



Antenna Composite Gain Test Report

FCC ID	LDKIW9167IH
Equipment	Cisco Catalyst IW9167I Heavy Duty Access Point
Brand Name	CISCO
Model Name	IW9167IH-B , IW9167IH-ROW
Applicant	Cisco Systems Inc 125 West Tasman Drive San Jose California United States 95134-1706
Manufacturer	Cisco Systems Inc 125 West Tasman Drive San Jose California United States 95134-1706
Sample Received	Feb. 16, 2023
Start Test Date	Mar. 08, 2023
Final Test Date	Jun. 08, 2023

Approved by: Sam Chen

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History of this test report

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1. Operation Mode and Antenna Information

Antenna Position	RF Port		Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	WLAN 2.4GHz	WLAN 5GHz					
2G5G Ant1	3	2	WNC	95XEAK15.G66	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~3
2G5G Ant2	2	3	WNC	95XEAK15.G67	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~3
2G5G Ant3	1	4	WNC	95XEAK15.G68	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~3
2G5G Ant4	4	1	WNC	95XEAK15.G69	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~3

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
6G Ant1	3	WNC	95XEAK15.G70	PIFA	I-PEX	6GHz UNII 5~8
6G Ant2	1	WNC	95XEAK15.G71	PIFA	I-PEX	6GHz UNII 5~8
6G Ant3	2	WNC	95XEAK15.G72	PIFA	I-PEX	6GHz UNII 5~8
6G Ant4	4	WNC	95XEAK15.G73	PIFA	I-PEX	6GHz UNII 5~8
Scan Ant1	2	WNC	95XEAK15.G74	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~3, 6GHz UNII 5~8
Scan Ant2	1	WNC	95XEAK15.G75	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~3, 6GHz UNII 5~8
BLE Ant3	1	WNC	95XEAK15.G76	PIFA	I-PEX	Bluetooth

Note:

For Iron Radio 1

2.4GHz Operation Mode (1TX/4RX)

Only 2G5G Ant3 can be use as transmitting antenna.

2G5G Ant1~4 can be used as receiving antenna.

2G5G Ant1~4 can receive simultaneously.

2.4GHz Operation Mode (2TX/4RX)

2G5G Ant3 and 2G5G Ant2 can be use as transmitting antenna.

2G5G Ant1~4 can be used as receiving antenna.

2G5G Ant1~4 can receive simultaneously.

2.4GHz Operation Mode (4TX/4RX)

2G5G Ant1~4 can be used as transmitting/receiving antenna.

2G5G Ant1~4 can transmit/receive simultaneously.

5GHz Operation Mode (1TX/4RX)

Only 2G5G Ant4 can be use as transmitting antenna.

2G5G Ant1~4 can be used as receiving antenna.

2G5G Ant1~4 can receive simultaneously.

5GHz Operation Mode (2TX/4RX)

2G5G Ant4 and 2G5G Ant1 can be use as transmitting antenna.



2G5G Ant1~4 can be used as receiving antenna.

2G5G Ant1~4 can receive simultaneously.

5GHz Operation Mode (4TX/4RX)

2G5G Ant1~4 can be used as transmitting/receiving antenna.

2G5G Ant1~4 can transmit/receive simultaneously.

For Radio 2

6GHz Operation Mode (1TX/4RX)

Only 6G Ant2 can be use as transmitting antenna.

6G Ant1~4 can be used as receiving antenna.

6G Ant1~4 can receive simultaneously.

5GHz Operation Mode (2TX/4RX)

6G Ant2 and 6G Ant3 can be use as transmitting antenna.

6G Ant1~4 can be used as receiving antenna.

6G Ant1~4 can receive simultaneously.

5GHz Operation Mode (4TX/4RX)

6G Ant1~4 can be used as transmitting/receiving antenna.

6G Ant1~4 could transmit/receive simultaneously.

For Scanning Radio 3

2.4GHz/5GHz Operation Mode (1TX/2RX)

Only Scan Ant2 can be use as transmitting antenna.

Scan Ant1~2 can be used as receiving antenna.

Scan Ant1~2 can receive simultaneously.

6GHz Operation Mode (2RX)

Scan Ant1~2 can be used as receiving antenna.

Scan Ant1~2 can receive simultaneously.

For Radio 4

Bluetooth Operation Mode (1TX/1RX):

Only BLE Ant3 can be used as transmitting/receiving antenna.



2. Test Frequency

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

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

3. Testing Location

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rex Liao	23.5~24.5 / 45~55	Mar. 08, 2023~Jun. 08, 2023

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

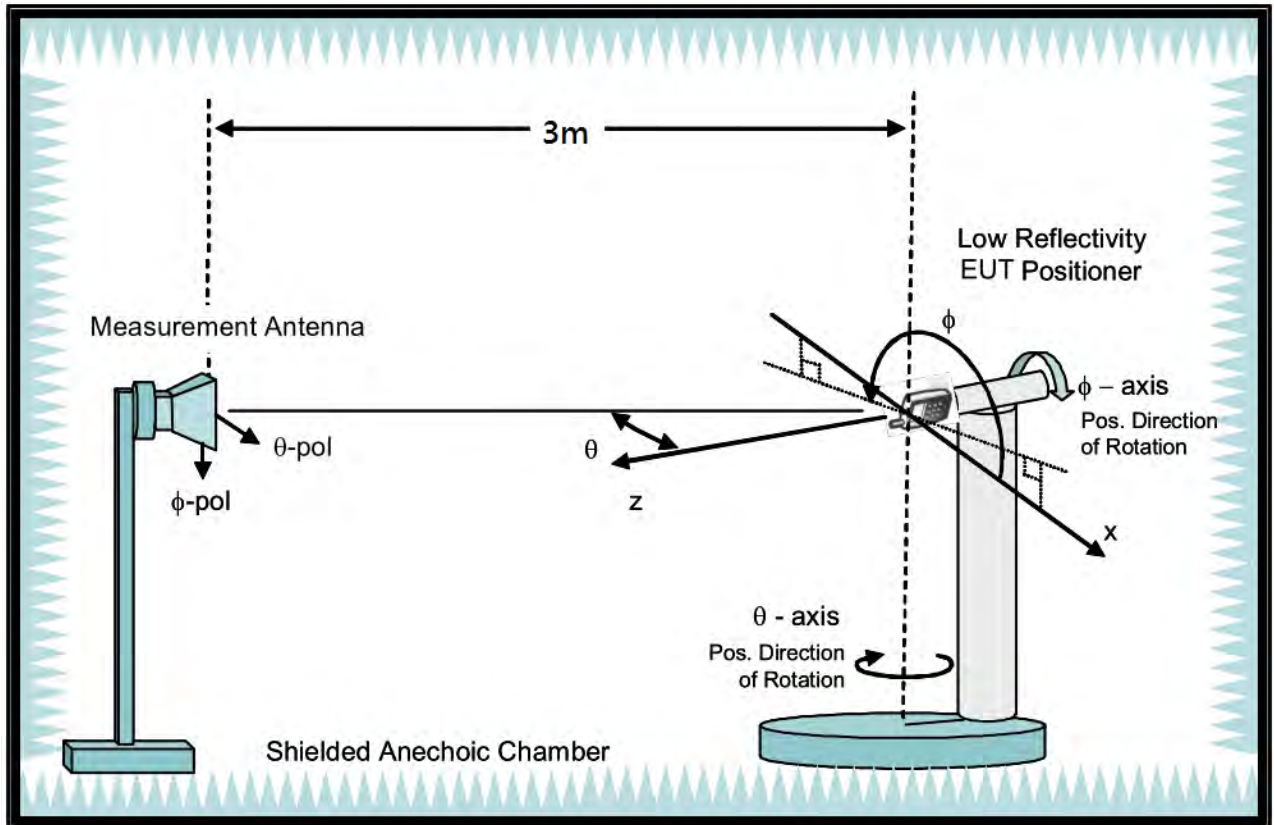
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

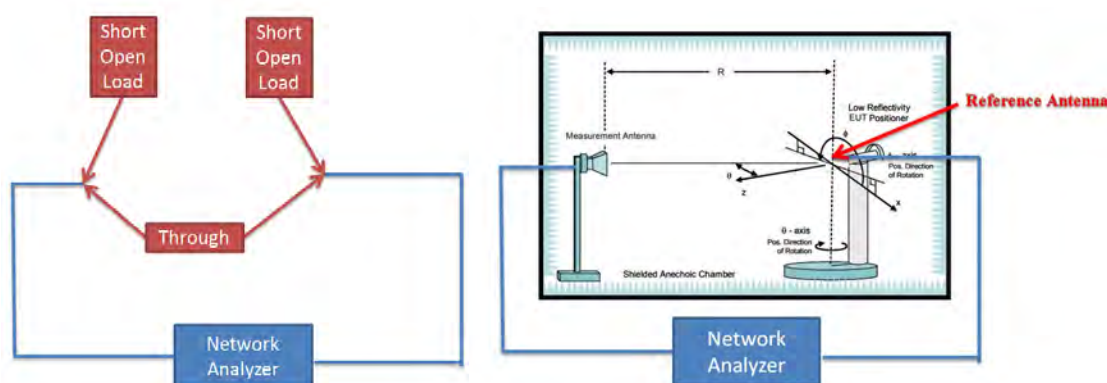
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



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.



Before May 31, 2023

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

Note:

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

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

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

Factor = gain factor + power gain conversion= (Reference antenna gain)-(G reading)

**After May 30, 2023**

Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.75	-33.64	-32.91	-32.21	-32.45	-32.33	-32.57	-32.94	-32.78	-33.35	-32.91	-33.81	-34.54	-35.64
G(phi) reading (dB)	-33.19	-32.12	-32.48	-32.51	-32.64	-31.68	-32.24	-32.45	-32.45	-32.85	-32.45	-33.62	-34.48	-35.24
Reference gain (dBi)	10	10.4	10.6	12.3	12.5	13.3	13.3	13.2	13.1	13	13.2	12.4	11.8	11.1
Factor(theta) (dB)	43.75	44.04	43.51	44.51	44.95	45.63	45.87	46.14	45.88	46.35	46.11	46.21	46.34	46.74
Factor(phi) (dB)	43.19	42.52	43.08	44.81	45.14	44.98	45.54	45.65	45.55	45.85	45.65	46.02	46.28	46.34

Note:

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

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

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

Factor = gain factor + power gain conversion= (Reference antenna gain)-(G reading)



6. Test Method

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

For Iron Radio 1:

<4TX>

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	0.85	-1.88	-0.18	-5.95	1.25
Ant. 2 (dBi)	1.93	1.89	-0.72	2.67	1.64
Ant. 3 (dBi)	3.95	2.1	1.84	3.49	0.83
Ant. 4 (dBi))	0.98	-0.49	-0.7	0.43	1.56
DG [1SS] (dBi)	8.04	6.58	6.15	6.87	7.35
Polarization	Theta	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	60	82.5	82.5	60	60
$\Phi(^{\circ})$	0	270	270	217.5	7.5

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 [$10^{(G/20)}$]	$10^{(0.85/20)}$	$10^{(-1.88/20)}$	$10^{(-0.18/20)}$	$10^{(-5.95/20)}$	$10^{(1.25/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(1.93/20)}$	$10^{(1.89/20)}$	$10^{(-0.72/20)}$	$10^{(2.67/20)}$	$10^{(1.64/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(3.95/20)}$	$10^{(2.1/20)}$	$10^{(1.84/20)}$	$10^{(3.49/20)}$	$10^{(0.83/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(0.98/20)}$	$10^{(-0.49/20)}$	$10^{(-0.7/20)}$	$10^{(0.43/20)}$	$10^{(1.56/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.103	0.805	0.979	0.504	1.155
Ant. 2 [$10^{(G/20)}$] value	1.249	1.243	0.92	1.36	1.208
Ant. 3 [$10^{(G/20)}$] value	1.576	1.274	1.236	1.495	1.1
Ant. 4 [$10^{(G/20)}$] value	1.119	0.945	0.923	1.051	1.197
Sum All Antenna [Amax]	5.047	4.267	4.058	4.409	4.66
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	8.04	6.58	6.15	6.87	7.35

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

<2TX>

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-	-1.32	1.11	3.09	3.45
Ant. 2 (dBi)	3	-	-	-	-
Ant. 3 (dBi)	3.53	-	-	-	-
Ant. 4 (dBi)	-	0.87	-1.46	0.93	1.23
DG [1SS] (dBi)	6.28	2.85	2.93	5.09	5.42
Polarization	Theta	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	60	82.5	52.5	60	60
$\Phi(^{\circ})$	7.5	37.5	60	45	45

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 [$10^{(G/20)}$]	-	$10^{(-1.32/20)}$	$10^{(1.11/20)}$	$10^{(3.09/20)}$	$10^{(3.45/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(3/20)}$	-	-	-	-
Ant. 3 [$10^{(G/20)}$]	$10^{(3.53/20)}$	-	-	-	-
Ant. 4 [$10^{(G/20)}$]	-	$10^{(0.87/20)}$	$10^{(-1.46/20)}$	$10^{(0.93/20)}$	$10^{(1.23/20)}$
Ant. 1 [$10^{(G/20)}$] value	-	0.859	1.136	1.427	1.488
Ant. 2 [$10^{(G/20)}$] value	1.413	-	-	-	-
Ant. 3 [$10^{(G/20)}$] value	1.501	-	-	-	-
Ant. 4 [$10^{(G/20)}$] value	-	1.105	0.845	1.113	1.152
Sum All Antenna [Amax]	2.914	1.964	1.982	2.54	2.64
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	6.28	2.85	2.93	5.09	5.42

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

For Radio 2:

<4TX>

DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	3.07	2.83	1.61	0.09
Ant. 2 (dBi)	0.32	3.28	5.81	4.76
Ant. 3 (dBi)	2.99	1.24	1	1.59
Ant. 4 (dBi)	2.65	1.61	1.03	3.67
DG [1SS] (dBi)	8.35	8.3	8.63	8.73
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	75	67.5	67.5	75
$\Phi(^{\circ})$	97.5	97.5	97.5	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)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(3.07/20)}$	$10^{(2.83/20)}$	$10^{(1.61/20)}$	$10^{(0.09/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(0.32/20)}$	$10^{(3.28/20)}$	$10^{(5.81/20)}$	$10^{(4.76/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(2.99/20)}$	$10^{(1.24/20)}$	$10^{(1/20)}$	$10^{(1.59/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(2.65/20)}$	$10^{(1.61/20)}$	$10^{(1.03/20)}$	$10^{(3.67/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.424	1.385	1.204	1.01
Ant. 2 [$10^{(G/20)}$] value	1.038	1.459	1.952	1.73
Ant. 3 [$10^{(G/20)}$] value	1.411	1.153	1.122	1.201
Ant. 4 [$10^{(G/20)}$] value	1.357	1.204	1.126	1.526
Sum All Antenna [Amax]	5.229	5.201	5.404	5.467
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	8.35	8.3	8.63	8.73

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

<2TX>

DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 2 (dBi)	1.21	3.28	5.81	4.76
Ant. 3 (dBi)	2.76	1.24	1	1.59
DG [1SS] (dBi)	5.03	5.33	6.74	6.33
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	60	67.5	67.5	75
$\Phi(^{\circ})$	45	97.5	97.5	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)	6.175G	6.475G	6.695G	6.995G
Ant. 2 [$10^{(G/20)}$]	$10^{(1.21/20)}$	$10^{(3.28/20)}$	$10^{(5.81/20)}$	$10^{(4.76/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(2.76/20)}$	$10^{(1.24/20)}$	$10^{(1/20)}$	$10^{(1.59/20)}$
Ant. 2 [$10^{(G/20)}$] value	1.149	1.459	1.952	1.73
Ant. 3 [$10^{(G/20)}$] value	1.374	1.153	1.122	1.201
Sum All Antenna [Amax]	2.524	2.612	3.074	2.931
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	5.03	5.33	6.74	6.33

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

For Iron Radio 1:

<4TX>

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.17	1.39	1.71	3.09	3.45
Ant. 2 Max Gain (dBi)	3.28	3.37	3.54	4.2	4.12
Ant. 3 Max Gain (dBi)	3.95	3.42	3.05	3.92	4.41
Ant. 4 Max Gain (dBi)	2.63	1.47	1.36	2.39	2.26
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/45/0	Theta/52.5/60	Theta/67.5/45	Theta/60/45	Theta/60/45
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/52.5/7.5	Theta/52.5/225	Theta/60/217.5	Theta/52.5/232.5	Theta/67.5/60
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/0	Theta/52.5/232.5	Theta/67.5/217.5	Theta/67.5/225	Theta/60/225
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/112.5	Theta/82.5/45	Theta/82.5/255	Theta/82.5/247.5	Theta/52.5/345
Max Gain (dBi)	3.95	3.42	3.54	4.2	4.41
DG [1SS] (dBi)	8.04	6.58	6.15	6.87	7.35
DG [2SS] (dBi)	5.04	3.58	3.54	4.2	4.41
DG [4SS] (dBi)	3.95	3.42	3.54	4.2	4.41

<2TX>

Freq(Hz)	2.45G
Ant. 2 Max Gain (dBi)	3.28
Ant. 3 Max Gain (dBi)	3.95
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/52.5/7.5
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/0
Max Gain (dBi)	3.95
DG [1SS] (dBi)	6.28
DG [2SS] (dBi)	3.95

Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	1.39	1.71	3.09	3.45
Ant. 4 Max Gain (dBi)	1.47	1.36	2.39	2.26
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/52.5/60	Theta/67.5/45	Theta/60/45	Theta/60/45
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/82.5/45	Theta/82.5/255	Theta/82.5/247.5	Theta/52.5/345
Max Gain (dBi)	1.47	1.71	3.09	3.45
DG [1SS] (dBi)	2.85	2.93	5.09	5.42
DG [2SS] (dBi)	1.47	1.71	3.09	3.45

For Radio 2:

<4TX>

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.66	2.95	5.16	5.06
Ant. 2 Max Gain (dBi)	3.38	4	5.81	4.76
Ant. 3 Max Gain (dBi)	3.54	2.54	3.51	3.97
Ant. 4 Max Gain (dBi)	4.27	3.5	5.5	5.22
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/90	Theta/75/120	Theta/60/82.5	Theta/75/127.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/0	Theta/67.5/157.5	Theta/67.5/97.5	Theta/75/97.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/82.5/307.5	Theta/75/135	Theta/82.5/270	Theta/82.5/300
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/82.5	Theta/67.5/82.5	Theta/75/262.5	Theta/75/262.5
Max Gain (dBi)	4.27	4	5.81	5.22
DG [1SS] (dBi)	8.35	8.3	8.63	8.73
DG [2SS] (dBi)	5.35	5.3	5.81	5.73
DG [4SS] (dBi)	4.27	4	5.81	5.22

<2TX>

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 2 Max Gain (dBi)	3.38	4	5.81	4.76
Ant. 3 Max Gain (dBi)	3.54	2.54	3.51	3.97
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/0	Theta/67.5/157.5	Theta/67.5/97.5	Theta/75/97.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/82.5/307.5	Theta/75/135	Theta/82.5/270	Theta/82.5/300
Max Gain (dBi)	3.54	4	5.81	4.76
DG [1SS] (dBi)	5.03	5.33	6.74	6.33
DG [2SS] (dBi)	3.54	4	5.81	4.76

For Scanning Radio 3:

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.06	3.81	3.38	3.2	2.54
Ant. 2 Max Gain (dBi)	2.52	3.21	2.86	3.11	3.78
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/270	Theta/67.5/60	Theta/67.5/60	Theta/75/37.5	Theta/52.5/0
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/90	Theta/75/142.5	Theta/82.5/217.5	Theta/60/120	Theta/60/127.5

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.32	3	4.97	4.81
Ant. 2 Max Gain (dBi)	3.22	4.16	3	3.45
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/75	Theta/67.5/75	Theta/75/75	Theta/75/75
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/255	Theta/75/255	Theta/75/105	Theta/82.5/202.5

