0.90/-0.51	-1.96/-1.97	-1.69/-0.75	-0.76/-1.54	-3.06/-3.42	-5.12/-5.39	-5.33/-6.53	-6.19/-4.32	-3.87/-3.92	-3.90/-3.83	-3.64/-3.35	-2.97/-2.53	-2.10/-1.11	-0.11/0.73	1.11/1.62	1.82/1.72	2.00/2.45	2.21/2.04	2.18/2.62
Θ(37.5°)	2.45/3.20	3.63/3.60	3.09/2.38	1.12/-0.07	0.08/0.83	0.07/-2.37	-2.54/-2.69	-2.36/-1.11	-1.22/-1.84	-2.09/-1.75	-2.90/-5.23	-6.21/-6.86	-6.95/-6.74	-8.09/-5.45	-2.34/-1.62	-1.81/-3.35	-4.27/-3.69	-3.45/-2.59	-1.54/-0.85	-1.55/-1.61	-0.05/-1.51	2.55/3.42	3.21/2.76	2.37/2.22
Θ(45°)	3.08/3.47	3.97/3.85	3.14/1.77	0.17/-1.10	-0.75/-0.55	-1.30/-2.18	-2.76/-2.61	-2.69/-2.92	-3.10/-2.42	-1.47/-2.06	-3.65/-5.36	-4.87/-4.83	-6.54/-6.00	-11.58/-6.39	-4.94/-5.60	-5.68/-6.01	-4.96/-3.04	-1.50/-0.96	-0.77/-0.54	-1.14/-0.27	0.70/1.77	3.01/3.55	3.12/3.42	
Θ(52.5°)	4.63/4.46	4.41/3.91	3.38/2.58	1.02/-1.72	-2.96/-2.31	-1.81/-2.07	-3.10/-3.05	-3.28/-4.97	-4.97/-5.13	-4.52/-4.19	-4.57/-4.92	-4.23/-4.97	-8.16/-11.58	-10.20/-7.14	-4.98/-6.03	-8.50/-10.64	-8.17/-7.95	-9.14/-5.32	-2.75/-2.11	-3.15/-4.03	-1.25/0.33	1.22/1.48	2.69/3.41	3.96/4.45
Θ(60°)	4.55/4.82	4.26/3.26	2.43/1.96	0.41/-2.00	-2.90/-1.86	-1.40/-2.21	-3.34/-3.99	-3.62/-3.24	-6.09/-9.31	-5.80/-3.91	-4.42/-5.23	-4.76/-7.22	-8.66/-8.43	-7.92/-9.48	-13.52/-11.29	-10.01/-6.12	-4.99/-5.69	-5.01/-3.93	-4.38/-4.34	-1.80/-0.22	0.28/0.30	2.72/3.98	3.67/4.26	
Θ(67.5°)	4.88/5.36	4.90/5.67	2.04/0.53	-1.45/-2.79	-4.88/-4.78	-2.16/-2.28	-2.56/-1.67	-2.45/-4.83	-7.16/-5.75	-6.01/-5.54	-5.78/-3.92	-5.09/-8.02	-8.26/-6.23	-8.68/-8.41	-8.62/-8.36	-6.29/-6.93	-8.51/-6.93	-3.97/-3.06	-3.43/-4.45	-5.40/-5.07	-1.55/-0.64	0.02/0.30	1.62/3.41	3.93/4.34
Θ(75°)	4.68/5.61	4.79/5.67	1.98/0.03	-3.02/-4.87	-5.58/-3.23	-2.81/-3.64	-2.23/4.57	-2.06/-1.77	-6.00/-4.55	-6.60/4.61	-5.59/-5.50	-4.62/-5.77	-8.34/-6.49</											



Antenna Pattern of Scan Ant1, BT Ant2

Appendix F

Θ (75°)	-3.41/-2.96	-2.79/-2.95	-2.68/-2.25	-2.92/-2.68	-2.93/-4.11	-2.56/-2.85	-2.45/-2.79	-6.70/-6.55	-7.77/-11.99	-9.06/-14.19	-13.75/-10.09	-11.02/-6.54	-8.23/-14.67	-13.30/-14.33	-13.86/-10.49	-14.37/-13.18	-14.47/-15.06	-11.75/-10.91	-13.11/-10.71	-11.50/-13.22	-10.55/-7.67	-7.77/-9.99	-8.40/-9.23	-7.89/-5.12