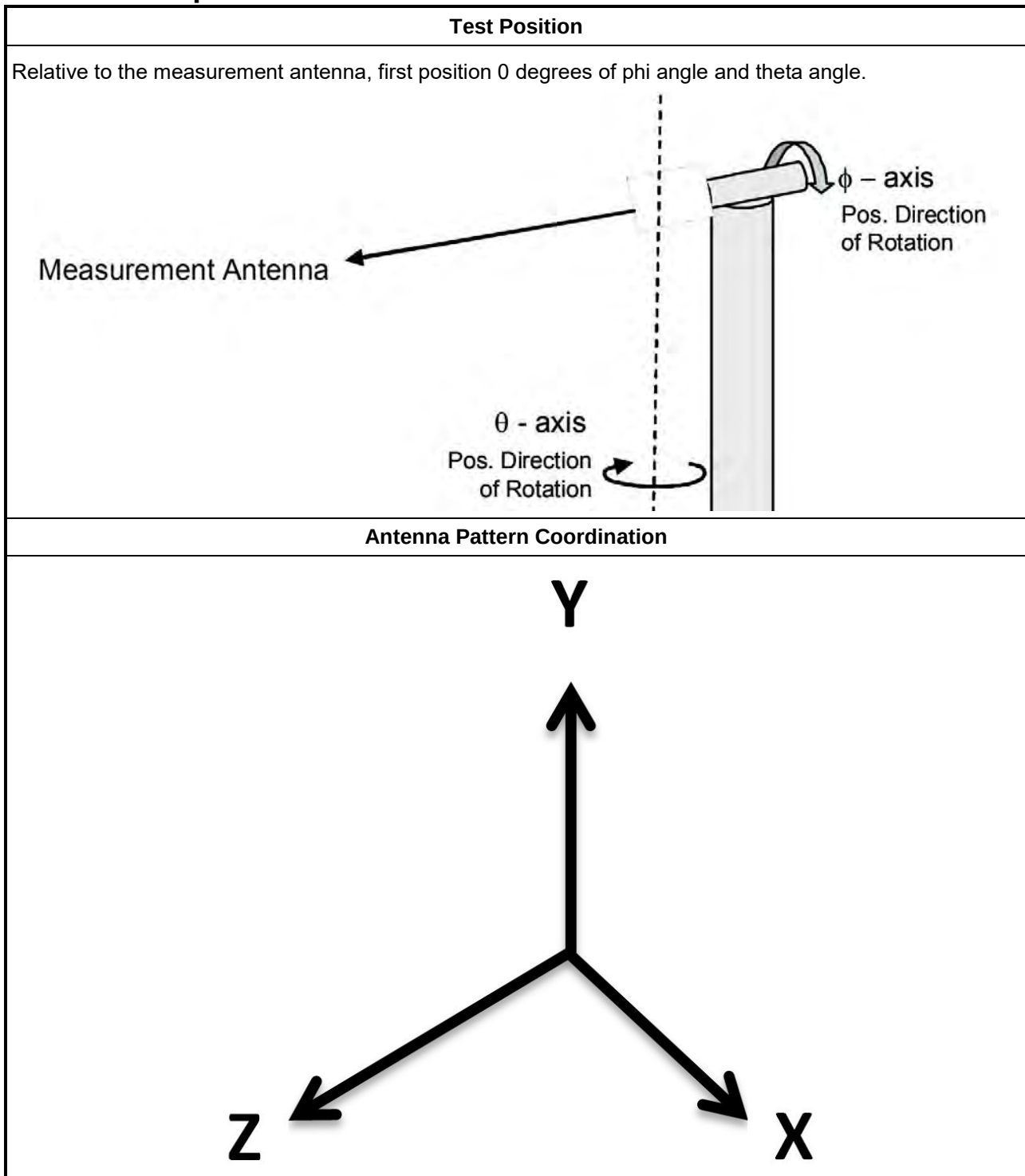
For Radio 4:

Freq(Hz)	2.45G
Ant. 3 Max Gain (dBi)	3.05
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/262.5

Note:

1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (4SS) = Directional Gain (1SS) – 6dB. 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-1543	1GHz~18GHz	May 31, 2022	May 30, 2023
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1543	1GHz~18GHz	May 11, 2023	May 10, 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. 20, 2022	Jul. 19, 2023
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

Appendix A - Radiated Composite Gain of 2.4GHz/5GHz in Radio 1.....	Page 21
Appendix B - Radiated Composite Gain of 6GHz in Radio 2.....	Page 44
Appendix C - Radiated Composite Gain of 2.4GHz/5GHz/6GHz in Radio 3 and Bluetooth in Radio 4..	Page 58
Appendix D - Antenna Pattern of 2.4GHz/2.4GHz/5GHz in Radio 1.....	Page 72
Appendix E - Antenna Pattern of 6GHz in Radio 2.....	Page 79
Appendix F - Antenna Pattern of 2.4GHz/5GHz/6GHz in Radio 3 and Bluetooth in Radio 4.....	Page 85
Appendix G - Test Photos.....	Page 92



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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.17	1.39	1.71	3.09	3.45
Ant. 2 Max Gain (dBi)	3.28	3.37	3.54	4.2	4.12
Ant. 3 Max Gain (dBi)	3.95	3.42	3.05	3.92	4.41
Ant. 4 Max Gain (dBi)	2.63	1.47	1.36	2.39	2.26
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/45/0	Theta/52.5/60	Theta/67.5/45	Theta/60/45	Theta/60/45
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/52.5/7.5	Theta/52.5/225	Theta/60/217.5	Theta/52.5/232.5	Theta/67.5/60
Ant. 3 Polarization/Θ(°)/Φ(°)	Theta/60/0	Theta/52.5/232.5	Theta/67.5/217.5	Theta/67.5/225	Theta/60/225
Ant. 4 Polarization/Θ(°)/Φ(°)	Theta/67.5/112.5	Theta/82.5/45	Theta/82.5/255	Theta/82.5/247.5	Theta/52.5/345
Max Gain (dBi)	3.95	3.42	3.54	4.2	4.41
DG [1SS] (dBi)	8.04	6.58	6.15	6.87	7.35
DG [2SS] (dBi)	5.04	3.58	3.54	4.2	4.41
DG [4SS] (dBi)	3.95	3.42	3.54	4.2	4.41



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

DG 1SS Result

Freq(Hz)	2.45GPol.	PhiH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DG(0B)	Phi(0°)Phi(7.5°)	Phi(15°)Phi(22.5°)	Phi(30°)Phi(37.5°)	Phi(45°)Phi(52.5°)	Phi(60°)Phi(67.5°)	Phi(75°)Phi(82.5°)	Phi(90°)Phi(97.5°)	Phi(105°)Phi(112.5°)	Phi(120°)Phi(127.5°)	Phi(135°)Phi(142.5°)	Phi(150°)Phi(157.5°)	Phi(165°)Phi(172.5°)	Phi(180°)Phi(187.5°)	Phi(195°)Phi(202.5°)	Phi(210°)Phi(217.5°)	Phi(225°)Phi(232.5°)	Phi(240°)Phi(247.5°)	Phi(255°)Phi(262.5°)	Phi(270°)Phi(277.5°)	Phi(285°)Phi(292.5°)	Phi(300°)Phi(307.5°)	Phi(315°)Phi(322.5°)	Phi(330°)Phi(337.5°)	Phi(345°)Phi(352.5°)
Theta	2.580/203	1.460/83	-0.03/-102	-1.63/-144	-0.9/-059	-0.37/-01	0.430/92	1.121/48	2.142/69	2.983/01	3.053/16	3.162/89	2.42/194	1.460/81	0.17/-07	-1.48/-175	-1.56/-12	-0.520/25	0.73/107	1.37/171	2.132/46	2.75/032	3.27/38	3.29/036
Theta(7.5°)	2.471/96	1.470/86	0.11/102	-1.21/-097	-0.42/-001	0.290/56	1.121/72	2.042/22	2.462/89	3.193/21	3.099/04	3.032/74	2.21/47	1.636/01	-0.94/-157	-1.93/-198	-1.21/-102	0.30/6	0.74/108	1.5/185	2.142/51	2.953/16	3.122/93	
Theta(15°)	2.081/42	0.69/-005	-0.95/-168	-1.83/-141	-0.86/-036	0.120/62	1.322/03	2.32/22	1.84/173	1.771/75	1.671/77	2.082/11	1.75/101	-0.1/-114	-1.71/-159	-1.37/-126	-1.51/-217	-2.27/-142	-0.52/-005	-0.08/-014	-0.09/-01	0.19/096	1.842/43	2.632/58
Theta(22.5°)	1.910/67	-0.48/-164	-2.23/-201	-1.32/-073	-0.56/-069	-0.460/14	0.96/169	2.1/197	1.190/54	1.190/54	1.151/57	-0.930/09	1.430/51	-1.05/-201	-1.49/-07	-0.18/-014	-0.83/-219	-3.29/-308	-2/-116	-1.12/-156	-2/-236	-2.34/-147	-0.02/127	2.112/42
Theta(30°)	1.660/19	-1.98/-352	-3.65/-218	-0.69/-005	-0.18/-104	-1.86/-134	-0.14/102	1.56/16	1.040/11	-0.97/-168	-2.03/-109	0.37/123	1.390/46	-1.59/-261	-1.61/-009	0.91/107	0.18/-163	-3.67/-431	-3/-4122	-1.62/-162	-2.16/-259	-3.02/-295	-1.630/16	1.562/18
Theta(37.5°)	0.79/-019	-1.87/-342	-3.47/-195	-0.60/04	-0.26/-173	-3.91/-355	-1.340/31	0.940/77	0.2/-045	-0.71/-084	-1.38/-118	0.05/094	1.130/36	-1.62/-288	-1.69/-007	0.99/118	0.13/-195	-4.13/-452	-3.52/-27	-2.08/-13	-1/-115	-1.39/-169	-1.52/-05	0.56/107
Theta(45°)	-0.44/-039	-1.01/-225	-2.5/-175	-1.09/-054	-0.71/-197	-4.08/-556	-3.15/-046	0.33/-035	-0.99/-609	-0.25/-003	-0.38/-088	-0.7/-009	0.570/48	-0.86/-235	-2.06/-08	0.070/16	-0.89/-284	-4.77/-487	-3.28/-27	-3.34/-305	-1.74/-098	-0.83/-078	-0.6/-036	-0.23/-035
Theta(52.5°)	0.81/-02	-0.25/-141	-1.99/-199	-1.92/-157	-1.85/-232	-3.64/-556	-4.03/-104	-0.45/-192	-2.49/-066	0.34/04	0.0/-37	-0.85/-11	-0.140/25	-0.78/-191	-1.68/-139	-1.03/-107	-1.79/-275	-3.88/-439	-2.79/-256	-4.49/-6	-3.71/-188	-1.14/-068	-0.220/09	-0.1/-067
Theta(60°)	-0.460/15	0.06/-109	-1.6/-168	-2.48/-26	-2.97/-23	-2.56/-478	-5.26/-162	-1.08/-357	-4.71/-158	-0.01/5	0.050/38	0.1/-096	-0.260/43	-0.27/-167	-1.34/-16	-2.16/-234	-2.84/-26	-2.66/-385	-3.03/-241	-5.29/-805	-5.56/-289	-1.65/-092	-0.180/4	-0.3/-36
Theta(67.5°)	-0.690/13	0.16/-079	-0.92/-118	-2.46/-332	-3.51/-212	-1.95/-457	-5.65/-203	-1.98/-533	-5.48/-201	-0.89/-102	-0.720/54	0.53/-094	-0.410/17	-0.73/-187	-0.82/-125	-2.74/-347	-4.24/-242	-2.21/-361	-3.44/-294	-6.42/-94	-5.64/-34	-2.37/-161	-0.390/55	0.43/-051
Theta(75°)	-1.64/-065	-0.13/-113	-1.27/-161	-3.28/-433	-4.6/-31	-2.17/4	-5.72/-28	-2.95/-637	-5.43/-241	-2.2/-258	-2.220/66	0.65/-134	-1.63/-044	-1.09/-271	-1.11/-101	-2.95/-473	-5.84/-393	-2.75/-371	-3.49/-31	-6.26/-957	-5.49/-442	-4.08/-274	-1.330/17	0.14/-109
Theta(82.5°)	-2.36/-136	-0.9/-193	-1.3/-16	-3.59/-47	-5.32/-394	-2.27/-362	-5.66/-342	-4.08/-689	-5.06/-26	-2.92/-261	-2.62/-06	-0.04/-244	-1.79/-024	-1.65/-399	-2.02/-209	-4.69/-64	-6.63/-409	-3.29/-441	-4.08/-416	-7.55/-76	-5.3/-548	-5.9/-395	-2.65/-081	-0.71/-189
Theta(90°)	-2.07/-11	-1.2/-25	-1.78/-187	-3.74/-453	-4.99/-422	-2.52/-379	-5.07/-366	-4.33/-699	-5.19/-317	-4.16/-34	-3.56/-17	-0.51/-248	-2.33/-081	-2.24/-61	-3.12/-254	-5.37/-672	-7.25/-453	-3.56/-508	-5/-488	-8.09/-735	-5.56/-595	-6.27/-443	-3.26/-161	-1.03/-203
Theta(97.5°)	-2.89/-158	-1.23/-284	-2.9/-327	-5.33/-517	-5.41/-363	-1.98/-316	-5.18/-492	-5.17/-67	-5.09/-368	-4.75/-358	-3.29/-143	-0.89/-373	-2.98/-116	-2.32/-528	-3.66/-328	-6.29/-791	-8.77/-501	-3.52/-496	-3.81/-488	-8.12/-696	-6.5/-786	-6.43/-451	-3.89/-208	-1.38/-224
Theta(105°)	-3.17/-185	-1.48/-334	-3.6/-423	-6.23/-515	-4.53/-299	-2.41/-448	-6.98/-545	-4.91/-358	-4.98/-436	-4.92/-241	-0.89/-252	-3.13/-187	-3.33/-563	-3.88/-265	-4.95/-841	-9.68/-584	-4.31/-566	-4.45/-52	-8.26/-748	-6.04/-874	-7.57/-519	-4.23/-212	-2.06/-276	
Theta(112.5°)	-4.81/-287	-2.36/-425	-4.28/-44	-7.55/-574	-6.42/-434	-3.32/-489	-6.17/-455	-5.47/-723	-5.19/-518	-6.29/-423	-3.62/-138	-0.81/-45	-5.76/-266	-2.37/-368	-3.81/-371	-6.63/-916	-8.63/-658	-6.65/-679	-4.39/-403	-7.7/-838	-7.18/-894	-7.04/-54	-4.18/-196	-2.64/-59
Theta(120°)	-5.15/-326	-2.6/-383	-4.25/-413	-6.08/-68	-5.97/-377	-3.41/-535	-7.03/-276	-7.22/-177	-4.63/-409	-4.13/-313	-3.71/-395	-1.4/-474	-6.12/-265	-2.3/-394	-5.77/-579	-6.72/-1016	-9.47/-61	-5.55/-684	-4.93/-44	-7.24/-822	-8.15/-994	-8.91/-698	-5.26/-269	-2.66/-504
Theta(127.5°)	-3.67/-261	-3.2/-519	-6.32/-677	-8.46/-802	-7.3/-672	-5.66/-698	-6.32/-59	-8.13/-918	-7.23/-604	-4.86/-535	-6.77/-355	-2.58/-353	-4.92/-241	-0.89/-252	-3.13/-187	-10.71/-974	-8.46/-579	-6.95/-777	-6.32/-646	-10.11/-974	-7.48/-783	-8.72/-778	-6.65/-414	-4.4/-529
Theta(135°)	-4.43/-378	-5.48/-691	-6.93/-327	-8.1/-934	-10.03/-1027	-8.49/-76	-6.25/-466	-7.83/-844	-7.7/-651	-5.82/-55	-5.21/-443	-4.34/-55	-6.88/-599	-5.03/-534	-6.26/-778	-9.16/-1004	-8.86/-936	-10.93/-83	-5.19/-521	-8.28/-1028	-7.72/-703	-7.25/-834	-7.06/-62	-6.78/-675
Theta(142.5°)	-5.84/-545	-6.83/-838	-7.69/-627	-8.64/-838	-10.71/-1133	-10.41/-866	-7.92/-767	-7.36/-757	-6.77/-67	-6.47/-591	-5.74/-643	-7.63/-699	-6.57/-565	-5.75/-616	-8.66/-95	-9.42/-794	-8.07/-99	-10.75/-846	-5.74/-553	-7.3/-799	-7.33/-679	-7.17/-852	-9.36/-89	-7.94/-683
Theta(150°)	-6.59/-743	-9.71/-1093	-9.47/-91	-7.47/-784	-8.33/-899	-6.71/-622	-4.96/-453	-4.97/-556	-6.09/-612	-6.16/-604	-4.96/-935	-10.11/-879	-7.81/-756	-8.36/-865	-10.84/-1048	-9.18/-86	-9.15/-1062	-10.75/-1002	-7.15/-625	-7.46/-844	-9.17/-94	-9.09/-912	-8.73/-915	-7.6/-67
Theta(157.5°)	-5.25/-6	-7.57/-941	-10.64/-878	-7.71/-702	-6.32/-53	-4.42/-376	-3.44/-379	-4.42/-521	-6.24/-704	-7.34/-706	-7.56/-785	-7.61/-686	-7.17/-754	-7.91/-838	-8.74/-999	-10.25/-1068	-10.58/-1101	-10.57/-952	-7.44/-669	-6.88/-804	-9.07/-981	-9.78/-65	-7.68/-716	-5.93/-531
Theta(165°)	-4.85/-529	-6.14/-673	-7.58/-831	-7.58/-833	-5.21/-45	-3.98/-374	-3.64/-383	-4.44/-556	-7.58/-896	-9.42/-845	-6.92/-636	-5.57/-535	-5.84/-642	-7.25/-834	-8.98/-939	-10.93/-1123	-11.1/-104	-10.96/-904	-7.91/-719	-6.93/-789	-8.75/-877	-8.61/-816	-7.36/-676	-6.11/-507
Theta(172.5°)	-5.03/-535	-6.72/-598	-6.60/-627	-5.94/-555	-5.13/-483	-4.39/-397	-3.89/-321	-3.69/-466	-5.95/-678	-5.88/-616	-5.68/-555	-5.61/-587	-6.89/-642	-7.25/-818	-9.01/-919	-8.49/-849	-8.81/-875	-8.2/-862	-5.88/-627	-6.43/-628	-5.99/-589	-5.92/-593	-5.68/-513	
Theta(180°)	-5.25/-56	-5.68/-559	-5.53/-581	-6.52/-708	-7.24/-676	-5.88/-508	-4.29/-418	-4.75/-52	-5.13/-461	-4.43/-486	-5.66/-64	-6.49/-67	-6.81/-707	-7.14/-696	-6.35/-553	-5.08/-538	-6.25/-639	-5.54/-468	-4.62/-474	-4.48/-421	-3.96/-389	-4/-424	-4.58/-507	-5.38/-519
Freq(Hz)	2.45GPol.	ThetaH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(0B)	Phi(0°)Phi(7.5°)	Phi(15°)Phi(22.5°)	Phi(30°)Phi(37.5°)	Phi(45°)Phi(52.5°)	Phi(60°)Phi(67.5°)	Phi(75°)Phi(82.5°)	Phi(90°)Phi(97.5°)	Phi(105°)Phi(112.5°)	Phi(120°)Phi(127.5°)	Phi(135°)Phi(142.5°)	Phi(150°)Phi(157.5°)	Phi(165°)Phi(172.5°)	Phi(180°)Phi(187.5°)	Phi(195°)Phi(202.5°)	Phi(210°)Phi(217.5°)	Phi(225°)Phi(232.5°)	Phi(240°)Phi(247.5°)	Phi(255°)Phi(262.5°)	Phi(270°)Phi(277.5°)	Phi(285°)Phi(292.5°)	Phi(300°)Phi(307.5°)	Phi(315°)Phi(322.5°)	Phi(330°)Phi(337.5°)	Phi(345°)Phi(352.5°)
Theta	-0.99/-038	0.320/95	1.38/171	2.032/3	2.452/51	2.52/35	21/36	0.53/-012	-0.6/-117	-1.81/-233	-2.37/-205	-1.61/-114	-0.7/-023	0.270/74	1.181/48	1.63/17	1.82	2.142/06	1.67/107	0.28/-062	-1.61/-125	-2.95/-28	-2.47/-215	-1.88/-151
Theta(7.5°)	-1.56/-104	-0.58/-007	0.55/101	1.21/131	1.41/152	1.53/126	0.74/-011	-1.08/-15	-1.78/-219	-2.57/-271	-2.6/-235	-1.94/-136	-0.77/-014	0.380/8	1.18/147	1.66/17	1.71/177	1.82/164	1.180/6	-0.02/-069	-1.01/-131	-1.31/-14	-1.65/-192	-2.02/-195
Theta(15°)	1.48/161	1.68/166	1.61/132	0.750/06	-0.43/-06	-1.71/-091	-1.17/-159	-2.26/-238	-1.91/-139	-1.2/-107	-0.94/-112	-1.62/-168	-1.17/-041	0.070/24	0.4/05	0.580/6	0.560/62	0.690/32	-0.38/-096	-1.11/-099	-0.640/06	0.660/88	0.830/78	0.93/125
Theta(22.5°)	4.22/443	4.34/02	3.44/263	1.610/64	0.140/37	0.83/11	0.990/45	-0.61/-174	-1.4/-018	0.82/137	1.66/173	1.86/194	22/01	1.94/169	1.210/59	0.07/-016	-0.120/23	0.540/32	-0.23/-076	-0.92/-078	-0.160/7	1.562/17	2.683/17	3.684/05
Theta(30°)	5.26/27	5.15/477	4.06/314	2.28/165	1.36/172	2.432/98	3.052/65	1.830/92	-0.01/4	1.522/75	3.413/76	4.064/25	4.173/82	3.43/07	2.682/07	1.320/67	0.420/7	1.01/1	0.830/65	0.510/43	0.540/92	1.482/14	2.973/79	4.464/93
Theta(37.5°)	5.435/39	5.094/52	3.62/7	2.312/25	2.192/3	2.793/15	3.152/81	2.45/23	1.99/13	1.512/86	3.844/33	4.654/87	4.173/82	3.27/42	3.23/91	2.52/13	1.962/06	2.232/26	2.182/12	2.071/92	1.671/42	1.32/16	2.63/78	4.735/25
Theta(45°)	6.71/644	5.864/9	3.49/228	2.132/8	3.213/21	3.233/5	3.633/46	3.283/52	3.582/73	1.612/46	3.844/62	5.035/25	5.074/54	3.923/5	3.193/08	2.993/03	3.313/5	3.533/55	3.493/45	3.423/29	2.841/98	1.31/33	2.363/83	5.186/11
Theta(52.5°)	7.727/65	6.915/72	4.012/61	2.41/34	4.17/44	4.294/47	4.84/8	4.594/79	4.923/98	2.292/89	4.65/73	6.386/51	5.965/09	4.433/9	3.293/18	3.444/66	3.864/1	4.344/58	4.514/35	4.34/11	3.472/22	1.32/177	3.074/53	5.96/88
Theta(60°)	8.04/8	7.175/89	4.182/98	2.93/73	6.614/96	4.824/84	5.295/55	5.515/67	5.714/73	2.933/29	5.036/27	7.067/37	6.15/72	4.944/43	3.623/29	3.664/11	4.214/39	4.885/36	2.594/88	4.674/48	3.832/44	1.422/27	3.734/99	6.047/18
Theta(67.5°)	7.67/6	6.825/54	3.89/28																					