Θ (82.5°)	-3.16/-2.44	-2.40/-3.12	-2.54/-2.22	-3.38/-3.07	-3.42/-5.48	-2.35/-4.74	-5.46/-4.02	-8.43/-5.41	-9.01/-10.50	-8.76/-12.61	-14.25/-11.46	-10.20/-8.15	-10.21/-15.07	-14.09/-15.23	-15.40/-11.90	-14.79/-15.40	-13.07/-12.35	-8.61/-10.38	-8.18/-7.69	-8.82/-10.33	-12.27/-9.56	-8.11/-9.82	-9.69/-9.85	-5.85/-3.78
Θ (90°)	-2.75/-2.23	-2.93/-3.38	-2.38/-2.84	-4.64/-4.21	-3.94/-7.03	-4.26/-8.22	-9.23/-5.99	-9.05/-7.11	-9.80/-9.92	-7.25/-13.58	-12.76/-13.16	-10.44/-9.11	-12.24/-14.18	-11.20/-15.56	-15.25/-13.42	-15.70/-15.42	-12.66/-12.42	-7.08/-11.48	-8.71/-7.88	-7.70/-10.83	-12.16/-13.54	-10.55/-10.05	-10.71/-9.23	-6.00/-4.30
Θ (97.5°)	-2.22/-2.52	-3.52/-3.48	-2.33/-3.24	-4.98/-4.42	-5.77/-7.91	-5.82/-15.05	-11.26/-7.90	-9.64/-9.73	-9.17/-10.59	-8.20/-12.29	-14.91/-11.92	-11.98/-11.40	-10.83/-13.06	-11.44/-13.96	-14.97/-15.35	-15.05/-13.83	-13.92/-15.99	-9.83/-12.64	-8.79/-11.47	-10.02/-13.36	-13.29/-12.70	-10.52/-12.45	-10.86/-8.97	-6.23/-3.37
Θ (105°)	-2.71/-3.26	-3.66/-3.07	-2.63/-4.00	-5.78/-5.45	-5.51/-9.82	-8.47/-12.23	-10.22/-9.36	-11.12/-12.95	-11.84/-10.12	-9.85/-9.52	-14.96/-12.10	-14.99/-11.17	-9.23/-11.96	-10.39/-14.93	-14.14/-13.44	-15.32/-13.77	-15.40/-14.54	-12.99/-11.01	-9.85/-10.63	-9.63/-12.83	-15.85/-15.72	-11.91/-11.58	-7.95/-7.42	-5.02/-3.16
Θ (112.5°)	-3.47/-3.53	-3.35/-3.05	-3.39/-3.92	-5.59/-5.26	-6.96/-8.21	-10.49/-13.72	-14.19/-13.83	-13.58/-14.08	-13.44/-11.38	-9.95/-10.79	-13.55/-11.29	-10.82/-7.03	-7.27/-13.17	-14.43/-12.41	-11.21/-12.57	-11.78/-14.76	-14.98/-12.32	-11.44/-8.03	-9.61/-11.53	-11.75/-12.09	-15.64/-11.37	-9.68/-13.58	-6.52/-7.31	-4.57/-3.35
Θ (120°)	-4.92/-4.27	-3.49/-3.07	-3.67/-5.39	-5.27/-5.54	-7.83/-9.17	-8.71/-14.71	-14.35/-15.12	-12.18/-10.92	-8.74/-10.10	-10.20/-10.60	-11.69/-11.57	-9.99/-5.47	-8.79/-15.96	-14.83/-13.93	-12.73/-10.02	-14.04/-12.37	-11.68/-13.52	-8.25/-9.59	-13.26/-12.89	-10.50/-11.90	-15.01/-13.02	-9.42/-12.82	-7.75/-8.59	-5.48/-5.28
Θ (127.5°)	-4.95/-3.74	-3.75/-4.37	-5.46/-6.31	-6.16/-6.53	-7.32/-6.67	-8.40/-10.34	-10.35/-11.93	-10.56/-9.58	-8.11/-8.13	-11.88/-10.68	-10.59/-15.17	-9.20/-9.94	-15.32/-15.14	-14.17/-14.29	-14.77/-13.77	-15.34/-11.24	-14.18/-11.57	-6.32/-13.75	-14.91/-13.29	-14.93/-13.40	-14.00/-11.73	-9.37/-11.79	-6.59/-6.72	-4.63/-5.63
Θ (135°)	-4.57/-3.69	-3.85/-4.73	-6.16/-6.82	-7.82/-9.32	-8.18/-6.73	-6.87/-7.58	-9.63/-9.46	-8.37/-10.24	-10.24/-6.62	-9.37/-13.93	-11.36/-14.13	-15.59/-15.16	-13.68/-12.80	-10.49/-8.33	-10.68/-12.61	-15.51/-15.22	-15.20/-14.26	-13.12/-15.22	-16.12/-15.83	-14.59/-15.69	-14.40/-14.48	-13.96/-12.76	-8.70/-7.67	-6.05/-5.88
Θ (142.5°)	-5.72/-5.68	-5.61/-5.71	-5.60/-5.46	-6.24/-8.78	-10.32/-8.20	-8.92/-10.64	-9.63/-8.97	-6.45/-10.48	-14.63/-10.53	-9.71/-13.00	-10.98/-9.70	-11.29/-12.42	-10.68/-10.98	-11.96/-13.06	-11.80/-14.19	-15.73/-11.63	-12.45/-15.63	-15.17/-13.94	-15.21/-15.20	-16.08/-13.51	-14.87/-12.53	-14.54/-14.11	-13.31/-9.84	-6.72/-6.17
Θ (150°)	-6.28/-6.24	-7.19/-7.11	-6.93/-6.22	-6.26/-6.99	-6.58/-5.82	-6.50/-8.07	-9.31/-10.31	-10.03/-10.53	-11.52/-10.84	-13.16/-13.27	-12.17/-13.68	-15.20/-12.89	-10.13/-12.72	-14.09/-14.21	-13.74/-15.43	-16.05/-13.70	-13.65/-10.62	-12.31/-14.68	-15.06/-14.51	-12.72/-9.95	-8.46/-9.09	-11.37/-11.07	-11.07/-10.36	-9.97/-7.76
Θ (157.5°)	-8.05/-6.95	-7.40/-7.68	-7.86/-9.31	-10.58/-11.00	-9.71/-8.83	-9.81/-11.02	-10.97/-10.43	-10.25/-11.66	-11.78/-12.62	-13.12/-10.68	-8.20/-8.20	-8.91/-11.21	-13.69/-13.50	-14.70/-15.11	-15.10/-15.39	-15.38/-14.63	-12.07/-12.64	-14.94/-15.44	-15.36/-12.87	-12.07/-9.31	-7.01/-7.16	-7.70/-8.83	-9.45/-7.52	-7.36/-6.80
Θ (165°)	-7.51/-7.22	-7.45/-7.69	-8.09/-8.43	-8.42/-8.24	-8.21/-8.21	-7.94/-7.94	-10.00/-9.07	-9.79/-10.84	-9.69/-8.82	-9.36/-9.97	-10.87/-11.75	-12.47/-13.15	-13.84/-14.03	-15.99/-15.17	-15.41/-15.07	-13.82/-13.09	-13.59/-13.78	-14.34/-13.22	-12.44/-12.67	-13.59/-13.75	-11.84/-10.32	-9.32/-8.77	-8.77/-8.91	-8.32/-7.69