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ(22.5°)	-3.25/-3.04	-3.49/-4.13	-3.79/-3.01	-3.34/-3.96	-5.42/-6.86	-6.3/-5.26	-5.25/-6.56	-8.01/-8.92	-7.44/-5.45	-5.24/-5.82	-5.9/-4.85	-3.28/-2.99	-4.81/-7.23	-7.87/-6.19	-3.36/-2.96	-3.79/-5.12	-5/-3.16	-4.08/-5.35	-7.72/-7.32	-6.11/-7.28	-7.79/-6.72	-4.67/-5.24	-5.57/-4.85	-3.71/-2.8
Θ(30°)	-3/-4.52	-4.49/-5.21	-6.54/-5.02	-5.41/-5.02	-4.41/-5.29	-6.47/-6.04	-5.99/-7.82	-9.28/-6.96	-6.92/-7.6	-7.9/-6.51	-6.88/-4.56	-2.53/-3.54	-5.62/-3.79	-2.95/-4.88	-5.68/-5.65	-4.57/-4.75	-5.97/-3.43	-3.07/-6.1	-6.92/-4.54	-5.31/-4.79	-7.24/-9.37	-6.21/-4.45	-5.95/-3.71	-2.01/-1.84
Θ(37.5°)	-3.16/-4.24	-5.58/-5.07	-5.97/-6.68	-6.69/-6.6	-5.88/-5.29	-7.43/-3.8	-5.84/-5.54	-6.51/-5.98	-6.47/-7.31	-7.66/-6.23	-7.72/-5.09	-3.2/-3.43	-4.44/-4.47	-4.35/-5.64	-3.44/-4.23	-5.15/-3.05	-5.46/-6.32	-1.52/-3	-3.47/-3.56	-6.63/-5.28	-6.84/-6.5	-5.08/-4.19	-5.91/-5.74	-3.62/-2.75
Θ(45°)	-3.39/-3.73	-7/-6.62	-7.44/-7.45	-7.09/-7.67	-8.17/-4.59	-5.47/-5.48	-5.7/-6.45	-6.78/-9.44	-8.46/-7.36	-6.35/-6.06	-6.42/-6.31	-6.24/-3.62	-3.33/-6.49	-6.89/-5.52	-3.49/-2.94	-9.46/-7.97	-3.96/-5.54	-5.29/-4.66	-3.96/-6.68	-6.63/-8.44	-8.91/-4.84	-4.43/-4.87	-4.88/-4.3	-3.34/-4.6
Θ(52.5°)	-3.57/-5.61	-6.66/-6.54	-10.04/-11.27	-11.09/-9.24	-10.74/-8.23	-6.36/-10.84	-6.48/-7.14	-7.53/-7.71	-7.94/-5.87	-5.6/-4.55	-5.48/-8.2	-7.15/-5.01	-6.12/-5.31	-6.27/-5.32	-6.8/-8.29	-8.64/-9.77	-7.08/-4.01	-5.74/-7.3	-4.14/-6.44	-4.37/-8.19	-6.8/-6.63	-7.03/-5.73	-4.55/-6.92	-4.25/-3.62
Θ(60°)	-4.53/-6.01	-8.18/-7.29	-9.42/-7.69	-9.64/-10.13	-8.69/-10.42	-7.57/-7.14	-8.96/-6.62	-6.78/-6.79	-5.51/-6.97	-9.56/-4.28	-6.37/-8.23	-7.93/-3.57	-5.73/-6.36	-7.83/-6.4	-4.17/-10.48	-10.45/-8.38	-5.94/-7.89	-7.46/-6	-7.33/-7.06	-5.55/-6.36	-6.75/-9.09	-3.64/-4.58	-4.36/-5.65	-3.68/-3.07
Θ(67.5°)	-4.08/-7	-9.23/-10.18	-10.49/-8.12	-7.49/-9.38	-8.77/-8.62	-9.28/-5.85	-9.77/-5.89	-6.62/-6.77	-4.09/-6.94	-4.26/-6.49	-7.7/-5.34	-5.5/-3.92	-1.99/-6.08	-7.73/-7	-4.45/-8.08	-10.37/-9.57	-3.71/-7.26	-10.98/-6.15	-7.1/-10.38	-5.71/-4.45	-5.91/-8.43	-2.28/-6.49	-7.13/-4.51	-2.79/-4.96
Θ(75°)	-3.3/-4.47	-6.68/-8.66	-9.43/-9.97	-8.53/-6.89	-10.65/-10.01	-10.99/-7	-9.42/-8.94	-9.58/-8.19	-4.28/-5.06	-4.88/-6.9	-6.18/-4.89	-4.43/-3.1	-0.84/-4.14	-5.74/-8.37	-6.39/-9.55	-11.11/-7.44	-5.66/-8.15	-8.84/-6.76	-7.42/-9.27	-6.35/-3.73	-4.59/-6.66	-2.86/-8.93	-7.5/-4.7	-2.55/-5.83
Θ(82.5°)	-3.61/-3.78	-5.26/-7.76	-7.53/-9.15	-8.75/-6.32	-11.33/-9.21	-11.6/-7.5	-10.14/-8.92	-9.48/-7.55	-5.12/-4.09	-5.66/-7.19	-1.06/-2.8	-4.44/-8.62	-8.22/-8.37	-7.95/-9.39	-6.17/-7.08	-6.36/-3.43	-7.37/-5.92	-4.64/-8.39	-6.12/-5.67	-2.94/-4.12				
Θ(90°)	-4.91/-3.99	-4.94/-6.99	-7.21/-9.91	-8.04/-5.18	-9.72/-11.37	-12.25/-8.39	-12.22/-9.83	-8.19/-7.12	-5.68/-3.66	-7.23/-7.71	-4.45/-3.84	-3.5/-3.3	-1.82/-1.83	-4.1/-7.55	-7.72/-10.25	-8.99/-4.39	-8.73/-9.45	-8.04/-11.14	-7.39/-8.9	-6.63/-5.07	-7.68/-5.83	-6.72/-7.18	-5.82/-6.7	-3.7/3
Θ(97.5°)	-4.42/-4.94	-5.51/-6.81	-6.18/-9.07	-8.08/-9.58	-9.3/-11.12	-12.55/-8.11	-11.68/-11.9	-9.71/-5.83	-6.82/-4.12	-8.56/-7.16	-4.9/-4.78	-4.1/-2.65	-2.32/-2.41	-3.57/-7.75	-7.59/-12.9	-9.21/-5.07	-7.63/-7.75	-10.78/-9.96	-8.49/-6.9	-8.28/-6.61	-8.22/-6.89	-6.07/-7.83	-4.84/-4.1	
Θ(105°)	-4.69/-6.16	-6.06/-8.6	-7.55/-8.53	-8.86/-6.38	-6.97/-10.27	-11.19/-8.75	-11.61/-13.34	-8.97/-8.35	-6.94/-4.45	-8.96/-4.88	-5.85/-5.64	-5.37/-4.18	-3.84/-3.21	-4.74/-8.52	-7.64/-11.36	-9.75/-7.67	-6.68/-9.86	-8.59/-9.86	-8.75/-9.78	-7/-7.54	-6.2/-9.26	-9.09/-7.18	-8.34/-9.13	-5.53/-4.96
Θ(112.5°)	-7.79/-9.43	-7.91/-10.83	-9.38/-7.76	-8.52/-8.73	-6.47/-10.6	-9.39/-10.39	-12.04/-11.07	-8.8/-7.35	-7.1/-6.34	-7.44/-9.08	-9.63/-8.55	-6.63/-6.76	-4.84/-5.84	-6.01/-9.58	-7.7/-9.71	-8.3/-5.93	-5.8/-10.41	-9.53/-7.54	-8.68/-10.26	-6.86/-8.32	-6.54/-8.53	-8.03/-8.46	-9.7/-9.53	-6.58/-7.7
Θ(120°)	-9.52/-11.31	-10.07/-11.97	-9.25/-8.05	-8.3/-8.58	-6.43/-11.05	-9.12/-11.22	-11.44/-10.98	-7.53/-8.88	-8.44/-10.26	-6.02/-7.3	-9.32/-11.93	-8.27/-7.62	-8.58/-10.95	-10.8/-3.2	-8.13/-9.04	-6.34/-9.14	-8.48/-9.02	-7/-10.47	-7.17/-12.67	-6.76/-9.93	-9.9/-55	-10.76/-10.66	-9.66/-8.68	
Θ(127.5°)	-9.37/-10.49	-10.81/-11.87	-8.63/-6.51	-9.18/-7.61	-10.41/-11.25	-10.34/-10.41	-11.19/-10.51	-9.46/-11.59	-9.66/-9.24	-7.77/-7.58	-9.67/-11.74	-11.87/-9.09	-10.23/-11.08	-9.06/-9.41	-7.57/-11.24	-8.52/-10.51	-11.11/-10.89	-9.81/-9.67	-10.67/-7.99	-12.14/-10.29	-9.89/-6.9	-9.13/-10.34		
Θ(135°)	-6.02/-10.41	-10.83/-8.46	-7.67/-7.72	-7.22/-8.84	-12.21/-10.13	-11.64/-11.23	-10.92/-11.48	-9.48/-11.16	-9.49/-6.85	-10.73/-10.97	-9.54/-9.53	-11.7/-11.43	-6.2/-10.22	-8.91/-7.61	-8.83/-7.54	-8.45/-9.95	-10.55/-8.05	-8.68/-6.55	-6.12/-8.26	-7.83/-8.9	-10.76/-10.44	-7.96/-9.1	-9.64/-11.45	-9.32/-9.75
Θ(142.5°)	-8.27/-10.11	-10.96/-9.66	-10.08/-7.6	-8.73/-9.85	-6.56/-8.39	-10.85/-8.35	-10.39/-9.17	-10.89/-9.31	-8.85/-9.2	-10.42/-12.05	-11/-9	-10.07/-9.82	-8.87/-9.19	-9.87/-1.96	-12.35/-7.74	-8.61/-10.78	-7.25/-7.85	-9.39/-5.67	-8.37/-6.63	-10.07/-9.49	-9.64/-8.9	-11.25/-9.14	-11.89/-10.82	-9.74/-10.46
Θ(150°)	-10.28/-10.25	-9.5/-12.18	-10.97/-9.6	-9.69/-8.49	-7.35/-8.83	-8.15/-7.78	-8.96/-9.78	-11.41/-10.36	-9.71/-9.25	-9.77/-9.76	-10.61/-11.55	-12.11/-8.26	-8.97/-11.15	-8.96/-9.8	-11.02/-9.23	-10.89/-11.89	-11.71/-11.17	-10.89/-9.01	-11.02/-11.64	-10.95/-12.08	-12.42/-12.1	-11.25/-9.94	-11.25/-9.94	-7.64/-10
Θ(157.5°)	-11.43/-12	-11.71/-10.8	-10.4/-9.82	-8.48/-9.47	-10.98/-10.01	-8.84/-7.89	-8.87/-12.68	-12.19/-9.79	-9.8/-11.28	-11.12/-10.61	-11.1/-12.77	-12.24/-10.9	-11.07/-11.48	-9.04/-9.33	-11.41/-11.53	-12.02/-9.97	-11/-11.81	-11.85/-10.41	-11.09/-10.63	-10.07/-10.24	-11.1/-11.08	-10.42/-9.8	-9.78/-10.54	-9.64/-11.2
Θ(165°)	-9.06/-12.25	-12.22/-9.85	-8.61/-7.89	-8.31/-7.58	-6.57/-6.68	-6.8/-8.05	-10.21/-10.88	-10.83/-10.01	-9.55/-9.46	-10.73/-11.66	-11.81/-12.05	-11.86/-11.59	-11.54/-10.83	-10.68/-11.89	-12.24/-12.12	-12.03/-12.38	-11.18/-9.43	-9.87/-8.07	-8.3/-7.76	-8.66/-9.97	-10.46/-7.97	-9.51/-10.71	-10.84/-10.08	-9.28/-9.51
Θ(172.5°)	-10.65/-11.47	-11.5/-10.92	-9.35/-7.78	-7.75/-7.79	-7.35/-7.33	-7.44/-8.02	-8.82/-9.88	-11.62/-11.65	-11.31/-12.45	-11.94/-11.9	-11.64/-12.2	-12.5/-11.06	-12.13/-12.45	-11.28/-11.98	-12.16/-12.55	-11.69/-12.08	-8.35/-8.85	-9.91/-10.63	-12.24/-12.56	-12.85/-11.95	-11.27/-11.3	-10.8/-11.39		
Θ(180°)	-11.73/-12.15	-11.41/-10.88	-10.13/-10	-9.59/-7.9	-8.53/-7.76	-7.58/-7.82	-7.26/-8.24	-8.83/-9.8	-10.35/-11.92	-11.91/-11.93	-11.46/-12.48	-12.29/-12.44	-12.51/-11.94	-11.24/-11.85	-11.62/-10.85	-10.25/-10.26	-10.74/-9.28	-9.29/-8.5	-8.73/-9.22	-9.1/-9.43	-9.94/-10.46	-10.49/-12.09	-12.11/-11.67	-11.69/-11.79
Freq(Hz)	5.36Pol.	Theta+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC(0dB)	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°)	-4.83/-5.66	-5.65/-6.09	-6.14/-6.2	-6.76/-6.11	-5.13/-4.87	-4.66/-4.06	-3.86/-4.2	-3.89/-4.27	-4.38/-4.7	-5.07/-5.42	-4.99/-5.09	-5.46/-5.83	-5.81/-6.29	-6.48/-6.75	-6.49/-5.45	-4.78/-5.08	-3.85/-2.91	-3.09/-2.38	-2.26/-2.16	-2.56/-2.7	-2.66/-3.01	-2.78/-2.93	-3.19/-3.18	-3.46/-3.28
Θ(7.5°)	-6.79/-7.2	-6.75/-5.7	-5.06/-5.44	-4.76/-4.78	-4.74/-3.47	-4.03/-4.3	-4.43/-6.1	-5.27/-5.15	-5.75/-5.48	-5.25/-5.25	-5.34/-6.53	-6.05/-6.7	-6.71/-6.58	-6.99/-7.54	-9.21/-9.11	-9.01/-8.37	-7.99/-7.44	-7.16/-7.26	-6.77/-6.95	-6.88/-5.53	-5.65/-5.5	-5.81/-6.76		
Θ(15°)	-6.48/-7.07	-7.89/-6.71	-5.71/-4.78	-3.58/-2.65	-2.21/-1.71	-1.71/-1.85	-0.91/-0.6	-7.19/-1.06	-1.76/-2.62	-3.59/-4.68	-5.41/-5.44	-5.5/-6.65	-5.91/-4.93	-4.23/-3.46	-1.86/-1.09	-0.22/-0.48	-0.05/-0.11	-0.21/-0.17	-0.61/-1.4	-1.83/-2.71	-4.44/-5.44	-5.09/-4.77	-4.53/-4.9	
Θ(22.5°)	-5.49/-5.05	-5.13/-5.83	-4.64/-2.75	-1.31/-0.78	-0.82/-0.71	-0.74/-1.61	-2.93/-3.52	-3.11/-1.13	-0.19/-0.62	-1.39/-2.12	-2.86/-2.89	-2.29/-2.48	-2.71/-3.1	-3.33/-1.91	-0.59/-0.09	-0.56/-0.41	0.34/-0.08	-0.9/-1.26	-0.89/-0.52	-0.54/-1.51	-1.93/-0.54	-0.52/-2.04	-3.65/-4.11	-4.08/-4.39
Θ(30°)	-0.67/-1.14	-2.31/-2.95	-2.29/-4.09	0.14/-0.74	-0.64/-0.66	2.271/-6	1.052/-11	2.161/-1	-1.2/-24	-1.080/-21	-1.14/-1.82	-2.18/-3.95	-4.21/-3.67	-2.31/-0.88	0.571/-72	1.391/-46	2.993/-65	3.933/-04	2.593/-23	3.32/-61	1.681/-88	2.090/-41	-2.02/-3.3	-2.13/-1.26
Θ(37.5°)	0.981/-26	0.220/-45	1.931/-36	0.420/-98	1.662/-	2.832/-54	0.230/-57	2.331/-99	1.311/-06	1.131/-55	1.12/-9.38	0.511/-02	1.023/-	1.411/-68	1.942/-52	2.943/-74	3.431/-45	1.473/-26	3.32/-72	2.512/-37	1.771/-89	2.110/-42	0.581/-07	
Θ(45°)	0.91/-0.48	-0.01/-1.3	3.684/-15	2.623/-44	4.031/-85	2.938/-	2.632/-95	2.681/-94	3.023/-32	1.562/-01	3.531/-65	1.131/-14	0.940/-72	1.372/-35	3.842/-5	34/-45	4.253/-93	3.893/-69	3.744/-06	4.184/-18	4.753/-92	2.173/-03	2.360/-81	1.10/-52
Θ(52.5°)	3.381/-9	2.152/-64	2.444/-54	3.554/-	4.343/-23	4.555/-44	3.314/-52	3.963/-85	4.614/-9	3.563/-15	3.563/-	2.713/-38	3.642/-31	1.50/-54	4.03/-2	4.16/-67	5.234/-92	5.854/-5	4.465/-29	5.414/-36	4.825/-55	4.624/-27	2.4/-34	3.533/-28
Θ(60°)	2.072/-17	2.613/-04	2.925/-06	4.53/-76	3.891/-84	2.733/-22	-0.42/-1.7	2.693/-06	4.485/-21	5.443/-98	4.174/-78	4.363/-5	3.592/-88	3.342/-83	4.225/-78	4.744/-51	4.982/-87	4.462/-59	1.193/-76	4.243/-55	4.15/-42	5.714/-73	3.274/-9	4.643/-34
Θ(67.5°)	0.020/-42	2.42/-72	3.643/-83	5.143/-73	3.441/-71	0.341/-45	-0.240/-36	1.572/-32	4.023/-57	4.53/-82	4.234/-47	3.51/-65	0.231/-31	3.393/-36	4.675/-68	4.132/-12	4.432/-8	3.31/-89	1.13/-31	2.623/-17	3.744/-09	5.945/-01	3.563/-73	4.142/-28
Θ(75°)	1.08/-0.7	2.731/-97	3.971/-15	4.922/-1	2.531/-8	1.332/-52	2.5/-18	2.451/-57	3.512/-18	4.443/-43	3.813/-43	3.31/-2	0.25/-0.12	1.912/-2	4.295/-63	52/-53	4.262/-81	4.044/-2	4.884/-19	3.12/-88	4.213/-17	5.955/-07	3.772/-48	2.971/-71
Θ(82.5°)	0.93/-0.46	1.820/-87	3.413/-07	4.30/-71	1.71/-12	1.622/-89	2.85/-207	2.191/-29	2.741/-46	4.023/-1	2.982/-65	2.911/-22	1.36/-0.22	0.451/-61	4.344/-98	4.554/-06	4.713/-01	5.255/-26	6.154/-9	3.282/-79	3.632/-99			