Θ (172.5°)	-10.76/-10.43	-10.05/-9.81	-10.01/-10.02	-10.45/-10.36	-9.87/-9.74	-9.25/-9.65	-8.32/-8.80	-8.63/-8.14	-8.23/-9.73	-12.83/-15.60	-15.81/-15.67	-14.69/-14.53	-15.81/-14.80	-14.40/-15.00	-14.82/-14.28	-15.44/-15.21	-15.22/-15.54	-14.73/-14.51	-15.54/-15.67	-15.08/-14.37	-12.90/-12.39	-13.37/-14.16	-13.31/-12.32	-11.90/-11.02
Θ (180°)	-12.39/-12.18	-12.76/-12.49	-12.11/-11.83	-10.81/-9.53	-9.62/-10.96	-12.25/-11.16	-11.05/-11.07	-10.58/-10.22	-12.37/-14.11	-15.06/-14.41	-14.42/-14.90	-16.19/-16.19	-15.59/-15.34	-15.81/-13.06	-12.20/-13.07	-12.17/-11.51	-12.03/-12.32	-12.99/-12.84	-12.91/-12.34	-12.10/-12.21	-11.99/-11.98	-11.96/-12.16	-11.48/-11.23	-11.57/-11.71
Freq(Hz)	2.45G/Pol.	Total Ant 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-3.56/-3.28	-3.21/-3.32	-3.55/-3.98	-4.68/-5.45	-5.84/-5.78	-5.43/-5.15	-5.12/-5.12	-4.81/-4.38	-4.07/-3.94	-3.97/-4.03	-4.00/-3.86	-3.55/-3.40	-3.49/-3.60	-3.88/-4.38	-5.04/-5.87	-6.68/-7.15	-7.13/-6.68	-6.57/-6.58	-6.43/-6.26	-6.15/-6.10	-5.94/-5.69	-5.52/-5.57	-5.47/-5.08	-4.48/-3.90
Θ (7.5°)	-3.27/-3.42	-3.89/-4.46	-5.20/-6.12	-7.17/-8.06	-8.46/-8.39	-8.12/-7.85	-7.56/-7.25	-6.84/-6.40	-6.01/-5.86	-5.83/-5.82	-5.63/-5.20	-4.70/-4.12	-3.62/-3.27	-3.26/-3.52	-3.92/-4.38	-4.76/-4.91	-4.78/-4.52	-4.36/-4.29	-4.13/-3.97	-3.82/-3.65	-3.51/-3.48	-3.68/-4.01	-4.17/-3.89	-3.63/-3.36
Θ (15°)	-3.52/-4.11	-4.89/-5.70	-6.75/-7.74	-9.05/-10.14	-9.95/-9.11	-8.12/-7.58	-7.54/-7.80	-8.25/-8.58	-8.59/-8.21	-7.53/-7.07	-6.30/-5.46	-4.63/-3.82	-3.10/-2.55	-2.21/-2.15	-2.31/-2.56	-2.82/-2.97	-3.02/-3.03	-3.03/-3.01	-2.88/-2.71	-2.51/-2.33	-2.26/-2.32	-2.56/-2.86	-3.04/-3.08	-3.06/-3.18
Θ (22.5°)	-2.65/-3.51	-4.14/-4.68	-5.40/-6.33	-7.28/-7.71	-7.27/-6.35	-5.70/-5.73	-6.57/-8.27	-10.43/-12.33	-12.04/-10.09	-7.82/-5.97	-4.52/-3.42	-2.64/-2.03	-1.56/-1.16	-0.85/-0.72	-0.77/-0.98	-1.23/-1.41	-1.52/-1.62	-1.73/-1.79	-1.76/-1.62	-1.45/-1.31	-1.29/-1.39	-1.56/-1.66	-1.56/-1.50	-1.59/-1.98