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ (67.5°)	-2.15/-1.99	-6.17/-7.21	-7.34/-5.67	-5.95/-6.82	-5.77/-6.4	-8.2/-6.47	-5.47/-8.8	-8.35/-6.66	-4.77/-4.13	-4.4/-3.06	-5.61/-5.59	-4.19/-4.5	-3.4/-3.61	-6.4/-5.19	-6.28/-6.65	-6.65/-10.03	-6.62/-9.39	-8.37/-8.86	-8.72/-10.6	-6.82/-3.94	-3.46/-3.7	-5.17/-4.37	-8.14/-6.04	-3.82/-2.58
Θ (75°)	0.44/-0.11	-3.31/-5.67	-6.52/-5.57	-7.7/-5.45	-6.68/-7.8	-8.95/-7.6	-7.69/-7.02	-10.21/-7.61	-3.57/-4.53	-4.34/-4.71	-8.26/-7.99	-2.93/-1.98	-2.05/-0.79	-4.56/-4.79	-6.84/-6.05	-8.76/-6.8	-7.36/-8.49	-7.74/-5.88	-9.33/-8.52	-7.74/-4.57	-1.36/-5.61	-3.6/-6.56	-6.81/-5.89	-4.46/-0.63
Θ (82.5°)	1.43/-0.4	-2.18/-5.17	-5.69/-6.52	-8.18/-5.27	-7.7/-9.21	-7.43/-8.93	-9.07/-7.73	-9.8/-8.32	-2.91/-4.86	-4.63/-4.8	-6.22/-7.37	-1.99/-0.33	0.02/-0.6	-2.86/-6.05	-7.64/-5.8	-7.56/-6.87	-7.8/-8.15	-6.43/-3.02	-6.86/-7.04	-6.04/-5.42	-2.05/-5.81	-4.53/-9.49	-3.29/-4.43	-3.55/-0.31
Θ (90°)	1.1/-1.1	-1.8/-5.04	-6.04/-6.21	-7.48/-4.64	-7.69/-8.91	-7.44/-7.69	-7.63/-8.01	-9.58/-10.32	-4.89/-4.89	-4.92/-4.79	-5.12/-8.45	-1.71/-0.14	-0.23/-0.44	-1.56/-7.64	-7.27/-5.79	-5.94/-6.93	-7.33/-7.71	-8.24/-4.78	-8.23/-8.07	-6.72/-5.93	-3.31/-5.84	-5.68/-9.96	-3.5/-4.85	-2.9/-0.84
Θ (97.5°)	-0.36/-3.14	-2.82/-5.62	-6.9/-7.6	-7.87/-5.2	-7.86/-8.11	-8.08/-8.43	-9.79/-7.06	-9.12/-10.56	-5.66/-4.89	-7.54/-4.54	-5.35/-7.09	-1.26/-1.12	0.01/-2.05	-2.55/-7.11	-6.79/-7.7	-5.03/-6.24	-7.09/-8.49	-7.07/-5.13	-9.96/-9.76	-6.59/-7.31	-5.45/-4.88	-6.47/-8.07	-4.44/-5.78	-3.78/-1.81
Θ (105°)	-3.03/-4.41	-5.09/-7.85	-6.52/-8.01	-8.2/-4.93	-6.4/-8.63	-8.94/-9.71	-9.9/-9.65	-10.07/-11.48	-6.84/-6.09	-9.19/-6.63	-7.64/-7.92	-2.83/-3.13	-1.7/-4.29	-4.34/-8.6	-7.22/-6.68	-7.98/-6.47	-7.38/-9.4	-10.15/-7.91	-12.08/-10.74	-9.82/-6.87	-6.92/-6.28	-8.47/-7.98	-7.17/-6.4	-3.51/-3.82
Θ (112.5°)	-5.69/-9.53	-8.03/-8.82	-7.56/-9.32	-8.1/-6.46	-7.63/-7.24	-9.36/-10.87	-8.49/-11.48	-11.11/-8.59	-7.69/-7.38	-10.48/-6.77	-8.98/-11.99	-5.61/-5.24	-6.06/-7.21	-8.63/-10.06	-9.77/-7.49	-6.23/-6.07	-6.68/-8.89	-11.83/-10.7	-11.62/-9.98	-9.14/-6.99	-9.34/-5.4	-7.69/-8	-10/-7.08	-5.96/-6.88
Θ (120°)	-7.98/-9.12	-9.48/-8.86	-7.72/-8.88	-7.43/-8.21	-8.82/-7.5	-8.66/-10.7	-7.37/-11.18	-10.54/-7.95	-7.25/-8.74	-8.95/-5.96	-8.46/-10.85	-8.73/-9.87	-8.81/-9.6	-8.14/-10.46	-7.82/-6.46	-8.57/-6.37	-4.75/-8.92	-11.91/-10.12	-11.91/-6.89	-9.22/-10.36	-6.57/-7.96	-9.85/-6.22	-9.34/-11.1	-7.75/-8.07
Θ (127.5°)	-9.38/-8.88	-8.22/-9.11	-8.08/-8.94	-4.74/-6.16	-8.28/-10.55	-10.44/-8.93	-8.72/-8.51	-11.02/-9.71	-5.48/-7.14	-9.19/-7.71	-6.71/-10.38	-8.47/-8.59	-8.02/-6.57	-7.19/-10.48	-8.85/-8.77	-7.65/-6.97	-7.77/-9.73	-8.62/-5.92	-9.85/-8.45	-8.46/-9.73	-8.39/-6.88	-9.04/-10.26	-8.09/-11.86	-10.93/-8.3
Θ (135°)	-7.35/-11.2	-9.02/-10.07	-10.63/-7.18	-7.07/-6.36	-7.51/-8.99	-8.47/-10.44	-9.93/-9.56	-6.59/-10.33	-7.42/-5.43	-6.42/-11.1	-8.63/-5.49	-8.28/-11.88	-10.91/-7	-11.32/-10.51	-9.13/-6.15	-6.45/-9.73	-10.16/-10.29	-5.82/-7.74	-4.14/-8.7	-5.93/-11.14	-8.51/-7.84	-8.56/-6.38	-8.64/-10.86	-9.74/-9.04
Θ (142.5°)	-6.02/-8.61	-7.33/-7.6	-6.08/-5.32	-7.62/-7.64	-9.55/-8.99	-6.62/-8.82	-8.85/-10.87	-8.25/-10.83	-9.99/-8.52	-8.7/-6.79	-7.23/-9.56	-7.95/-9.02	-9.93/-9.02	-8.72/-10.16	-8.8/-7.33	-9.23/-7.01	-7.56/-10.27	-9.83/-8.52	-4.85/-9.01	-7.81/-11.38	-11.14/-7.48	-8.94/-6.68	-11.25/-8.62	-10.08/-8.09
Θ (150°)	-6.11/-8.16	-7.85/-8.04	-8.51/-8.8	-11.2/-12.2	-10.77/-10.35	-11.24/-12.43	-11.39/-11.3	-11.14/-10.91	-11.33/-9.23	-10.18/-11.05	-9.02/-8.25	-8.46/-7.4	-5.56/-9.48	-9.69/-7.42	-12.59/-7.83	-7.54/-8.64	-10.51/-12.2	-11.72/-11.58	-10.62/-12.4	-10.87/-9.31	-9.96/-11.16	-9.96/-11.66	-11.14/-9.46	-8.91/-7.89
Θ (157.5°)	-9.75/-10.91	-12.19/-10.44	-10.92/-11.46	-10.69/-9.33	-8.29/-6.85	-9.06/-8.78	-9.81/-10.07	-7.88/-6.58	-8.16/-9.48	-10.53/-10.61	-8.98/-8.81	-10.46/-12.19	-12.74/-9.79	-9.38/-10.62	-12.05/-10.2	-10.35/-9.92	-11/-9.99	-9.56/-11.03	-11.78/-11.13	-10.18/-9.06	-10.7/-11.1	-9.68/-10.08	-10.07/-11.45	-10.56/-9.29
Θ (165°)	-9.38/-10.07	-10.23/-11.17	-11.11/-10.87	-11.56/-10.82	-8.33/-7.75	-8.4/-9.42	-11.7/-10.96	-9.41/-9.36	-9.68/-9.42	-9.03/-9.39	-9.79/-8.5	-8.91/-9.83	-10.8/-10.35	-10.71/-11.63	-11.81/-10.43	-8.53/-8.99	-8.75/-9.78	-11.92/-12.16	-11.6/-11.39	-11.13/-11.47	-12.18/-11.8	-11.1/-9.56		
Θ (172.5°)	-9.02/-10.03	-11.19/-9.54	-10.04/-8.63	-9.16/-10.33	-10.81/-11.68	-11.3/-10.38	-9.67/-9.07	-8.2/-8.39	-9.28/-10.11	-10.41/-10.32	-10.06/-10.21	-9.53/-10.48	-11.53/-12.29	-12.12/-11.47	-11.01/-9.86	-9.01/-8.77	-8.65/-8.36	-8.28/-7.83	-7.95/-7.72	-7.83/-7.55	-7.54/-7.97	-8.82/-9.3	-9.29/-9.2	
Θ (180°)	-9.63/-10.07	-9/-9.76	-10.28/-10.21	-10.59/-10.49	-11.25/-9.9	-9.2/-8.86	-8.93/-9.02	-8.5/-9.79	-9.16/-8.92	-8.14/-8.96	-9.86/-10.48	-10.83/-10.02	-10.42/-9.63	-9.18/-9.57	-9.04/-9.49	-10.97/-11.76	-12.13/-11.18	-9.86/-9.69	-8.83/-9.37	-8.74/-9.29	-9.3/-9.88	-9.3/-10.48	-10.18/-9.79	-10.31/-9.9
Freq(Hz)	5.785GPol.	Theta-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DC(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-8.32/-7.93	-8.17/-8.5	-7.83/-8.38	-7.77/-6.86	-6.38/-5.68	-5.82/-5.97	-5.75/-5.72	-4.91/-4.71	-5.17/-4.9	-4.72/-4.6	-4.96/-5.08	-5.09/-5.61	-5.33/-5.39	-5.36/-5.72	-4.94/-4.71	-5.23/-4.86	-4.88/-4.21	-4.38/-4.69	-4.87/-4.54	-4.65/-5.03	-5.25/-5.24	-5.55/-5.84	-6.54/-6.64	-7.61/-8.96
Θ (7.5°)	-5.58/-4.82	-4.82/-4.61	-4.05/-3.7	-4.3/-4.7	-5.02/-5.03	-4.82/-4.35	-4.25/-4.1	-4.02/-3.74	-3.61/-3.95	-4.46/-4.65	-5.2/-5.89	-6.56/-7.37	-7.64/-8.56	-8.96/-8.55	-9.29/-8.29	-7.62/-6.74	-5.95/-5.4	-4.81/-4.84	-4.39/-4.72	-3.96/-3.8	-3.29/-2.7	-3.11/-3.06	-3.43/-3.98	-4.73/-5.29
Θ (15°)	-8.32/-8.94	-8.27/-7.23	-6.57/-6.11	-6.28/-7.25	-7/-6.65	-5.96/-4.73	-3.45/-2.59	-3.42/-4.02	-5.23/-4.87	-4.93/-4.23	-3.8/-3.96	-4.38/-5.13	-5.44/-4.78	-3.58/-2.99	-3.03/-3.94	-4.57/-4.82	-3.71/-3.71	-2.66/-1.8	-2.05/-2.64	-3.7/-4.55	-4.71/-4.52	-4.06/-4.06	-4.73/-7.25	-8.93/-8.32
Θ (22.5°)	-1.49/-1.16	-1.62/-2.42	-3.85/-3.78	-3.37/-1.91	-0.160.46	-0.7/-0.4	0.61/0.7	0.270.37	0.11/-1.61	-2.42/-2.79	-4.06/-5.16	-5.13/-5.35	-4.25/-3.96	-5.03/-5.08	-3.55/-2.39	-0.770.76	0.730.38	0.881.74	1.390.3	0.6711.09	0.12/-2.66	-5.4/-4.92	-2.83/-0.97	-0.54/-0.8
Θ (30°)	-1.18/-1.62	-1.77/-0.58	0.52/1.6	1.47/1.22	1.42/0.46	-1.970.52	1.99/1.69	0.3/-0.09	2.18/1.54	-0.49/-1.5	-1.78/-1.5	-1.24/-1.97	-1.37/-0.34	0.21/0.99	1.42/1.17	1.2/2.46	1.9/2.26	3.21/3.5	2.84/2.66	3.01/8.46	3.49/2.51	1.26/0.84	1.07/1.49	0.49/-0.76
Θ (37.5°)	3.59/3.53	2.45/2.29	1.92/2.78	3.6/2.76	3.06/2.98	3.14/2.6	3.08/2.95	3.06/4.22	4.36/2.84	3.26/2.46	1.36/1.85	0.88/1.23	1.21/0.89	1.1/2.08	2.56/4.1	4.54/0.3	4.22/4.25	4.49/4.09	4.77/5.15	5.12/4.81	3.93/3.47	4.09/3.03	2.09/3.82	4.71/4.56
Θ (45°)	4.36/4.53	3.51/4.65	5.43/4.78	5.47/4.36	4.4/4.36	2.84/0.57	2.26/1.65	3.23/5.16	3.98/3.42	4.46/4.46	4.37/4.29	4.43/4.66	3.44/4.91	4.79/4.4	4.15/2.3	4.41/4.49	4.98/5.08	3.86/4.22	4.18/4.39	5.41/5.76	5.43/4.86	6.45/6.68	6.66/6.02	5.77/5.43
Θ (52.5°)	5.61/6.23	5.26/4.73	5.38/5.19	6.11/5.96	5.61/5.98	4.45/3.75	4.05/3.16	4.42/4.95	5.73/5.92	6.31/6.03	6.97/6.09	6.26/5.64	4.34/3.66	4.96/5.92	6.24/6.67	6.79/6.5	6.8/6.13	5.03/5.52	5.53/6.51	5.97/6.28	6.4/6.08	6.97/6.74	7.12/6.15	5.79/5.47
Θ (60°)	5.06/7.35	6.31/5.55	5.65/5.62	6.58/6.96	5.45/4.3	3.83/2.63	1.84/2.11	4.48/4.05	5.02/6.13	6.71/6.44	6.28/5.81	6.96/7.09	5.97/5.58	4.86/5.06	4.81/6.51	7.3/6.84	5.81/5.12	4.63/4.44	4.68/5.97	4.95/4.89	5.03/6.24	7.17/6.02	6.02/5.03	5.43/6.27
Θ (67.5°)	3.93/5.43	4.99/6.24	5.94/5.89	5.03/6.7	4.51/2.95	3.09/-2.21	-0.22/-0.48	3.35/3.27	5.1/6.15	5.69/6.29	6.86/5.53	5.85/6.33	5.03/5.87	5.26/5.12	4.96/6.79	6.21/5.66	4.43/2.91	2.68/1.61	2.35/2.92	4.09/4.09	4.19/5.6	6.45/6.1	5.14/5.62	4.44/5.31
Θ (75°)	2.37/3.95	4.24/6	5.6/6.1	4.17/5.46	3.81/2.38	3.27/-1.13	1.36/0.07	2.96/0.45	5/4.86	3.84/5.65	6.84/5.17	4.19/4.31	2.4/4.6	5.24/5.52	5.16/7.04	5.71/4.48	4.32/3.84	2.42/2.86	3.57/3.16	4.4/3.9	3.45/4.97	5.31/6.29	4.24/5.42	4.09/4.14
Θ (82.5°)	1.73/2.67	3.32/4.93	4.46/5.26	3.42/4.52	3.07/1.43	2.84/0.83	1.93/1.34	2.43/2.71	4.11/3.75	3.125/0.99	5.68/4.04	3.51/3.37	2.2/3.82	5.13/4.76	4.8/6.45	4.25/4.23	4.27/4.76	3.36/4.51	5.04/4.1	4.36/3.66	3.41/3.93	4.35/4.6	3.69/4.3	2.78/2.55
Θ (90°)	-0.180.77	1.67/2.7	2.76/3.59	1.8/3.25	1.83/-0.65	1.79/1.2	0.95/1.83	1.14/1.47	3.14/2.06	1.71/4.34	4.25/2.87	2.48/2.26	1.95/1.71	4.35/3.41	3.57/5.27	4.28/3.88	2.83/4.14	2.76/4.25	4.62/4.44	3.07/2.64	2.66/2.65	3.14/3.98	2.39/2.37	1.17/0.6
Θ (97.5°)	-2.83/-1.77	-0.36/-0.05	1.19/2.05	0.71/1.72	0.85/-2.46	0.37/1.15	-0.44/1.38	-0.35/-0.14	1.41/0.39	0.87/2.92	2.47/1.22	1.11/0.6	0.39/0.16	2.58/1.07	1.1/3.26	2.4/2.42	0.85/1.85	0.54/3.2	1.86/2.34	0.47/0	1.24/-0.01	1.71/2.11	0.08/-0.54	-1.15/-0.43
Θ (105°)	-4.06/-4.54	-3.35/-3	-1.01/-0.38	-0.320.17	-1.04/-4.39	-0.770.07	-1.75/-0.45	-1.65/-1.19	-0.77/-1.5	-1/1.57	0.43/-0.6	-1.2/-1.38	-1.98/-1.24	0.94/0.23	-1.07/1.33	0.86/0.7	-2.58/-2.21	-1.630.94	-2.95/0.83	-3.08/-3.57	-0.87/-1.95	-1.290.05	-2.48/-1.28	-3.3/-3.38
Θ (112.5°)	-6.24/-7.2	-5.99/-4.86	-2.86/-2.24	-2.18/-0.63	-1.98/-4.03	-3.52/-1.22	-3.87/-2.37	-3.72/-3.76	-2.39/-1.61	-2.810.13	-0.96/-4.13	-3.29/-3.56	-4.17/-4.28	-2.3/-1.53	-2.47/-0.23	-0.020.21	-5.88/-4.04	-2.57/-0.6	-4.8/-2.1	-3.55/-3.46	-4.19/-2.58	-1.72/-0.89	-3.64/-1.48	-4.79/-5.65
Θ (120°)	-6.55/-7.06	-8.14/-5.33	-5.74/-3.81	-3.11/-1.88	-3.43/-4.02	-3.78/-2.43	-4.3/-4.67	-3.87/-2.69	-3.7/-1.11	-4.41/-2.69	-3.38/-4.39	-3.63/-6.47	-2.88/-6.25	-3.63/-2.73	-3.82/-3.09	-2.46/-1.68	-2.39/-1.92	-4.8/-3.46	-4.77/-5.04	-3.94/-2.97	-3.73/-1.9	-2.45/-3.81	-4.18/-1.33	-4.75/-7.21
Θ (127.5°)	-6.52/-7.01	-11.44/-6.8	-6.53/-3.86	-3.47/-3.82																				

Gain Result

[illegible]