Θ (30°)	-1.92/-2.79	-3.19/-3.51	-3.76/-4.37	-5.07/-5.57	-5.55/-5.28	-5.57/-6.58	-8.25/-10.01	-10.76/-10.35	-8.77/-7.74	-6.07/-4.40	-2.95/-1.80	-0.99/-0.53	-0.35/-0.30	-0.25/-0.25	-0.42/-0.70	-0.95/-0.93	-0.68/-0.42	-0.33/-0.47	-0.71/-0.80	-0.77/-0.69	-0.67/-0.77	-0.92/-0.93	-0.74/-0.58	-0.68/-1.18
Θ (37.5°)	-3.00/-3.92	-4.32/-4.30	-4.28/-4.57	-5.10/-5.84	-6.36/-7.59	-8.35/-7.11	-5.19/-3.43	-2.51/-2.33	-2.63/-3.01	-3.05/-2.60	-1.88/-1.05	-0.40/-0.16	-0.32/-0.72	-1.21/-1.73	-2.32/-2.86	-3.05/-2.60	-1.53/-0.52	0.09/0.18	-0.12/-0.53	-0.85/-1.09	-1.35/-1.69	-1.99/-1.94	-1.58/-1.34	-1.54/-2.21
Θ (45°)	-6.32/-7.22	-7.34/-6.57	-5.32/-4.30	-3.95/-4.39	-5.73/-6.87	-4.96/-1.55	0.89/2.08	2.33/1.81	0.73/-0.47	-1.40/-1.95	-2.29/-2.27	-1.80/-1.23	-0.95/-1.03	-1.36/-1.87	-2.58/-3.63	-4.94/-5.26	-3.68/-1.67	-0.20/0.52	-0.30/-1.02	-1.90/-3.10	-4.58/-5.35	-4.77/-4.18	-4.49/-5.38	
Θ (52.5°)	-9.43/-9.71	-9.84/-7.54	-4.16/-1.63	-0.30/-0.13	-0.95/-1.93	-1.27/0.96	2.82/3.70	3.58/2.65	1.26/0.11	-0.55/-1.27	-2.72/-4.56	-4.25/-2.34	-1.00/-0.38	-0.27/-0.44	-1.03/-2.18	-3.99/-5.61	-5.34/-3.46	-1.55/-0.19	0.59/0.82	0.68/0.25	-0.38/-1.50	-3.41/-5.95	-7.28/-7.40	-8.14/-9.31
Θ (60°)	-13.73/-12.95	-14.25/-11.13	-6.04/-2.15	0.07/0.85	0.39/-0.87	-1.52/-0.17	1.57/2.36	1.99/0.76	-0.29/-0.17	0.11/-0.52	-2.61/-5.83	-5.62/-2.98	-1.48/-1.09	-1.20/-1.46	-1.70/-2.12	-2.97/-4.36	-6.27/-7.69	-7.06/-4.42	-2.10/-0.59	0.20/0.35	0.10/-0.58	-1.86/-3.65	-4.75/-5.27	-7.14/-11.27
Θ (67.5°)	-9.90/-12.10	-12.70/-15.00	-15.63/-8.79	-4.17/-2.06	-1.68/-2.12	-1.86/-0.34	1.02/1.29	0.24/-1.40	-1.46/-0.41	-0.36/-1.72	-3.72/-4.62	-3.62/-3.03	-3.50/-4.48	-5.04/-4.44	-3.19/-2.36	-2.17/-2.40	-3.00/-4.33	-6.57/-7.74	-5.33/-2.42	-0.62/0.05	-0.26/-1.44	-3.69/-6.78	-6.90/-4.59	-4.29/-6.54
Θ (75°)	-9.42/-11.24	-10.45/-9.10	-6.66/-3.76	-1.23/0.16	0.46/0.28	0.25/0.61	0.78/0.18	-1.61/-3.87	-4.10/-3.53	-4.23/-5.14	-4.87/-4.35	-4.35/-5.72	-7.88/-8.19	-6.15/-3.89	-3.02/-3.64	-4.77/-4.18	-2.36/-1.59	-2.37/-4.66	-7.28/-5.14	-1.50/0.68	1.50/1.30	-0.04/-3.26	-10.36/-12.36	-7.62/-7.54