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ(22.5°)	-9.08/-7.66	-6.22/-7.09	-7.24/-7.33	-7.93/-8.88	-9.23/-7.68	-8.19/-10.79	-15.02/-16.9	-15.31/-18.25	-17.28/-11.98	-11.19/-11.19	-11.26/-12.01	-10.28/-8.02	-8.58/-11.1	-14.22/-13.32	-10.51/-9.56	-10.82/-15.06	-18.48/-16.67	-13.42/-15.17	-18.17/-18.29	-18.53/-19.23	-18.33/-18.98	-18.77/-17.01	-16.3/-12.41	-10.25/-9.26
Θ(30°)	-11.16/-8.64	-7.25/-6.84	-7.77/-7.89	-7.83/-10.68	-11.88/-9.93	-9.29/-10.5	-14.19/-17.34	-13.55/-12.72	-19/-16.72	-18.78/-11.33	-9.21/-9.95	-9.5/-11.03	-13.99/-12.32	-12.13/-14.49	-14.89/-13.1	-13.44/-17.23	-18.92/-17.83	-19.05/-17.77	-18.17/-18.99	-16.44/-13.27	-13.58/-17.73	-18.03/-19.72	-17.48/-13.34	-11.19/-11.28
Θ(37.5°)	-13.91/-10.1	-10.88/-10.49	-10.32/-10.71	-8.21/-8.79	-8.73/-10.04	-9.3/-5.97	-9.71/-10.28	-10.78/-17.11	-17.07/-17.98	-15.95/-8.89	-8.15/-10.49	-8.84/-7.41	-15.73/-13.57	-9.99/-14.63	-18.58/-19.21	-18.89/-18.82	-19.76/-18.67	-18.3/-17.25	-18.17/-18.12	-10.81/-7.77	-12.33/-13.9	-18.45/-18.03	-16.28/-18.31	-14.28/-14.07
Θ(45°)	-15.74/-10.9	-8.07/-12.72	-10.11/-12.38	-11.79/-12.47	-12.55/-9.79	-10.65/-7.3	-8.65/-17.4	-8.27/-17.45	-14.36/-18.53	-16.12/-12.56	-8.65/-9.05	-14.81/-9.81	9.2/-13.65	-13.23/-18.32	-12.34/-13.52	-17.89/-18.61	-15.03/-18.57	-17.77/-18.29	-18/-16.08	-12.01/-14.03	-11.69/-6.52	-9.95/-12.94	-18.09/-18.91	-18.42/-13.29
Θ(52.5°)	-18.07/-14.51	-9/-15.31	-11.79/-18.06	-17.76/-14.41	-15.6/-18.14	-15.09/-19.42	-10.16/-10.54	-7.79/-10.21	-15.76/-11.94	-13.33/-16.49	-11.23/-9.69	-10.29/-13.98	-14.49/-13.47	-18.35/-18.28	-14.3/-18.05	-18.4/-17.93	-15.83/-12.33	-18.28/-16.64	-13.14/-13.62	-10.92/-10.02	-8.03/-9.51	-11.1/-12.1	-18.57/-19.01	-18.06/-18.72
Θ(60°)	-16.44/-16.54	-11.61/-13.96	-17.14/-18.06	-14.46/-17.43	-18.65/-18.03	-11.11/-19.13	-11.93/-17.66	-11.26/-14.66	-11.53/-13.89	-18.66/-8.46	-8.8/-12.94	-12.94/-8.48	-13.9/-9.55	-13.59/-13.64	-18.25/-18.78	-16.73/-16.44	-15.68/-14.7	-12.79/-15.72	-9.52/-9.16	-8.66/-10.95	-9.3/-9.21	-16.16/-17.89	-17.12/-15.35	
Θ(67.5°)	-16.78/-17.24	-16.97/-17.1	-18.96/-15.47	-10.21/-17.6	-15.6/-18.14	-12.8/-14.68	-12.69/-13.75	-15.7/-18.78	-8.09/-12.52	-15.28/-9.89	-9.68/-7.45	-9.14/-9.49	9.88/-12.1	-12.35/-13.29	-18.61/-18.49	-18.74/-18.67	-18.37/-18.68	-19.11/-17.92	-13.52/-18.28	-9.28/-8.67	-8.28/-9.93	-9.01/-10.88	-18.34/-17.44	-14.07/-15.81
Θ(75°)	-16.12/-18.52	-18/-16.11	-18.34/-16.56	-12.5/-13.19	-17.52/-18.24	-13.72/-18.96	-13.42/-15.78	-17.81/-17.82	-7.85/-11.45	-13.26/-14.67	-18.08/-8.65	-8.18/-13.83	-8.88/-10.68	-10.38/-12.55	-14.35/-18.7	-18.78/-18.56	-17.12/-18.82	-17.36/-18.09	-18.06/-17.72	-10.08/-9.28	-9.19/-10.59	-9.04/-11.18	-18.33/-15.54	-12.37/-14.57
Θ(82.5°)	-13.88/-19.1	-17.91/-18	-13.33/-13.97	-16.65/-11.73	-17.31/-18.09	-17.68/-17.52	-13.48/-14.96	-15.72/-18.73	-12.42/-13.19	-12.18/-14.54	-11.56/-10.71	-7.72/-10.77	-9.7/-6.97	-9.85/-11.98	-12.47/-19.13	-18.79/-19.17	-17.04/-19.18	-18.6/-18.34	-17.76/-17.58	-10.39/-9.51	-9.83/-11.55	-10.71/-12.97	-17.02/-16.97	-11.35/-11.31
Θ(90°)	-17.88/-17.52	-17.17/-18.46	-15.26/-16.77	-15.01/-10.12	-19.19/-18.19	-18.04/-18.1	-18.68/-18.19	-10.64/-14.67	-14.11/-11.69	-14.77/-11.88	-8.95/-9.34	-8.63/-13.33	9.18/-5.17	-9.79/-8.77	-11.02/-18.08	-18.64/-14.89	-17.67/-18.8	-17.92/-19.01	-17.97/-17.67	-12.96/-10.6	-11.46/-14.35	-12.74/-15	-18.88/-16.74	-11.75/-11.07
Θ(97.5°)	-12.84/-18.17	-18.49/-19.36	-12.86/-15.13	-17.79/-8.7	-15.12/-16.12	-19.02/-18.23	-17.33/-19.02	-15.82/-14.94	-18.97/-10.91	-16.36/-9.3	-8.11/-13.88	-9.3/-9.99	-8.19/-5.77	-11.52/-10.18	-10.57/-18.53	-18.71/-15.24	-18.18/-17.91	-18.64/-18.73	-14.06/-12.26	-12.09/-15.17	-12.71/-17.02	-19.16/-15.69	-12.97/-11.64	
Θ(105°)	-11.89/-18.69	-17.64/-17.56	-14.53/-18.26	-18.92/-10.56	-11.68/-12.62	-14.53/-18.92	-17.25/-18.77	-18.11/-17.87	-18.72/-9.55	-18.72/-10.39	-15.58/-15.38	-9.2/-12.66	-9.2/-1.1	-11.54/-9.58	-11.48/-15.01	-17.95/-15.36	-18.59/-17.97	-16.91/-18.75	-18.94/-19.19	-16.92/-13.77	-11.26/-15.54	-13.88/-18.73	-19.31/-18.08	-11.73/-13.04
Θ(112.5°)	-14.08/-18.09	-18.59/-18.07	-17.17/-13.14	-18.1/-12.52	-12.91/-13.05	-10.1/-18.75	-18.16/-18.32	-18.53/-15.53	-18.26/-13.63	-14.22/-14.05	-11.75/-17.41	-12.89/-15.62	-10/-9.51	-13.5/-12.44	-11.72/-18.09	-18.42/-17.57	-18.88/-17.58	-18.12/-17.77	-19.4/-17.95	-15.16/-17.04	-11.36/-18.25	-15.53/-16.84	-19.32/-16.7	-12.24/-12.77
Θ(120°)	-13.21/-15.28	-18.89/-18.69	-17.86/-14.72	-18.82/-13.93	-13.54/-12.97	-9.68/-17.67	-16.75/-15.92	-13.82/-17.77	-17.02/-18.57	-12.56/-12.54	-9.86/-18.21	-17.89/-19.28	-12.9/-14.06	-15.16/-15.11	-18.19/-19.29	-13.42/-17.47	-18.7/-18.4	-17.65/-18.9	-17.47/-18.7	-15.22/-18.74	-17.94/-19.18	-18.04/-18.85	-17.72/-9.23	-17.72/-9.23
Θ(127.5°)	-11.96/-17.76	-18.73/-17.94	-18.82/-14.53	-18.42/-18.77	-18.39/-14.84	-14.99/-14.41	-15.86/-15.14	-12.26/-17.74	-12.38/-18.3	-15.74/-13.89	-11.72/-19.27	-18.54/-15.88	-18.07/-18.37	-19.16/-14.19	-16.2/-18.41	-18.01/-18.92	-18.26/-18.2	-17.25/-16.49	-18.59/-18.09	-16.81/-17.17	-19.12/-18.84	-17.23/-17.61	-18.54/-12.82	
Θ(135°)	-11.64/-12.2	-15.7/-17.35	-15.57/-18.62	-14.33/-18.48	-18.68/-18.5	-18.93/-15.18	-14.93/-15.71	-11.74/-16.27	-15.34/-11.5	-18.66/-19.08	-18.95/-18.79	-17.71/-16.3	-15.62/-17.73	-17.99/-16.73	-12.19/-18.53	-18.82/-19.32	-17.32/-17.39	-17.51/-18.89	-18.58/-19.61	-18.8/-19.44	-19.08/-17.18	-17.19/-18.76	-16.29/-18.79	-17.63/-12.46
Θ(142.5°)	-11/-11.66	-15.3/-17.87	-17.92/-18.18	-18.95/-16.13	-11.02/-15.8	-15.92/-14.87	-17.4/-12.86	-14.8/-12.6	-19.1/-15.34	-18.5/-17.36	-14.5/-19.22	-18.13/-17.42	-17.79/-19.1	-18.02/-19.17	-18.23/-18.85	-14.77/-17.43	-17.19/-17.3	-17.87/-18.18	-19.21/-18.48	-18.71/-17.73	-15.88/-18.34	-18.96/-19.34	-15.44/-12.52	
Θ(150°)	-13.69/-11.03	-15.04/-18.45	-18.75/-17.96	-17.55/-18.46	-11.84/-12.57	-17.05/-17.4	-13.27/-11.18	-17.77/-17.21	-17.92/-14.95	-17.3/-17.25	-18.69/-18.62	-18.25/-18.68	-18.9/-19.51	-17.88/-17.21	-18.28/-17.28	-15.96/-18.53	-18.3/-19.24	-18.29/-19.09	-18.83/-19.39	-16.86/-17.26	-16.06/-18.87	-19.18/-18.66	-13.56/-14.21	
Θ(157.5°)	-15.33/-17.07	-18.63/-17.2	-18.84/-17.59	-18.22/-17.54	-18.79/-18.74	-18.52/-18.31	-17.81/-17.95	-17.48/-16.23	-18.29/-19	-18.68/-17.89	-18.02/-19.06	-19.22/-18.84	-18.79/-18.58	-16.05/-19.08	-18.45/-19.23	-18.46/-19.15	-17.24/-16.6	-17.05/-18.29	-17.45/-14.9	-14.83/-17.81	-17.15/-17.98	-19.13/-17.02	-18.2/-18.1	-13.42/-14.03
Θ(165°)	-14.22/-18.59	-17.14/-13.72	-12/-12.06	-12.96/-11.79	-10.89/-11.86	-14.23/-18.04	-18.7/-15.06	-13.9/-15.63	-18.4/-18.59	-18.93/-13.36	-18.46/-17.9	-18.01/-13.3	-18.25/-17.52	-18.35/-18.45	-18.26/-19.4	-17.87/-17.92	-18.17/-18.05	-17.85/-15.39	-12.36/-10.72	-10.68/-12.26	-14.79/-14.63	-17.49/-19.22	-19.16/-15.81	-14.54/-13.85
Θ(172.5°)	-17.78/-17.92	-17.57/-14.63	-15.74/-14.69	-14.66/-15.43	-14.66/-14.54	-14.64/-14.46	-17.4/-15.62	-17.13/-18.06	-17.66/-18.27	-17.88/-17.81	-18/-17.15	-17.44/-18.06	-18/-19	-18.39/-18.93	-18.95/-19.29	-19.06/-18.83	-16.28/-14.62	-13.84/-13.53	-14.53/-15.8	-17.97/-18.81	-19.28/-18	-18.29/-19.16	-17.55/-18.5	
Θ(180°)	-17.04/-18.86	-16.59/-15.43	-17.07/-18.51	-19.13/-17.69	-19.25/-18.35	-18.19/-18.49	-19.06/-19.09	-18.51/-19.09	-18.13/-18.8	-18.24/-18.35	-17.27/-18.49	-17.83/-18.07	-17.48/-18.36	-18.43/-18.14	-19.05/-18.13	-18.39/-18.85	-18.11/-17.8	-17.39/-17.38	-18.02/-18.74	-19.12/-17.95	-17.45/-17.89	-18.97/-17.91	-18.21/-16.74	-15.51/-16.25
Freq(Hz)	5.36Pol.	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°)	-13.35/-14.97	-16.16/-19.09	-17.76/-19.28	-19.12/-16.34	-15.13/-13.62	-11.88/-10.52	-10.87/-10.36	-10.19/-10.34	-11.64/-12.25	-12.44/-13.83	-13.39/-13.5	-14.58/-18.36	-13.48/-18.45	-17.71/-17.96	-18.58/-14.53	-12.32/-11.3	-10.73/-9.9	-9.74/-8.38	-7.41/-6.88	-7.49/-7.4	-7/-6.73	-7.21/-8.01	-8.4/-8.69	-9.76/-11.34
Θ(7.5°)	-14.67/-16.98	-17.2/-14.72	-12.59/-13.73	-10.47/-9.18	-9.31/-8.55	-7.64/-7.3	-7.31/-6.86	-6.86/-7	-7.44/-7	-6.88/-6.99	-7.52/-7.87	-8.18/-9.9	-12.15/-13.31	-14.56/-18.68	-19.01/-18.74	-18.32/-18.22	-18.19/-18.66	-18.7/-17.39	-11.55/-17.57	-17.49/-16.06	-15.8/-14.76	-13.03/-14.16	-11.18/-11.61	-12.72/-13.59
Θ(15°)	-15.8/-15.97	-18.16/-14	-10.05/-7.58	-5.99/-4.99	-4.86/-4.3	-3.95/-3.83	-3.43/-3.27	-3.27/-3.2	-3.66/-5	-6.75/-8.2	-9.05/-9.91	-11.23/-12.19	-13.95/-15.93	-15.99/-15.87	-15.92/-15.21	-13.71/-13.28	-12.37/-11.45	-11.05/-11.14	-10.02/-10.73	-9.86/-9.44	-10.02/-11.3	-12.51/-13.85	-14.88/-15.45	-15.38/-16.47
Θ(22.5°)	-6.12/-5.72	-6.79/-8.65	-6.58/-3.7	-2.45/-2.91	-4.39/-4.43	-3.52/-3.22	-3.67/-3.98	-3.57/-3.3	-3.31/-4.51	-5.34/-5.4	-6.14/-7.36	-8.59/-10.65	-12.01/-12.79	-14.06/-15.05	-13.87/-10.95	-9.13/-8.99	-9.49/-13.14	-16.28/-15.5	-12.8/-10.08	-8.36/-7.93	-8.33/-9.33	-10.88/-10.73	-8.98/-7.28	-6.29/-6.39
Θ(30°)	-4.31/-5.13	-4.97/-3.47	-3.17/-2.99	-1.77/-1.94	-3.28/-3.46	-2.63/-1.93	-2.06/-2.69	-3.26/-3.7	-4.42/-3.61	-2.46/-3.27	-6.09/-4.62	-9.24/-10.5	-12.98/-13.73	-13.97/-12.97	-12.31/-16.81	-18.86/-11.03	-7.09/-6.56	-6.31/-6.31	-6.44/-5.95	-7.08/-9.22	-9.94/-8.73	-6.79/-5.57	-6.46/-6.67	-6.76/-5.13
Θ(37.5°)	-2.24/-2.08	-2.73/-0.57	0.98/-0.97	-2.95/-2.37	-1.59/-2.34	-3.29/-2.68	-3.17/-3.45	-1.58/-1.58	-3.22/-0.45	-3.79/-4.17	-5.97/-7.27	-6.75/-7.43	-10.25/-11.69	-16.69/-14.18	-9.48/-9.64	-16.46/-11.77	-6.53/-5.7	-5.69/-6.26	-6.17/-3.73	-3.38/-4.52	-4.38/-5.04	-7.37/-8.49	-8.04/-5.23	-3.56/-2.69
Θ(45°)	-2.91/-3.43	-1.67/-1.8	-0.40/-0.08	-1.24/-0.68	0.31/-0.37	-1.2/-1.39	-2.35/-3.38	-3.76/-3.3	-2.32/-3.51	-5.38/-3.04	-1.84/-6.13	-8.2/-8.26	-12.41/-17.61	-18.82/-17.26	-7.37/-8.45	-12.21/-11.36	-8.55/-6.57	-4.98/-7.8	-5.51/-3.55	-3.17/-2.98	-2.21/-3.49	-6.74/-8.6	-5.27/-2.23	-2.61/-3.09
Θ(52.5°)	-2.63/-3.72	-1.25/-0.8	-2.280.32	0.62/-1.17	1.11/-0.09	-0.44/-1.21	-0.89/-2.92	-2.53/-2.8	-2.31/-1.94	-1.91/-1.22	-2.03/-6.79	-7.83/-4.3	-3.55/-9.34	-10.22/-14.14	-6.8/-18.09	-12.34/-8.54	-7.08/-6.35	-3.12/-3.75	-4.17/-0.93	-2.29/-2.67	-3.61/-4.88	-2.28/-2.9	-4.47/-2.73	-2.25/-1.8
Θ(60°)	-3.21/-4.39	-1.87/-0.66	-2.820.95	0.980.33	0.05/-2.8	-3.18/-3.13	-5.3/-6.4	-2.63/-5.7	-5.49/-1.46	0.41/-0.95	-1.44/-1.98	-1.89/-4.64	-4.38/-6.4	-7.14/-6.25	-6.13/-8.58	-12.8/-9.42	-2.42/-5.2	-2.99/-1.42	-4.29/-1.53	-2.51/-1.69	-2.			