Θ (82.5°)	-9.48/-10.31	-10.19/-8.56	-5.52/-2.22	0.21/1.31	1.22/0.32	-1.06/-2.91	-5.10/-6.76	-6.48/-5.11	-4.06/-3.87	-4.18/-4.52	-5.15/-5.35	-5.20/-5.20	-4.39/-2.60	-0.62/0.53	0.31/-1.23	-3.88/-4.67	-1.98/-0.15	0.25/-0.66	-3.31/-8.11	-7.33/-2.54	0.08/1.26	1.34/0.22	-2.66/-7.63	-10.31/-8.87
Θ (90°)	-6.56/-6.36	-6.09/-4.44	-1.96/0.28	1.86/2.45	1.91/0.30	-2.32/-5.18	-4.67/-2.13	-0.57/-0.79	-2.57/-4.33	-4.28/-4.27	-4.61/-4.36	-4.26/-4.41	-3.89/-2.19	-0.16/0.77	0.57/-0.31	-2.32/-5.05	-3.94/-1.47	0.02/0.65	0.37/-0.99	-2.90/-3.30	-1.89/-0.50	0.22/-0.01	-1.54/-4.34	-7.63/-7.70
Θ (97.5°)	-12.16/-13.19	-9.91/-5.91	-1.93/1.00	2.68/3.19	2.64/0.88	-2.27/-5.37	-3.57/-1.16	-0.75/-2.76	-6.99/-5.52	-2.62/-2.00	-2.07/-2.32	-2.56/-2.32	-1.48/-0.20	0.47/0.33	0.23/0.44	-0.12/-1.61	-2.48/-2.24	-1.76/-1.21	-1.01/-1.67	-2.92/-3.58	-2.96/-1.63	-0.33/0.39	0.25/-0.82	-3.48/-8.31
Θ (105°)	-2.96/-2.68	-2.73/-3.45	-2.91/-0.76	0.71/0.93	0.32/-1.06	-2.76/-2.45	-0.49/0.64	0.08/-2.40	-4.52/-1.89	-0.00/0.10	-1.09/-3.47	-5.72/-5.61	-4.43/-3.23	-3.18/-3.88	-2.57/-0.74	-0.08/-0.03	0.13/0.21	-0.06/-0.55	-0.88/-1.19	-1.77/-2.33	-2.92/-3.52	-3.05/-1.48	-0.41/-0.05	-0.67/-2.14
Θ (112.5°)	0.68/1.03	0.79/0.10	-0.07/0.44	0.28/-1.46	-4.39/-7.15	-7.57/-5.10	-2.48/-1.51	-2.52/-4.41	-2.52/0.19	1.19/0.83	-0.64/-2.87	-3.50/-3.08	-3.15/-3.54	-3.64/-2.14	0.09/-1.22	1.20/0.73	0.19/-0.41	-1.20/-1.90	-1.87/-1.45	-1.18/-1.15	-1.36/-2.22	-3.17/-2.88	-1.74/-0.82	-0.24/0.15
Θ (120°)	-0.45/-0.10	-0.22/-0.69	-1.02/-0.99	-1.27/-2.29	-3.17/-1.92	-0.21/1.00	1.53/1.14	-0.35/-1.84	-1.03/0.45	0.95/0.39	-1.37/-3.78	-4.50/-4.16	-4.59/-5.38	-4.66/-1.93	0.60/1.98	2.26/1.81	1.02/0.31	-0.07/0.18	1.06/1.83	2.21/2.21</				



Total Gain Result

Ant. 1									
Freq (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
Efficiency (%)	48.96	55.40	63.81	53.39	43.25	61.83	65.02	49.75	20.56
Gain (dBi)	2.42	4.69	5.18	4.29	3.75	5.61	5.04	3.25	1.06
Ant. 2									
Freq (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
Efficiency (%)	77.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gain (dBi)	4.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