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ(75°)	-10.09/-12.36	-17.21/-15.99	-16.03/-10.16	-7.7/-8.53	-8.92/-10.68	-16.56/-18.13	-15.51/-14.92	-18.94/-15.05	-6.34/-19.06	-17.77/-18.16	-18.98/-14.6	-9.81/-6	-5.35/-3.94	-5.82/-8.4	-10.66/-18.47	-15.53/-11.53	-19.09/-16.28	-13.8/-12.9	-14.55/-13.42	-17.8/-12.09	-6.94/-5.91	-8.47/-8.82	-18.54/-14.41	-16.69/-13.68
Θ(82.5°)	-9.52/-12.15	-16.83/-14.7	-15.45/-15.65	-8.18/-8.51	-9.33/-14.59	-16.91/-18.11	-14.14/-11.95	-18.85/-19.4	-5.91/-18.01	-12.26/-12.97	-10.11/-17.29	-9.88/-3.12	-2.92/-3.79	-4.25/-8.22	-8.22/-12.1	-18.96/-12.29	-17.41/-16.84	-13.7/-12.94	-15.04/-12.23	-19.27/-14.5	-7.62/-9.13	-11.65/-14.8	-18.54/-15.34	-19.09/-13.09
Θ(90°)	-9.31/-11.42	-13.23/-12.47	-16.08/-11.77	-8.04/-7.55	-9.34/-13.39	-15.83/-19	-10.55/-10.05	-18.88/-17.25	-10.74/-11.4	-13.15/-9.26	-7.58/-17.04	-7.21/-2.22	-3.72/-3.8	-4.52/-10.23	-9.01/-11.09	-18.98/-12.61	-17.21/-16.94	-13.89/-18.47	-17.96/-11.86	-9.38/-11.03	-13.43/-16.64	-18.38/-16.03	-19.2/-14.53	
Θ(97.5°)	-10.5/-13.81	-12.77/-12.28	-18.54/-17.84	-9.81/-8.75	-10.15/-10.8	-14.58/-18.45	-15.51/-6.5	-17.72/-17.23	-13.8/-8.69	-16.9/-7.23	-7.84/-16.76	-6.14/-3.71	2.98/-6.51	-6.6/-11.9	-9.65/-14.43	-18.53/-18.05	-17.81/-18.74	-18.47/-17.74	-18.48/-18	-18.28/-12.19	-11.5/-11.4	-12.77/-16.51	-17.77/-18.18	-18.7/-14.33
Θ(105°)	-11.47/-11.38	-13.85/-14.1	-18.23/-18.21	-13.19/-8.7	-10.19/-12.16	-17.18/-18.69	-16.76/-13.43	-13.55/-19.3	-13.15/-9.14	-17.38/-12.59	-11.51/-14.67	-6.59/-4.97	-6.21/-11.12	-9.67/-12.56	-12.12/-16.36	-17.46/-16.35	-18.44/-19.07	-19.19/-18.32	-18.44/-19.07	-18.03/-12.34	-12.97/-11.81	-15.76/-19.51	-18.14/-17.64	-14.8/-15
Θ(112.5°)	-12.44/-12.32	-18.42/-17.57	-18.69/-18.05	-16.89/-11.38	-13.63/-10.06	-16.55/-17.21	-15.38/-18.24	-19.25/-12.43	-12.86/-11.38	-19.5/-11.75	-10.78/-17.9	-8.82/-9.81	-10.45/-16.41	-13.92/-16.32	-15.28/-17.84	-16.77/-18.73	-18.97/-18.69	-17.98/-16.6	-17.66/-11.08	-15.65/-10.29	-12.08/-16.58	-18.99/-13.07	-14.18/-16.35	
Θ(120°)	-11.2/-11.33	-14.63/-18.37	-17.38/-19.14	-16.23/-17.32	-18.78/-10.05	-12.68/-18.7	-12.05/-18.45	-18.88/-12.39	-11.65/-13.89	-14.56/-11.6	-10.27/-17.89	-9.94/-18.39	-18.16/-18.86	-18.02/-17.25	-18.88/-12.61	-18.33/-17.86	-12.73/-19.3	-18.96/-18.41	-18.73/-13.67	-15.41/-12.03	-17.63/-11.4	-13.75/-13.93	-17.3/-19	-11.53/-11.55
Θ(127.5°)	-11.15/-9.24	-12.09/-18.21	-16.13/-18.85	-11.08/-17.18	-17.14/-18.65	-13.54/-15.54	-18/-11.69	-15.61/-17.96	-8.46/-15.2	-14.85/-12.96	-16.13/-13.82	-14.51/-15.19	-15.84/-15.2	-18.12/-18.18	-18.13/-16.35	-19.05/-15.91	-16.81/-17.68	-18.74/-19.25	-19.37/-17.75	-18.53/-14.11	-17.17/-11.41	-9.33/-19.63	-17.83/-18.05	-18.42/-12.87
Θ(135°)	-12.43/-15.44	-11.41/-13.81	-17.28/-15.24	-19.33/-13.87	-8.42/-18.57	-14.79/-16.36	-15.02/-16.46	-9.8/-16.45	-11.75/-8.59	-9.14/-17.08	-11.36/-11.56	-10.39/-18.05	-19.35/-18.6	-18.12/-17.54	-13.93/-17.67	-18.59/-18.54	-16.08/-17.44	-17.36/-19.05	-15.85/-17.37	-18.44/-17.12	-16.3/-11.72	-8.26/-9.72	-16.68/-19.39	-18.48/-11.98
Θ(142.5°)	7.38/-12.8	-15.2/-9.22	-16.4/-17.7	-16.21/-10.43	-11.91/-12.35	-10.81/-18.6	-14.59/-17.51	-14.13/-14.54	-17.63/-11.76	-17.26/-12.9	-11.66/-18.88	-10.13/-17.81	-16.84/-11.08	-15.73/-17.92	-18.18/-18.07	-18.01/-12.09	-15.04/-16.16	-18.75/-15.9	-14.53/-15.3	-12.95/-18.19	-17.63/-13.58	-10.07/-10.47	-17.9/-17.91	-16.92/-16.85
Θ(150°)	-9.92/-10.26	-16.12/-15.77	-12.63/-15.13	-18.85/-18.98	-17.89/-19.29	-19.22/-18.98	-15.48/-18.36	-19.22/-15.58	-16.87/-11.58	-15.69/-18.45	-18.21/-18.21	-14.06/-14.65	-16.49/-14.99	-19.1/-18.44	-15.37/-13.23	-17.09/-19.04	-18.89/-18.15	-15.34/-15.25	-18.7/-18.46	-13.5/-15.25	-16.86/-19	-18.74/-15.71	-11.3/-12.66	
Θ(157.5°)	-11.07/-14.14	-19.33/-16.34	-19.33/-15.27	-14.4/-15.12	-19.85/-17.38	-15.97/-14.1	-16.89/-17.64	-10.71/-8.37	-12.74/-17.92	-18.19/-17.56	-17.63/-18.32	-15.51/-17.79	-19.14/-17.54	-18.09/-16.88	-18.02/-18.25	-17.53/-19.08	-18.5/-19.09	-19.3/-17.85	-15.59/-13.63	-15.39/-19.09	-18.11/-18.41	-19.07/-19.05	-15.1/-11.25	
Θ(165°)	-12.82/-12.58	-15.7/-17.16	-15.24/-16.88	-17.06/-14.01	-10.2/-8.13	-8.34/-11.17	-18.11/-17.26	-12.39/-11.92	-14.75/-18.04	-17.68/-18.41	-18.16/-17.99	-17.63/-17.97	-18.7/-16.44	-14.7/-16.82	-18.26/-17.21	-17.38/-19.11	-17.86/-18.97	-17.36/-13.47	-12.08/-15.12	-19.2/-17.33	-16.36/-15.96	-15.1/-15.73	-17.46/-19.09	-17.37/-15.21
Θ(172.5°)	-10.2/-11.59	-14.22/-15.08	-16.21/-18.62	-18.89/-17.55	-17.04/-16.36	-16.98/-16.44	-14.86/-13.78	-12.66/-13.46	-16.44/-17.65	-17.27/-18.47	-17.54/-18.85	-18.91/-18.1	-18.06/-17.51	-18.24/-18.61	-17.78/-17.75	-18.91/-18.96	-15.45/-13.78	-12.91/-12.29	-12.14/-12.49	-13.84/-13.57	-11.31/-10.7	-11.08/-12.76	-18.07/-18.18	-15.28/-11.44
Θ(180°)	-17.41/-13.97	-17.37/-19.02	-17.38/-18.66	-17.84/-19.14	-18.61/-18.34	-18.9/-19.17	-19.55/-18.79	-17.65/-18.6	-18.17/-18.29	-17.85/-18.56	-18.56/-18.79	-19.21/-18.43	-17.77/-18.16	-19.18/-18.94	-18.25/-18.53	-17.82/-18.75	-17.67/-19.23	-18.68/-17.68	-18.19/-17.64	-16.68/-17.36	-18.99/-17.8	-17.73/-18.59	-17.51/-18.77	-18.66/-18.67
Freq(Hz)	5.785GPol.	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°)	-18.23/-18.88	-17.71/-19.16	-17.82/-17.57	-16.84/-15.4	-12.98/-13.26	-12.24/-11.9	-11.88/-13.07	-12.99/-12.69	-14.29/-16.59	-17.97/-18.71	-18.19/-18.27	-17.78/-18.05	-14.22/-12.08	-11.21/-9.34	-8.3/-6.95	-6.07/-6.73	-5.93/-6.96	-8.24/-8.45	-9.15/-10.11	-11.03/-12.58	-15.41/-19.22			
Θ(7.5°)	-17.24/-18.84	-15.27/-12.74	-11.88/-10.03	-9.03/-8.74	-8.14/-7.5	-7.19/-6.83	-6.33/-6.15	-6.25/-6.65	-6.88/-6.8	-8.22/-8.79	-9.04/-9.99	-11.74/-12.57	-14.03/-16.74	-18.05/-18.39	-18.28/-17.58	-17.34/-18.83	-17.25/-18.51	-19.05/-17.55	-19.13/-17.91	-16.15/-15.02	-15.46/-15.26	-15.67/-14.52	-14.56/-15.8	-18.44/-17.64
Θ(15°)	-9.47/-9.94	-8.7/-7.3	-6.76/-8.84	-7.3/-8.7	-8.87/-6.75	-4.92/-3.67	-3.24/-5.38	-4.64/-6.07	-6.52/-6.53	-6.88/-7.72	-7.89/-8.48	-12.05/-14.5	-17.81/-18.35	-16.66/-16.66	-15.9/-16.23	-17.21/-18.26	-18.61/-18.21	-18.84/-17.63	-17.61/-17.58	-16.44/-16.51	-17.97/-18.2	-18.38/-15.41	-13.22/-13.11	-13.71/-11.32
Θ(22.5°)	-5.34/-4.03	-3.75/-4.32	-6.05/-1.2	-5.28/-3.87	-2.32/-1.2	-3.71/-5.06	-3.7/-2.5	-2.21/-1.89	-1.26/-2.08	-4.09/-7.31	-8.5/-9.3	-11.43/-15.65	-18.42/-17.81	-16.81/-13.63	-10.51/-8.31	-8.52/-10.43	-12.55/-13.69	-15.45/-18.31	-17.57/-17.59	-15.94/-10.78	-7.59/-6.13			
Θ(30°)	-2.96/-2.21	-1.91/-2.14	-1.29/-0.01	-1.01/-2.75	-0.69/-1.09	-3.91/-3.24	-1.69/-1.92	-3.03/-2.22	-0.8/-1.81	-4.52/-7.62	-8.52/-7.76	-10.3/-14.44	-18.55/-16.13	-12.54/-13.05	-16.06/-18.45	-19.23/-17.05	-18.19/-16.53	-7.96/-7.16	-7.32/-6.59	-4.76/-3.28	-3.3/-4.78	-7.36/-8.14	-5.55/-2.99	-2.05/-2.55
Θ(37.5°)	-0.62/-0.61	-1.24/-1.94	-0.77/-1.6	1.67/-1.29	-1.1/-2.85	-1.96/-3.46	-4.96/-2.92	-0.930/-24	-0.31/-0.26	0.69/-1.9	-6.9/-8.7	-9.17/-11.89	-9.99/-15.68	-8.8/-9.25	-19.07/-13.78	-4.46/-8.77	-7.4/-4.18	-4.5/-2.32	-0.11/-0.91	-1.19/-0.95	-2.89/-3.81	-2.79/-2.95	-4.42/-2.5	-0.59/-0.13
Θ(45°)	0.80/-62	1.45/-11	2.270/-65	1.16/-1.35	-0.28/-1.61	-1.84/-9.11	-6.83/-3.85	-1.160/-1	-1.07/-0.96	-0.44/-2.82	-5.09/-5.17	-3.61/-4.5	-13.01/-6.5	-6.62/-5.11	-5.83/-5.72	-5.62/-8.29	-6.03/-2.66	-1.35/-1.75	1.312/-35	0.531/-26	1.861/-3	0.2/-0.29	0.710/-51	
Θ(52.5°)	0.80/-35	-1.380/-25	3.210/-77	1.761/-01	2.371/-29	-1.560/-11	-3.163/-3.74	-4.951/-103	1.381/-1.63	0.3201/-44	0.252/-73	-2.97/-0.96	-5.05/-5.96	-4.11/-5.41	-3.52/-1.41	-2.22/-6.15	-5.21/-2.36	-3.7/-2.64	-0.691/-0.7	2.110/-69	-0.242/-49	2.481/-97	0.360/-0.2	1.431/-93
Θ(60°)	2.191/-25	0.460/-47	1.931/-08	3.452/-73	-0.020/-09	-6.12/-2.6	-6.93/-4.92	-3.51/-1.41	-0.790/-17	-0.431/-95	-0.954/-24	-1.270/-89	-1.64/-11	-0.06/-1.59	-4.07/-3.19	-2.97/-4.37	-5.08/-3.97	-2.56/-2.88	1.021/-85	1.60/-04	-0.2/-2.37	2.422/-46	1.43/-1.73	-0.173/-32
Θ(67.5°)	2.270/-87	-0.040/-5	-0.312/-82	3.352/-24	-4.96/-2.18	-5.61/-10.1	-14.3/-11.33	-4.46/-4.6	-2.95/-1.66	-1.29/-0.33	-0.48/-0.81	0.43/-1.61	-5.39/-2.19	-1.72/-1.98	-4.35/-1.92	-4.13/-3.62	-3.66/-5.78	-2.15/-5.14	1.260/-33	1.781/-07	0.710/-69	0.591/-64	1.31/-2.77	-1.872/-47
Θ(75°)	0.520/-31	-1.170/-05	-1.773/-44	2.151/-11	-7.67/-1.92	-3.34/-5.93	-9.46/-15.7	-8.9/-6.19	-2.82/-2.78	-1.11/-0.33	2.010/-85	-0.98/-5.11	-16.23/-2.83	-1.14/-2.01	-4.46/-2.4	-1.73/-4.38	-3.93/-5.32	-4.51/-5.74	-7.4/-0.05	1.930/-83	-0.541/-1.88	-2.10/-34	-0.01/-2.59	-1.611/-84
Θ(82.5°)	-1.78/-21.4	-3.2/-1.16	-2.973/-12	1.071/-35	-6.52/-0.27	-3.33/-3.65	-10.36/-10.57	-16.39/-7.9	-4.36/-6.45	-0.871/-14	2.4/-0.38	-4.22/-0.78	-6.98/-0.3	0.11/-1.45	-3.01/-1.35	-1.75/-5.83	-4.91/-5.96	-4.53/-4.51	0.61/-6.09	1.9/-0.53	-2.13/-4.6	-4.22/-1.78	-1.57/-4.22	-1.740/-98
Θ(90°)	-3.75/-3.23	-5.46/-2.86	-4.021/-9	-0.35/-2.18	-8.34/-4.14	-3.83/-3.93	-9.72/-8.68	-18.15/-10.46	-5.34/-6.75	-1.861/-17	0.63/-1.8	-9.87/-8.89	-6.14/-0.48	0.76/-1.53	-2.8/-2.25	-0.82/-5.67	-7.79/-3.74	-6.27/-3.62	-0.43/-1.1	0.51/-2.08	-3.78/-5.34	-5.94/-2.72	-2.35/-5.36	-2.87/-0.76
Θ(97.5°)	-6.76/-5.09	-6.77/-6.02	-4.690/-81	-1.14/-5.06	-9.27/-6.65	-4.05/-4.01	-10.56/-8.2	-17.67/-14.46	-3.87/-10.52	-3.71/-0.07	-2.84/-3.26	-11.5/-11.3	-1.75/-1.63	-1.175/-7.5	-8.55/-4.77	-5.22/-8.02	-5.36/-4.35	-8.07/-3.95	-2.49/-2.01	-1.51/-4.41	-5.3/-6.39	-2.75/-3.43	-2.97/-1.29	-4.32/-2.88
Θ(105°)	-8.95/-6.24	-8.96/-8.16	-6.71/-105	-2.38/-17.2	-15.85/-9.57	-5.9/-3.99	-11.34/-16.1	-19.38/-19.12	-10.61/-14.37	-5.62/-15.4	-5.41/-4.94	-12.05/-8.53	-10.73/-16	-2.55/-6.62	-17.01/-10.59	-8.24/-11.16	-14.94/-4.78	-9.54/-6.02	-6.52/-2.46	-4.48/-6.07	-7.93/-7.02	-8.06/-3.91	-3.56/-6.86	-5.54/-6.01
Θ(112.5°)	-10.54/-12.7	-10.65/-10.41	-7/-2.29	-5.32/-8.79	-12.26/-14.79	-15.45/-19	-15.98/-9.71	-19.21/-17.93	-12.42/-9.33	-5.76/-3.66	-4.83/-4.87	-10.08/-7.1	-7.32/-6.14	-9.59/-15.04	-16.77/-9.69	-9.18/-14.72	-18/-11.37	-10.09/-8.27	-7.73/-2.57	-4.92/-7.54	-11.56/-9.03	-5.77/-6.53	-4.73/-3.73	-4.78/-7.78
Θ(120°)	-7.81/-7.11	-13.05/-9.82	-7.79/-3.9	-6.37/-1.71	-11.44/-11.98	-10.45/-9.22	-15.48/-14.36	-18.28/-12.94	-12.09/-6.66	-6.11/-8.91	-10.26/-16.88	-11.55/-13.72	-5.27/-9.75	-14.55/-17.75	-12.18/-19.9	-9.13/-15.73	-9.37/-8.67	-13.25/-15.53	-10.36/-8.96	-5.4/-11.3				



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ (127.5°)	-9.08/-10.74	-17.95/-12.6	-8.01/-6.52	-8.57/-10.09	-18.04/-19.27	-18.34/-17.97	-16.43/-15.75	-17.58/-12.87	-15.13/-18	-8.68/-11.68	-17.08/-19.32	-18.96/-17.7	-18.91/-18.53	-14.91/-18.5	-6.16/-18.8	-14.21/-15.05	-18.13/-13.88	-10.4/-11.19	-9.14/-16.5	-12.34/-15.29	-9.68/-11.27	-15.58/-18.04	-10.94/-10.11	-10.12/-14.42
Θ (135°)	-9.54/-18.1	-18.44/-9.75	-9.66/-6.66	-6.86/-9.02	-13.94/-13.02	-18.46/-15.7	-17.74/-15.31	-18.51/-17.48	-13.88/-18.93	-12.43/-11.27	-10.9/-15.98	-12.94/-18.06	-13.16/-17.8	-10.43/-12.2	-17.51/-11.12	-12.62/-12.91	-11.81/-12.22	-10.33/-8.87	-8.44/-10.46	-10.88/-11.91	-11.8/-17.95	-18.4/-12.03	-11.95/-14.45	-10.94/-10.91
Θ (142.5°)	-17.14/-18.9	-17.67/-12.7	-10.75/-8.96	-9.39/-5.56	-6.82/-8.69	-18.29/-11.04	-16.37/-18.28	-18.39/-18.42	-13.07/-15.88	-17.66/-13.09	-10.62/-10.98	-16.69/-15.58	-15.25/-15.2	-15.87/-17.26	-16.75/-9.43	-12.66/-14.86	-8.37/-11.23	-19.19/-8.54	-11.12/-9.44	-11.47/-14.52	-13.39/-16.23	-17.89/-9.83	-14.51/-19.61	-11.47/-14.88
Θ (150°)	-17.31/-17.14	-18.2/-17.19	-12.12/-11.17	-10.28/-7.15	-6.46/-8.76	-7.69/-8.24	-14.95/-18.29	-12/-15.38	-13.44/-14.46	-16.3/-12.32	-13.36/-15.94	-14.97/-10.65	-18.09/-13.62	-10.01/-12.99	-17.8/-10.53	-9.01/-17.19	-14.36/-17.94	-18.68/-13.06	-17.13/-13.8	-14.86/-18.09	-17.18/-15.7	-18.89/-18.1	-13.91/-13.52	-11.22/-15.19
Θ (157.5°)	-17.41/-18	-16.46/-12.64	-9.87/-8.6	-8.73/-8.71	-9.41/-9.04	-7.16/-6.93	-11.03/-17.76	-18.56/-15.2	-15.38/-16.68	-13.77/-14.1	-19.03/-18.64	-16.4/-12.11	-15.85/-16.34	-10.73/-11.59	-17.91/-16.99	-15.23/-15.28	-13.87/-18.6	-14.03/-16.32	-15.02/-19.01	-18.72/-17.22	-16.47/-15.7	-14.02/-12.12	-11.89/-14.03	-15.07/-17.47
Θ (165°)	-11.81/-16.67	-18.93/-13.51	-10.2/-9.82	-9.03/-7.64	-7.13/-7.14	-7.72/-9.7	-13.13/-18.58	-14.86/-12.11	-11/-13.27	-16.5/-18.13	-18.8/-17.67	-18.07/-15.79	-18.9/-18.98	-18.39/-15.29	-18.25/-18.93	-17.81/-19.12	-19.22/-13.89	-8.69/-10.64	-9.65/-12.12	-15.33/-14.25	-11.99/-12.31	-12.12/-12.03	-11.77/-11.63	-10.96/-9.75
Θ (172.5°)	-13.33/-16.66	-13.72/-11.44	-9.97/-7.63	-6.85/-7.04	-7.25/-7.05	-7.82/-8.97	-10.53/-13.62	-14.86/-16.64	-18.58/-18.28	-17.7/-18.38	-18.37/-17.34	-18.51/-18.3	-19.22/-18.81	-18.96/-17.58	-15.85/-18.05	-18.17/-16.52	-16.22/-14.13	-16.9/-14.96	-11.87/-10.57	-10.54/-11.89	-14.24/-18.04	-18.55/-17.56	-15.03/-13.08	-11.88/-11.59
Θ (180°)	-18.02/-17.49	-17.91/-13.65	-11.89/-12.8	-9.68/-9.2	-8.32/-6.95	-6.42/-5.9	-6.35/-7.01	-7.8/-6.93	-13.11/-16.39	-15.95/-14.88	-13.79/-15.32	-17.46/-17.68	-18.15/-18.4	-18.38/-15.78	-15.09/-14.18	-11.81/-12.73	-11.64/-11.59	-9.91/-8	-8.14/-8.37	-9.09/-9.44	-9.85/-11.03	-12.25/-13.25	-14.92/-16.24	-17.92/-17.19
Freq(Hz)	5.2GPol.	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ (0°)	-6.75/-5.99	-5.62/-6.47	-5.13/-5.4	-5.94/-5.49	-6.99/-6.65	-6.42/-6.92	-7.98/-7.67	-7.99/-9.54	-9.68/-10.26	-10.87/-11.79	-11.5/-10.7	-11.09/-9.98	-9.69/-9.17	-8.37/-8.29	-9.04/-7.14	-7.85/-7.71	-6.09/-7.73	-5.66/-6.94	-8.42/-7.21	-8.62/-8.35	-10.23/-9.4	-9.58/-8.39	-8.65/-8.03	-8.2/-7.17
Θ (7.5°)	-10.25/-8.96	-9.74/-8.61	-8.78/-8.14	-7.99/-7.98	-8.91/-10.5	-10.18/-9.53	-9.43/-9.13	-9.03/-9.71	-10.55/-11.55	-10.89/-10.7	-10.25/-9.61	-10.22/-10.97	-9.78/-9.04	-10.7/-11.06	-8.95/-10.79	-12.06/-10.48	-11.79/-10.43	-10.45/-10.73	-10.81/-12.1	-13.85/-16.66	-18.04/-17.35	-19.02/-17.11	-14.85/-10.82	
Θ (15°)	-6.65/-5.97	-6.97/-6.02	-7.92/-6.01	-5.49/-5.08	-8.91/-3.84	-3.89/-3.38	-4.36/-5.3	-5.3/-5.69	-5.7/-6.48	-7.31/-8.68	-18.71/-7.83	-6.59/-6.16	-5.17/-6.43	-5.48/-4.12	-5.45/-5.53	-4.4/-3.72	-4.01/-5.55	-9.1/-13.05	-19.19/-18.43	-14.37/-11	-9.57/-8.88			
Θ (22.5°)	-11.09/-10.66	-10.25/-10.61	-11.22/-9.26	-5.91/-4.21	-3.4/-4.3	-6.4/-6.77	-7.62/-8.27	-6.28/-6.13	-4.8/-4.19	-4.6/-7.17	-8.17/-7.12	-6.36/-6.08	-4.61/-4.74	-3.51/-2.51	-2.2/-1.54	-1.57/-2.23	-2.96/-4.45	-5.43/-5.07	-5.75/-4.36	-3.72/-4.13	-6.47/-7.28	-6.34/-7.55	-11.01/-11.67	-10.87/-11.16
Θ (30°)	-16.1/-13.49	-10.54/-5.26	-5.15/-5.57	-7.75/-10.49	-1.27/-2.7	-1.64/-2.09	-2.26/-3.08	-2.9/-3.55	-5.68/-6.83	-7.76/-9.93	-11.72/-7.9	-6.5/-6.68	-6.34/-6.67	-6.29/-8.62	-4.34/-0.7	0.49/-0.17	-0.130.79	-0.61/-2.6	-3.01/-1.39	-2.23/-3.24	-1.4/-0.91	-1.28/-4.31	-7.74/-10.16	-14.07/-15.44
Θ (37.5°)	-3.1/-3.17	-4.86/-5.97	-4.95/-4.96	-4.42/-4.52	-5.3/-0.86	0.99/-1.27	-3.14/-3.9	-1.4/-1.02	-3.9/-6.83	-3.32/-0.68	-2.74/-4.25	-0.77/-1.63	-1.17/-1.26	-2.34/-2.77	-1.74/-1.83	-0.92/-0.39	-3.58/-2.3	-3.67/-2.74	-1.25/-2.44	-4.25/-4.41	-1.52/-3.95	-8.04/-5.46		
Θ (45°)	-4.07/-2.85	-2.93/-2.51	-3.03/-4.58	-3.13/-0.59	-1.46/-4.19	0.490.74	-0.99/-2.95	-4.46/-3.31	-4.53/-2.84	-1.55/-1.39	-0.63/-5.72	-1.92/-3.62	-2.68/-2.86	-2.14/-1.88	1.070.9	-0.66/-1.53	2.870.2	-1.7/-1.83	0.690.61	1.190.59	1.570.05	-1.31/-4.02	-0.49/-3.99	-5.11/-5.3
Θ (52.5°)	-4.77/-5.89	-6.19/-2.39	-0.54/-1.24	-2.01/-0.37	0.68/-1.95	-0.280.41	0.541.64	-0.58/-1.71	-1.860.17	-1.97/-0.13	-2.08/-0.33	0.571.46	0.65/-3.26	-4.99/-3.32	1.853.28	3.37/-2.48	2.381.71	1.03/-0.49	1.130.97	1.540.63	2.171.45	-1.4/-1.43	-3.33/-1.58	-1.49/-4.91
Θ (60°)	-2.64/-3.4	-5.41/-2.44	-1.01/-1.35	0.24/-3.6	-0.93/-1.11	-1.36/-1.39	-2.91/-2.7	0.210.68	0.021.82	-1.11/-1.87	-0.16/-1.46	0.391.84	-0.12/-0.11	1.4711.16	1.021.98	3.211.83	-1.13/-1.23	0.46/-2.28	-4.6/-2.04	0.08/-1.24	0.02/-0.07	0.89/-0.11	-4.99/-0.18	0.8/-3
Θ (67.5°)	-3.84/-3.04	-2.09/-1.37	-1.03/-1.98	-1.57/-2.67	-1.74/-1.7	-0.54/-1.31	-4.22/-1.57	-0.560.33	1.670.63	-1.6/-1.93	-0.97/-0.41	-0.88/-2.2	-3.86/-0.88	1.351.15	0.57/-0.57	0.77/-0.99	-3.92/-2.75	-2.43/-4.42	-8.57/-2.96	-0.19/-1.31	-1.09/-4.3	1.51/-8.2	-4.56/-1.39	0.5/-2.92
Θ (75°)	-3.6/-2.48	-0.35/-1.41	-2.22/-1.07	1.91/-1.74	-3.1/-1.33	0.27/-0.16	-3.76/-2.33	-1.85/-2.02	1.52/-1.92	-0.93/-3.54	-1.44/-1.64	-0.28/-0.32	-3.52/-4.13	-3.53/-0.7	2.341.3	1.461.83	-0.33/-1.27	-5.77/-1.25	-0.41/-1.45	0.64/-1.81	-1.5/-4.87	0.3/-3.7	-4.52/-3.97	-0.93/-3.4
Θ (82.5°)	-2.78/-2.07	-0.26/-2.19	-4.61/-0.06	1.27/-1.97	-3.71/-4.8	0.37/-0.46	-4.05/-2.98	-2.96/-3.79	-0.21/-4.23	-2.21/-3.72	-3.11/-0.9	0.57/-1.76	-2.22/-9.42	-6.63/-3.37	2.670.2	1.493.09	1.240.08	-5.05/-0.52	1.89/-0.06	0.56/-1.78	-2.3/-8.08	-1.05/-1.31	-4.17/-8.15	-1.88/-3.6
Θ (90°)	-3.52/-2.81	-1.74/-3.53	-5.59/-1.1	-0.07/-3.34	-3.87/-3.22	-0.37/-1.89	-5.01/-4.65	-3.19/-5.93	-2.67/-5.83	-1.03/-4.74	-4.6/-1.95	0.17/-1.76	-3.12/-9.78	-0.59/-6.05	0.97/-0.99	-1.921.86	1.07/-0.75	-3.25/-0.57	1.69/-1.65	-0.69/-5.15	-4.35/-3.86	-2.6/-0.1	-5.83/-10.61	-3.98/-5.56
Θ (97.5°)	-3.78/-4.08	-2.63/-6.1	-6.77/-1.57	-0.63/-4.27	-3.78/-4.37	-0.75/-3.12	-7.2/-5.65	-4.42/-6.41	-5.68/-4.73	-2.83/-4.84	-7.24/-4.84	-1.01/-2.39	-4.21/-13.43	-13.74/-8.07	-2.06/-3.8	-6.68/-1.49	-0.06/-2.69	-4.78/-1.62	-0.21/-3.85	-3.67/-8.13	-6.65/-10.1	-3.24/-2.23	-6.17/-16.61	-5.69/-1.76
Θ (105°)	-5.59/-6.89	-5.67/-7.98	-6.39/-3.05	-2.07/-3.57	-4.84/-5.1	-2.01/-5.09	-8.93/-5.06	-4.64/-5.81	-6.34/-8.49	-3.13/-6.3	-10.08/-10.18	-3.51/-8.59	-7.73/-14.55	-18.47/-12	-3.59/-3.59	8.8/-2.59	-3.5/-5.88	-11.91/-6.31	-3.68/-13.09	-8.24/-17.62	-8.91/-8.3	-2.19/-3.7	-7.68/-18.3	-9.73/-9.84
Θ (112.5°)	-11.36/-10.11	-8.1/-7.02	-7.04/-4.54	-5.73/-2.36	-4.81/-4.95	-2.28/-7.93	-8.05/-7.19	-5.66/-8.18	-5.04/-6.7	-7.32/-5.24	-18.28/-17.91	-9.41/-10.66	-13.81/-18.89	-5.25/-13.69	-5.25/-5.79	-4.55/-4.61	-9.17/-10.67	-18.07/-13.41	-3.82/-17.15	-18.47/-18.02	-9.77/-6.5	-2.89/-4.47	-10.25/-18.36	-12.92/-18.6
Θ (120°)	-16.12/-10.74	-6.3/-7.67	-11.98/-12.05	-5.83/-4.5	-5.63/-4.23	-3.99/-8.62	-11.38/-7.29	-7.23/-10.53	-7.57/-8.31	-9.62/-5.79	-7.05/-18.07	-15.97/-16.73	-17.94/-18.4	-16.91/-10.63	-6.77/-7.23	-7.22/-5.88	-9.96/-12.46	-10.74/-13.16	-9.6/-16.21	-12.12/-15.36	-7.31/-3.68	-4.2/-7.56	-12.47/-10.02	-12.69/-17.29
Θ (127.5°)	-12.99/-14.64	-12.46/-6.8	-10.33/-5.85	-6.43/-8.7	-7.06/-4.21	-6.33/-12.6	-17.91/-13.12	-13.41/-16.85	-10.17/-13.57	-10.94/-19.9	-9.9/-10.1	-9.51/-9.95	-9.46/-17.99	-18.3/-9.31	-19.38/-15.58	-7.54/-8.79	-5.4/-9.84	-17.76/-15.3	-6.68/-11.66	-7.5/-15.33	-6.29/-1.81	-4.32/-8.96	-16.31/-7.76	-11.84/-17.47
Θ (135°)	-18.42/-15.86	-11.78/-8.78	-8.41/-12.15	-15.06/-10.34	-7.81/-7.98	-8.25/-15.8	-14.56/-16.78	-17.47/-16.89	-18.36/-13.33	-10.82/-17.92	-16.28/-8.77	-11.47/-18.21	-13.49/-17.59	-17.10/-9.8	-17.97/-17.67	-9.99/-12	-8.97/-19.12	-17.74/-11.82	-5.35/-7.08	-4.65/-14.16	-2.94/-4.73	-11.59/-7.19	-7.99/-8.43	-14.11/-12.72
Θ (142.5°)	-13.72/-12.4	-12.37/-16.32	-13.69/-11.12	-11.33/-11.4	-11.48/-9.41	-12.63/-13.85	-14.57/-18.53	-17.2/-16.26	-16.83/-14.59	-14.67/-13.42	-12.78/-11.62	-9.84/-14.39	-17.78/-16.32	-18.32/-16.13	-15.65/-17.25	-15.39/-9.58	-14.76/-16.08	-19.35/-9.58	-11.29/-15.64	-12.48/-9.07	-7.21/-13.98	-8.14/-6.92	-8.36/-7.15	-10.21/-11.79
Θ (150°)	-12.29/-11.4	-12.22/-13.63	-10.88/-11.55	-11.56/-10.71	-9.45/-8.75	-9.41/-10.8	-10.71/-14.62	-13.19/-17.28	-18.76/-10.58	-10.87/-10.58	-11.01/-14.94	-18.13/-19.04	-18.35/-17.88	-17.85/-14.37	-10.66/-15.81	-16.66/-12.59	-17.37/-17.71	-18.09/-16.91	-13.79/-9.58	-8.83/-12.21	-9.14/-18.2	-8.8/-7.85	-8.48/-7.8	-14.07/-9.84
Θ (157.5°)	-9.26/-9.66	-10.47/-14.04	-17.46/-15	-16.41/-16.99	-11.97/-10.47	-11.51/-11.67	-10.41/-10.93	-11.37/-14.33	-17.65/-16.75	-17.5/-15.88	-18.36/-14.77	-10.8/-11	-10.55/-10.9	-18.62/-15.88	-15.35/-18.75	-18.15/-13.99	-16.79/-18.41	-14.88/-15.53	-14.43/-12.95	-11.62/-12.19	-12.03/-16.58	-14.96/-13	-15.25/-12.59	-13.28/-10.31
Θ (165°)	-10.14/-9.09	-11.73/-13.54	-13.46/-17.27	-17.95/-15.86	-18.41/-18.8	-18.4/-17.95	-18.36/-17.67	-16.41/-13.03	-11.43/-10.69	-13.53/-18.49	-15.12/-12.99	-15.56/-19.17	-18.83/-18.12	-18.97/-14.28	-17.97/-18.09	-18.16/-17.96	-17.94/-16.46	-17.74/-16.84	-18.12/-17.67	-18.73/-18.66	-18.25/-17.69	-17.62/-16.32	-14.79/-13.97	-12.63/-12.65
Θ (172.5°)	-14.93/-15.8	-13.37/-12.67	-10.47/-16.62	-17.48/-17.95	-18.1/-16.91	-13.44/-11.11	-10.67/-11.06	-11.68/-11.56	-12.69/-14.94	-17.95/-15.39	-14.71/-11.48	-11.06/-13.12	-16.02/-17.95	-17.24/-16.84	-18.88/-18.91	-18.27/-19.18	-18.48/-17.38	-18.65/-16.43	-13.95/-13.77	-13.74/-13.17	-17.21/-18.08	-18.1		



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ (165°)	-18.22/-18.75	-16.56/-11.59	-10.6/-11.76	-10.86/-13.24	-18.3/-14.47	-17.14/-11.76	-11.02/-13.65	-15.17/-18.63	-13.15/-11.57	-12.32/-17.57	-17.28/-17.5	-17.68/-18.65	-17.63/-18.77	-18.53/-18.39	-17.38/-18.4	-18.39/-18.01	-18.26/-15.29	-16.23/-15.55	-18.87/-17.4	-18.43/-18.01	-17.75/-18.2	-18.62/-18.59	-15.85/-13.93	-14.54/-17.23
Θ (172.5°)	-15.71/-18.43	-15.34/-13.84	-14.43/-13.07	-12.73/-13.94	-12.82/-11.61	-10.46/-10.35	-11.58/-11.91	-13.32/-18.77	-19.04/-18.97	-18.3/-17.19	-15.57/-16.01	-16.03/-19.1	-17.49/-16.56	-15.64/-15.82	-15.69/-13.29	-13.23/-14.27	-12.61/-17.05	-15.32/-16.07	-14.36/-18.06	-16.79/-18.42	-17.89/-16.84	-13.43/-11.43	-10.19/-11.22	-13.19/-14.24
Θ (180°)	-12.76/-14.51	-12.32/-9.87	-11.29/-9.48	-9.48/-9.89	-8.86/-9.97	-10.11/-11.15	-11.24/-13.26	-15.76/-16.12	-15.84/-17.86	-18.71/-17.98	-17.42/-18.39	-18.01/-18.26	-16.48/-15.57	-14.24/-15.81	-14.08/-15.99	-16.1/-14.37	-12.78/-11.45	-12.61/-10.37	-14.12/-14.93	-18.11/-18.57	-18.48/-17.25	-18.18/-18.47	-18.18/-18.6	-18.33/-17.71
Freq(Hz)	5.6GpPol	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°)	-11.06/-10.25	-11.37/-10.67	-9.8/-11.4	-9.29/-9.09	-9.45/-8.4	-8.53/-8.88	-8.3/-9.77	-11.02/-9.59	-11.43/-12.47	-12.37/-14.03	-13.86/-12.24	-13.49/-11.49	-9.68/-9.19	-9.35/-9.23	-7.86/-8.47	-8.54/-8.64	-9.34/-8.29	-11.22/-10.05	-10.99/-10.48	-11.17/-10.48	-11.16/-10.85	-11.17/-11.52	-10.31/-10.81	
Θ (7.5°)	-9.22/-8.51	-7.91/-9.25	-9.3/-8.91	-10.89/-11.75	-11.53/-11.44	-10.48/-9.19	-7.17/-8.19	-6.16/-6.79	-5.51/-5.53	-6.15/-7.32	-8.46/-8.6	-9.46/-10.02	-9.91/-11.29	-10.41/-10.43	-11.22/-9.1	-8.2/-7.4	-6.75/-5.75	-5.68/-8.01	-7.88/-11.48	-10.62/-13.14	-11.84/-10.15	-10.24/-9.48	-9.26/-9.34	-8.98/-9.32
Θ (15°)	-12.71/-12.2	-12.49/-12.67	-15.05/-16.55	-18.68/-16	-12.08/-9.65	-8.72/-8.14	-9.15/-8.64	-8.9/-8.12	-6.24/-5.2	-4.73/-6.24	-8.51/-11.4	-14.54/-14.68	-13.07/-12.11	-10.57/-9.01	-7.92/-6.75	-7.64/-7.13	-8.52/-9.13	-8.32/-6.39	-6.44/-7.21	-8.32/-8.32	-11.15/-11.71	-9.9/-9.5	-8.45/-9.11	-11.05/-12.76
Θ (22.5°)	-8.06/-11.22	-15.54/-16.73	-15.78/-12.54	-12.21/-14.42	-13.5/-11.2	-8.85/-5.07	-3.93/-3.59	-3.78/-6.57	-8.64/-8.7	-8.29/-8.87	-7.39/-6.79	-6.85/-5.61	-4.68/-4.37	-3.53/-4.93	-4.97/-4.18	-2.04/-0.6	-1.49/-3.12	-4.57/-3.93	-4.98/-6.13	-8.74/-5.02	-3.43/-4.71	-7.78/-9.81	-10.03/-7.95	-7.03/-6.94
Θ (30°)	-4.71/-5.07	-4.78/-6.14	-9.98/-13.69	-9.73/-5.48	-5.06/-4.15	-3.19/-2.16	-4.11/-7.06	-5.91/-4.35	-2.92/-3.85	-4.99/-9.52	-9.6/-9.09	-12.39/-7.79	-7.45/-6.22	-3.09/-1.59	-0.240.03	-0.0300.65	0.15/-0.31	-2.42/-1.26	-2.06/-4.17	-1.98/-1.35	-1.47/-2.85	-6.27/-2.55	-3.14/-2.87	-2.95/-3.38
Θ (37.5°)	-7.59/-7.85	-6.47/-5.46	-4.06/-1.16	-0.29/-1.72	-3.61/-7.65	-8.95/-2.46	-1.09/-2.8	-4.91/-5.91	-5.51/-5.44	-7.28/-5.62	-1.16/-3.78	-4.39/-3.15	-3.7/-1.97	-3.65/-5.55	-5.49/-0.71	-0.38/-0.74	1.290.94	0.16/-1.8	-3.66/-7.42	-5.18/-2.04	-2.22/-2.85	-1.49/-0.27	-3.8/-3.12	-3.54/-5.38
Θ (45°)	-2.55/-3.7	-4.68/-7.85	-4.05/-0.89	-1.88/-4.88	-4.55/-2.21	-4.24/-2.33	-1.68/-3.06	0.21/-0.91	-2.98/-3.79	-2.01/-2.34	-1.91/-15	-1.87/-2.32	-1.790.54	0.02/-0.42	-0.160.46	1.671/7.7	1.120.09	-2.69/-1.56	-0.68/-0.13	-1.25/-1.3	0.31/-2.48	-2.93/-1.6	0.162/1.3	0.53/-1
Θ (52.5°)	-4.7/-1.12	-0.32/-1.36	-1.13/-0.13	0.23/-1.16	-0.17/-0.62	-2.93/-3.63	-3.15/-7.13	-1.24/-2.46	0.050.3	2.05/-3.45	1.03/-0.39	1.221.05	0.22/-1.74	-1.78/-2.13	1.46/1.83	1.964/-2	4/2.69	-0.49/1.07	1.152.58	0.960.08	2.81/-0.38	-1.09/-1.3	2.072.69	0.02/-3.02
Θ (60°)	-2.930.72	-1.1/-0.75	-1.35/-2.29	0.51/-2.7	-0.28/-0.53	0.45/-0.13	-1.46/-4.94	-2.96/-6.16	1.562/0.3	2.14/-2.26	0.31/52	1.992.84	1.260.89	-2.3/-5.49	-0.18/-2.67	1.452/7.7	2.21/1.9	0.01/-1.85	-1.4/-1.32	-0.59/-2.38	0.72/-0.63	2.380.17	-0.17/-0.04	-6.46/-7.92
Θ (67.5°)	-1.76/1.34	0.520.35	-1.56/-1.33	1.262/4.3	0.44/-0.54	-0.530.06	-3.27/-5.27	-4.2/-4.48	0.040.65	1.43/-2.83	-0.840.76	-0.360.35	-1.91/-0.05	0.040.19	-1.02/-1.37	-0.11/-0.91	-0.7/-2.74	-3.07/-13.89	-2.76/-4.42	-2.17/-3.74	-2.59/-0.21	2.95/-0.16	-2.04/-2.45	-6.42/-6.03
Θ (75°)	-2.030.19	-0.80/9	2.080.18	0.812/15	1.6/-0.51	-3.27/-2.04	-3.8/-8.22	-4.76/-2.36	-4.54/-0.08	-1.99/-3.6	-3.35/-0.58	-0.56/-0.52	-5.31/-3.81	-0.20/-37	0.570.17	-0.31/-0.94	-1.54/-2.19	-8.05/-4.73	-6.21/26	-1.28/-2.8	-3.51/-1.33	0.78/-0.19	-4.87/-2.87	-6.78/-4.38
Θ (82.5°)	-3.75/-1.27	-2.380.78	1.97/-0.6	-1.28/-1.2	1.15/-1.08	-5.73/-3.85	-3.22/-10.3	-5.49/-1.56	-6.98/-2.49	-3.79/-6.08	-2.91/-0.75	0.48/-0.21	-6.68/-2.93	-2.64/-1.87	0.65/-0.52	-0.20/-5	0.76/-0.4	-5.72/-0.21	-1.94/-0.37	-0.77/-2.77	-3.84/-1.38	-1.79/-2.15	-6.39/-3.52	-7.75/-6.47
Θ (90°)	-6.49/-3.76	-3.56/-0.11	1.4/-1.89	-4.29/12	-0.13/-1.82	-5.56/-9.57	-2.16/-16.4	-4.58/-2.07	-8.48/-3.96	-7.11/-4.72	-3.55/-2.53	-0.350.48	-5.55/-8.81	-8.08/-5.39	-1.22/-1.55	-1.10/3.8	0.260.13	-4.650.22	-1.09/2.87	-4.88/-2.44	-4.1/-2.36	-9.44/-4.03	-8.2/-6.62	
Θ (97.5°)	-7.15/-3.94	-4.24/-2.06	-0.53/-5.18	-4.25/-0.38	-2.59/-2.21	-7.34/-5.53	-3.25/-13.42	-5.89/-2.37	-8.42/-6.6	-6.48/-5.75	-5.05/-5.62	-2.85/-2.13	-7.32/-9.3	-11.6/-10.1	-2.74/-3.37	-3.2/-0.15	-3.3/-2.5	-8.62/-1.13	-5.070.42	-6.96/-9.86	-4.66/-4.55	-4.36/-3.33	-11.77/-4.24	-9.38/-7.75
Θ (105°)	-8.54/-6.54	-5.77/-4.69	-5.27/-5.51	-4.05/-2.21	-4.28/-2.61	-6.54/-5.8	-4.27/-11.25	-5.08/-3.73	-5.58/-2.66	-4.55/-4.83	-5.33/-13.09	-6.59/-3.52	-9.05/-9.54	-10.34/-8.03	-5.21/-4.99	-5.37/-2.9	-9.37/-10.25	-12.48/-3.22	-10.66/-2.72	-18.43/-10.45	-5.09/-4.75	-3.87/-0.73	-14.31/-18.7	-10.27/-2.99
Θ (112.5°)	-11.73/-9.24	-7.95/-8.08	-9.06/-4.72	-4.57/-6.09	-5.26/-3.04	-8.98/-4.9	-5.47/-9.25	-6.5/-2.97	-5.74/-7.12	-6.81/-6.9	-7.67/-17.52	-12.25/-11.25	-10.21/-12.54	-9.57/-7.65	-5.02/-8.4	-10.39/-5.23	-10.34/-10.78	-19.24/-8.1	-16.47/-5.36	-18.17/-12.26	-9.74/-4.51	-2.53/-7.9	-15.67/-11.53	-10.83/-13.23
Θ (120°)	-14.83/-13.95	-11.26/-12.16	-6.87/-4.48	-5.94/-12.14	-8.89/-6.56	-14.76/-6.44	-5.83/-12.95	-5.34/-4.03	-5.57/-5.69	-8.61/-11.17	-7.18/-8.66	-17.78/-16.64	-15.82/-18.77	-9.45/-6.53	-8.51/-7.81	-11.58/-8.35	-8.07/-8.45	-18.98/-7.12	-11.8/-7.09	-10.91/-7.36	-5.51/-6.09	-5.39/-10.08	-14.5/-16.82	-13.49/-15.37
Θ (127.5°)	-13.88/-9.87	-8.08/-7.35	-7.52/-7.28	-10.33/-8.82	-11.06/-10.43	-12.47/-5.55	-6.18/-12.98	-3.33/-4.4	-7.54/-6.35	-11.65/-13.5	-8.33/-4.89	-14.23/-9.49	-17.9/-15.49	-12.29/-7.42	-13.04/-5.59	-6.4/-10.91	-6.96/-12.22	-17.92/-11.26	-7.97/-10.06	-7.81/-8.96	-3.32/-3.15	-10.04/-5.48	-14.32/-14.13	-14.88/-12.58
Θ (135°)	-12.68/-8.49	-14.37/-12.38	-9.88/-11.66	-10.92/-9.24	-14.4/-16.06	-14.47/-9.42	-8.04/-17.62	-6.16/-7.53	-10.92/-11.45	-7.9/-10.9	-18.08/-8.75	-13.31/-11.6	-12.19/-18.12	-15.13/-7.33	-9.38/-15.77	-9.25/-11.82	-6.39/-13.9	-18.1/-10.45	-6.64/-5.79	-7.01/-8.89	-7.53/-9.18	-9.94/-5.28	-15.83/-14.75	-15.71/-12.3
Θ (142.5°)	-15.05/-15.34	-7.79/-9.37	-8.06/-7.91	-11.19/-18.05	-16.99/-11.55	-9.94/-11.94	-16.5/-18.91	-8.58/-7.06	-11.28/-15.95	-8.55/-9.91	-11.85/-18.72	-17.78/-18.38	-18.98/-17.95	-18.54/-11.2	-9.95/-13.69	-17.9/-18.25	-13.52/-18.91	-18.45/-14.02	-18.10/-10.39	-18.69/-9.03	-18.13/-9.95	-7.81/-9.29	-8.95/-15.2	-15.17/-17.89
Θ (150°)	-13.85/-12.21	-12.34/-12.3	-14.2/-16.84	-15.44/-13.55	-13.72/-13.11	-14.13/-14.36	-17.5/-17.75	-11.46/-10.75	-11.68/-17.3	-18.03/-1.96	-10.5/-13.33	-13.5/-10.54	-18.81/-17.78	-18.16/-15.08	-11.29/-17.87	-16.7/-17.26	-15.88/-18.44	-16.89/-18.41	-11.67/-13.51	-13.74/-9.87	-10.68/-9.02	-12.69/-12.22	-11.21/-14.61	-15.55/-13.88
Θ (157.5°)	-18.79/-13.51	-14.63/-16.19	-14.02/-16.26	-15.5/-10.67	-9/-9.5	-10.43/-15.92	-18.65/-18.65	-14.82/-10.71	-12.19/-17.7	-18.64/-17	-17.49/-17.8	-17.48/-17.46	-18.36/-15.47	-11.4/-16.92	-17.63/-18.71	-15.03/-18.34	-16.32/-18.13	-19.06/-15.49	-13.91/-18.79	-18.53/-12.14	-11.73/-16.71	-16.02/-18.27	-18.06/-17.3	
Θ (165°)	-18.08/-18.68	-17.62/-15.2	-15.09/-13.49	-9.68/-10.7	-12.3/-9.7	-6.54/-9.22	-10.8/-1.45	-10.49/-10.72	-13.85/-13.93	-17.71/-17.57	-17.95/-18.63	-18.91/-18.09	-17.63/-19.36	-18.62/-15.97	-17.42/-18.34	-17.57/-18.69	-17.58/-18.5	-18.76/-17.21	-18.42/-18.24	-19.23/-17.89	-17.97/-18.74	-15.84/-18.21	-16.63/-18.08	-18.48/-17.83
Θ (172.5°)	-16.84/-16.82	-17.29/-15.87	-18.16/-18.46	-18.4/-17.91	-17.07/-18.44	-17.92/-15.28	-13.39/-13.1	-12.08/-11.86	-12.4/-13.79	-18.24/-17.44	-18.08/-18.01	-18.67/-18.64	-18.98/-15.51	-14.54/-15.11	-13.96/-14.83	-15.01/-13.77	-13.63/-11.83	-12.79/-11	-11.33/-11.27	-13.29/-14.53	-17.31/-17.4	-18.3/-18.09	-18.3/-18.02	-18.75/-18.91
Θ (180°)	-16.86/-17.56	-16.9/-18.25	-18.39/-18.23	-18.33/-16	-14.3/-13.78	-12.08/-11.88	-11.79/-12.31	-12.17/-11.8	-10.15/-11.05	-12.97/-13.02	-12.26/-13.03	-14.5/-12.8	-12.29/-13.34	-15.13/-19.07	-18.78/-18.24	-18.2/-18.18	-17.53/-18.68	-16.47/-18.64	-15.69/-15.79	-14/-14.31	-12.68/-13.19	-13.08/-12.98	-11.74/-14.16	-14.65/-14.52
Freq(Hz)	5.785GpPol	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°)	-9.95/-10.22	-10.45/-10.98	-9.73/-10.39	-11.36/-10.63	-11.31/-11.61	-9.84/-8.76	-8.11/-8.2	-6.72/-6.13	-5.6/-6.02	-6.36/-6.78	-7.39/-7.84	-7.99/-8.65	-8.58/-9.33	-11.51/-10.46	-12.88/-12.06	-11.96/-11.46	-10.62/-8.79	-9.34/-8.69	-8.87/-6.88	-7.08/-7.97	-7.6/-7.38	-8.27/-8.28	-8.31/-9.35	-9.04/-9.37
Θ (7.5°)	-5.78/-18.87	-18.39/-14.42	-11.51/-9.61	-8.74/-6.88	-6.03/-7.17	-7.55/-7.54	-9.08/-10.61	-13.13/-14.16	-13.29/-13.73	-14.51/-14.69	-13.75/-12.19	-10.98/-10.99	-10.47/-10.05	-11.43/-10.61	-9.55/-13.83	-15.57/-17.46	-17.8/-16.14	-8.38/-6.68	-6.52/-5.43	-4.74/-6.22	-6.83/-6.97	-8.17/-7.96	-8.44/-9.47	-10.77/-12.67
Θ (15°)	-14.17/-10.95	-9.22/-9.05	-7.48/-7.32	-9.21/-7.29	-7.5/-0.3</																			



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ(15°)	-8.2/-7.6	-7.26/-7.04	-7.13/-7.88	-8.87/-9.49	-9.7/-8.66	-6.68/-5.22	-4.69/-5.7	-7.9/-7.81	-6.07/-5.25	-5.24/-5.2	-4.61/-4.1	-4.01/-4.17	-4.42/-4.61	-4.84/-5.12	-5.4/-5.63	-5.83/-6.14	-6.49/-6.78	-7.08/-7.44	-7.78/-7.73	-7.26/-7.16	-7.29/-7.34	-7.59/-8.24	-9.44/-10.45	-10.31/-9.19
Θ(22.5°)	-3.1/-2.46	-2.1/-2.1	-2.81/-2.47	-6.06/-7.12	-6.99/-5.77	-3.91/-2.29	-1.66/-2.23	-4.37/-6.57	-6.18/-4.38	-3.27/-2.86	-2.31/-1.62	-1.21/-1.37	-1.94/-2.67	-3.23/-3.67	-4.15/-4.87	-6/-7.46	-9.03/-10.48	-11.05/-12.08	-13.15/-13.35	-12.22/-11.24	-10.12/-9.13	-8.2/-7.65	-7.17/-6.38	-5.19/-4.06
Θ(30°)	-2.97/-2.3	-1.77/-1.71	-2.47/-3.63	-4.24/-4.4	-3.47/-2.64	-1.61/-0.66	-0.09/-0.13	-1.13/-2.92	-5.4/-7.7	-0.50/-0.94	-0.70/-0.33	0.85/-0.97	-0.42/-0.56	-1.62/-2.44	-3.09/-4.04	-5.79/-8.43	-11.93/-15.67	-17.58/-18.68	-13.61/-11.05	-8.62/-7.01	-5.93/-5.07	-4.4/-3.71		
Θ(37.5°)	-3.62/-3.41	-2.97/-3.02	-4.07/-4.89	-4.08/-2.94	-2.27/-1.73	-1.3/-1	-0.67/-0.38	-0.53/-1.2	-2.63/-4.08	-2.89/-0.62	0.67/-1.16	1.43/-1.47	0.99/-0.07	-1.14/-2.56	-3.8/-4.95	-6.91/-9.66	-12.82/-14.4	-13.28/-11.1	-9.88/-9.84	-10.78/-12	-12.52/-11.22	-8.95/-7.46	-6.22/-5.12	-4.22/-3.77
Θ(45°)	-0.37/-0.8	-1.38/-1.97	-3.99/-6.5	-5.5/-3.83	-2.92/-2.1	-1.64/-1.57	-1.5/-1.29	-1.12/-0.99	-1.28/-2.33	-2.95/-1.51	0.21/-0.08	1.27/-1.01	0.68/-0.39	-0.45/-2.48	-5.19/-6.87	-8.17/-8.47	-8.04/-8.42	-8.42/-6.53	-5.17/-5.43	-6.97/-8.66	-9.85/-10.53	-9.44/-8.13	-6.95/-5.21	-2.9/-1.04
Θ(52.5°)	2.57/-0.1	1.02/-0.1	-2.06/-5.76	-6.62/-6.76	-4.3/-2.37	-1.32/-1.12	-1.3/-1.47	-1.48/-1.09	-0.79/-1.38	-2.52/-2.21	-0.34/-1.14	1.61/-0.7	0.64/-0.85	-0.41/-1.97	-6.16/-8.91	-8.44/-6.44	-5.22/-5.85	-6.36/-4.45	-2.93/-3.16	-8.56/-10.99	-11.26/-9.19	-6.74/-4	-0.88/-5.5	
Θ(60°)	3.95/-3.53	2.51/-5.5	-0.71/-4.33	-6.44/-7.12	-5.28/-2.68	-1.42/-1.14	-1.25/-1.32	-1.14/-0.7	-0.5/-1.36	-2.89/-3.03	-1.10/-8.2	1.83/-1.68	1.17/-1.11	0.71/-1.34	-5.2/-8.84	-8.62/-6.19	-4.57/-4.83	-5.22/-3.63	-2.06/-1.91	-3.01/-4.37	-5.82/-8.96	-13.28/-11.41	-6.77/-3.04	0.12/-2.82
Θ(67.5°)	3.77/-3.65	2.98/-1.9	-0.51/-4.12	-6.72/-7.45	-4.93/-2.96	-2.18/-1.79	-1.54/-1.25	-0.94/-0.68	-0.92/-2.27	-3.77/-3.33	-1.44/-0.6	2.14/-2.36	1.46/-0.69	0.11/-1.47	-4.14/-7.45	-0.05/-6.94	-4.8/-4.43	-4.55/-3.29	-1.92/-1.94	-3.1/-4.28	-5.32/-7.69	-11.82/-11.75	-6.42/-2.46	0.42/-69
Θ(75°)	2.64/-2.9	2.22/-1.37	-0.78/-3.96	-7.58/-8.52	-5.56/-3.97	-3.03/-2.06	-1.54/-1.38	-1.39/-1.47	-1.76/-2.97	-4.38/-4.09	-2.33/-0.13	1.82/-0.6	0.80/-1	-0.15/-1.47	-3.76/-7.09	-8.81/-7.48	-4.9/-4.45	-4.77/-3.38	-2.08/-2.57	-4.31/-5.51	-6.25/-8.05	-10.78/-10.91	-6.36/-2.55	0.11/-2.06
Θ(82.5°)	1.52/-0.82	0.39/-0.35	-2.02/-4.18	-7.75/-8.55	-6.04/-5.24	-3.95/-2.39	-1.88/-2.06	-2.31/-2.23	-2.19/-3.21	-5.31/-5.64	-3.28/-0.87	0.91/-0.09	0.03/-0.3	-1.01/-2.71	-4.91/-7.48	-8.35/-7.59	-5.83/-5.37	-5.15/-3.38	-2.46/-3.22	-4.23/-4.5	-5.48/-8.05	-11.02/-10.6	-6.65/-3.77	-1.10/-98
Θ(90°)	-0.18/-0.64	-1.69/-3.04	-4.49/-5.51	-8.03/-6.77	-5.93/-6.42	-5.51/-3.47	-2.63/-2.53	-2.43/-2.23	-2.47/-4.14	-7.18/-6.78	-4.18/-2.58	-0.69/-0.36	-0.46/-1.47	-2.39/-3.62	-5.4/-6.98	-7.44/-9.17	-8.29/-7.1	-6.13/-4.55	-4.11/-4.6	-4.63/-4.3	-4.96/-7.52	-11.13/-9.78	-6.44/-5.26	-3.66/-1.4
Θ(97.5°)	-2.88/-2.56	-3.63/-6.3	-8.27/-8.1	-10.58/-7.51	-5.19/-5.89	-5.81/-4.03	-2.88/-2.36	-2.16/-2.26	-3.65/-5.91	-7.58/-6.88	-6.71/-2.59	-1.19/-3.71	-2.19/-5.05	-6.18/-6.18	-6.71/-11.27	-11.93/-9.19	-7.09/-5.78	-5.79/-5.94	-5.58/-5.11	-5.43/-7.83	-13.19/-9.81	-6.53/-6.86	-6.37/-4.33	
Θ(105°)	-5.4/-4.41	-4.56/-7.69	-13.66/-10.49	-12.66/-9.21	-5.34/-5.14	-5.03/-3.99	-3.6/-3.72	-4.15/-5.21	-6.16/-6.62	-7.29/-9.13	-7.54/-3.86	-2.02/-2.32	-4.77/-6.47	-4.83/-4.34	-5.55/-6.33	-7.66/-15.77	-17.23/-9.65	-6.84/-6.58	-7.42/-7.24	-6.81/-6.58	-6.47/-6.2	-15.88/-12.08	-7.83/-8.69	-10.07/-7.59
Θ(112.5°)	-7.5/-6.58	-5.55/-7.43	-17.97/-13.47	-12.67/-10.09	-5.91/-5.69	-6.24/-6.51	-5.37/-6.52	-5.93/-5.94	-5.74/-6.57	-9.33/-11.28	-6.68/-4.68	-4.07/-4.43	-5.44/-6.68	-3.44/-4.59	-7.81/-8.13	-9.77/-18.06	-14.05/-7.92	-6.27/-7.87	-9.03/-7.11	-6.23/-6.78	-8.11/-10.75	-16.23/-14.53	-10.53/-11.1	-11.17/-9.2
Θ(120°)	-6.75/-7.63	-8.57/-9.13	-17.43/-15.52	-11.74/-11.43	-7.13/-4.5	-5.69/-6.27	-6.73/-6.69	-6.31/-5.95	-6.53/-8.64	-11.98/-10.73	-6.91/-5.45	-4.02/-3.3	-4.22/-5.08	-4.92/-6.56	-8.81/-7.76	-9.01/-16.64	-18.79/-10.94	-9.8/-13.67	-13.02/-8.78	-7.69/-8.4	-10.16/-14.94	-17.93/-16.52	-16.08/-17.56	-14.14/-9.6
Θ(127.5°)	-9.13/-8.39	-11.32/-14.66	-19.08/-12.24	-8.7/-10.03	-9.15/-6.59	-5.58/-5.74	-6.63/-7.17	-6.98/-6.54	-7.05/-9.03	-11.49/-10.3	-7.64/-6.81	-4.34/-4.51	-6.02/-5.59	-4.86/-6.25	-7.76/-7.67	-9.26/-14.28	-18.8/-18.83	-18.42/-18.7	-15.2/-12.04	-12.17/-12.67	-13.67/-17.57	-17.46/-17.23	-18.08/-17.45	-14.12/-14.21
Θ(135°)	-18.18/-18.06	-18.85/-18.14	-15.47/-9.52	-6.62/-6.78	-8.51/-9.19	-8.76/-9.22	-10.53/-11	-9.34/-7.58	-7.74/-10.39	-12.69/-10.61	-8.41/-7.27	-6.84/-6.95	-6.26/-4.99	-5.11/-6.93	-8.76/-9.26	-10.3/-13.51	-18.9/-18.97	-17.31/-18.45	-17.96/-18.28	-18.99/-17.7	-18.65/-18.51	-17.8/-17.7	-18.27/-15.64	-14.74/-13.14
Θ(142.5°)	-12.41/-13.16	-12.28/-10.37	-8.18/-6.53	-5.76/-6.21	-7.61/-8.81	-9.11/-9.27	-8.91/-8.22	-7.68/-7.69	-9.10/-85	-9.62/-7.34	-6.75/-7.24	-7.24/-6.51	-6.02/-6.5	-8.21/-11.14	-14.1/-15.22	-14.69/-14.12	-12.92/-11.14	-13.68/-13.98	-11.62/-10.76	-11.93/-13.51	-14.87/-14.92	-14.93/-15.9	-14.95/-12.9	
Θ(150°)	-9.77/-8.42	-7.42/-6.67	-5.94/-5.47	-5.64/-6.61	-8.01/-9.11	-9.43/-9	-8.02/-7.02	-6.46/-6.76	-8.37/-9.76	-8.46/-7.02	-6.93/-7.36	-6.77/-6.22	-6.84/-8.64	-11.75/-15.34	-16.18/-14.45	-12.32/-10.73	-9.49/-8.45	-8.27/-9.12	-10.66/-10.68	-9.25/-8.34	-9.18/-11.1	-12.68/-12.4	-11.13/-10.69	-11.08/-11.03
Θ(157.5°)	-0.15/-8.94	-8.83/-8.84	-8.39/-7.67	-7.14/-6.92	-7.18/-7.86	-8.51/-8.78	-8.96/-9.27	-10.17/-12.2	-17.55/-10.62	-11.28/-9.86	-9.03/-7.37	-5.87/-5.75	-6.67/-8.18	-9.69/-10.92	-11.62/-11.89	-11.99/-11.98	-11.84/-11.61	-11.99/-13.18	-14.36/-14.21	-12.82/-11.86	-12.89/-16.2	-17.72/-14.16	-11.66/-10.25	-9.63/-9.29
Θ(165°)	-15.52/-15.61	-15.12/-14.28	-12.87/-10.97	-9.28/-7.92	-7.28/-7.25	-7.23/-7.64	-9.03/-11.75	-16.22/-16.35	-13.15/-11.48	-10.81/-9.83	-8.24/-7.05	-6.69/-7.41	-8.67/-10.15	-11.94/-13.81	-15.68/-17.14	-18.39/-18.83	-18.17/-18.84	-18.14/-18.23	-17.75/-17.86	-17.54/-18.49	-17.99/-18.6	-18.21/-18.14	-17.58/-16.51	-15.77/-15.36
Θ(172.5°)	-13.94/-12.09	-10.43/-9.61	-9.31/-9.13	-8.85/-8.39	-8.27/-8.6	-8.62/-8.98	-9.53/-10.04	-10.33/-9.78	-9/-9.02	-9.53/-9.7	-9.3/-9.29	-10.11/-41	-13.2/-14.91	-15.94/-15.31	-14.71/-14.28	-13.91/-13.83	-13.41/-13.84	-12.95/-13.21	-13.71/-14.36	-14.93/-14.68	-13.62/-12.35	-11.85/-12.18	-12.97/-13.78	-14.73/-15.19
Θ(180°)	-8.91/-8.8	-7.71/-7.27	-7.37/-7.81	-8.05/-8.23	-8.69/-9.59	-10.01/-10.21	-10.28/-10.08	-9.77/-9.42	-9.36/-9.94	-10.5/-10.41	-9.92/-10.1	-10.45/-10.27	-9.58/-8.85	-8.49/-8.49	-8.77/-9.15	-9.6/-8.88	-10.09/-10.46	-10.92/-11.45	-11.67/-11.19	-10.49/-9.95	-9.67/-9.41	-9.06/-8.93	-8.77/-8.55	-8.55/-8.85
Freq(Hz)	5.2GPol.	PhiAnt. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.44/-4.25	-4.13/-4.11	-4.4/-4.46	-4.33/-4.06	-4.45/-5.95	-7.08/-8.24	-9.63/-10.12	-12.24/-18.3	-19.47/-17.47	-17.89/-14.46	-11.51/-10.22	-8.54/-6.76	-5.56/-4.81	-4.33/-3.8	-3.66/-4.05	-4.07/-4.23	-4.57/-5.03	-6.81/-8.11	-9.11/-11	-13.85/-16.61	-18.37/-18.27	-18.52/-11.47	-8.76/-6.67	-7.45/-5.74
Θ(7.5°)	-4.84/-4.9	-4.78/-4.8	-5.26/-5	-5.11/-5.16	-6.07/-7.07	-7.97/-10.48	-16.38/-17.97	-15.84/-14.1	-11.72/-9.28	-7.77/-6.91	-6.83/-6.66	-6.28/-5.94	-6.89/-7.22	-7.14/-7.38	-7.28/-7.18	-7.39/-8.44	-10.18/-12.05	-12.3/-12.12	-11.81/-13.24	-13.36/-11.36	-12.12/-9.99	-8.9/-7.59	-6.89/-6.45	
Θ(15°)	-5.61/-6.27	-6.54/-8.14	-6.93/-10.34	-11.78/-11.49	-11.47/-10.84	-10.97/-11.14	-12.14/-6.15	-16.25/-18.79	-17.12/-18.71	-11.23/-9.14	-9.74/-8.14	-6.64/-7.74	-5.54/-5.78	-6.88/-4.03	-3.25/-3.19	-3.71/-4.74	-6.39/-9.97	-12.21/-66	-12.56/-18.9	-17.94/-12.95	-8.82/-8.41	-7.38/-8.32	-8.32/-9.21	-8.92/-6.06
Θ(22.5°)	-7.56/-7.22	-6.61/-8.56	-10.74/-10	-8.1/-8.17	-9.42/-14.54	-17.34/-13.93	-14.85/-15.85	-17.57/-18.72	-15.86/-16.2	-18.02/-18.4	-14.29/-9.84	-8.79/-8.26	-7.42/-6.54	-4.29/-3.37	-3.61/-4.78	-4.99/-5.16	-7.2/-12.11	-15.62/-10.39	-11.13/-11.34	-12.86/-18.4	-10.54/-11.67	-10.88/-7.82	-6.99/-4.89	-6.02/-8.48
Θ(30°)	-5.94/-10.08	-8.37/-8.08	-11.5/-16.02	-10.75/-10.44	-11.62/-18.08	-17.89/-12.9	-10/-11.91	-13.77/-13.94	-18.12/-18.85	-18.62/-18.03	-17.85/-13.88	-10.21/-8.37	-6.78/-4.5	-4.26/-68	-6.53/-5.04	-5.67/-6.24	-7.44/-11.96	-9.63/-11.42	-17.27/-14.7	-14.08/-16.69	-14.05/-7.17	-6.01/-5.07	-3.64/-4.17	
Θ(37.5°)	-5.01/-7.83	-8.74/-8.6	-9.41/-11.02	-13.96/-17.96	-14.72/-15.8	-18.84/-10.37	-9.14/-12.97	-18.64/-9.45	-7.29/-8.95	-9.71/-14.46	-17.89/-15.88	-11.93/-11.19	-7.19/-5.44	-4.15/-4.54	-3.64/-3.48	-4.87/-6.33	-9.07/-5.71	-5.24/-9.12	-5.43/-7.19	-17.42/-9.37	-15.97/-13.68	-10.29/-6.78	-7.29/-9.72	-9.83/-5.7
Θ(45°)	-8.73/-7.42	-14.72/-12.48	-12.99/-9.92	-10.02/-18.26	-13.88/-13.48	-17.39/-11.95	-13.43/-17.83	-10.68/-8.32	-7.66/-5.13	-6.09/-9.88	-12.85/-13.39	-12.83/-18.2	-12.57/-6.84	-5.69/-3.95	-5.15/-7.11	-12.62/-14.87	-16.63/-17.85	-13.54/-9.51	-8.04/-7.27	-7.9/-10.7	-16.14/-6.57	-9.78/-12.33	-8.82/-4.71	-3.04/-9.44
Θ(52.5°)	-9.63/-6.76	-11.94/-10.61	-17.26/-16.72	-14.4/-18.52	-15.99/-15.78	-14.84/-15.5	-18.02/-14.7	-9.28/-8.79	-3.55/-6.36	-9.28/-12.75	-14.85/-14.12	-16.93/-6.22	-6.88/-14.78	-14.62/-13.25	-17.12/-12.3	-18.51/-9.81	-13.15/-7.75	-6.38/-12.92	-13.86/-8.22	-17.07/-7.77	-7.05/-7.1	-5.18/-5.5		
Θ(60°)	-11.31/-8.05	-11.74/-7.59	-12.34/-16.73	-18.3/-18.43	-15.97/-17.37	-13.6/-17.71	-15.3/-11.1	-9.2/-7.5	-3.98/-3.89	-4.14/-4	-9.63/-15.05	-18.32/-18.95	-18.75/-9.51	-7.39/-6.6	-8.05/-12.75	-12.12/-11.63	-15.53/-9.28	-18.86/-7.64	-18.17/-11.04	-13.18/-7.99	-12.91/-14.92	-9.84/-4.36	-3.59/-5.91	-7.15/-4.62
Θ(67.5°)	-10.1/-11.94	-12.44/-8.8	-15.01/-13.59	-14.88/-18.39	-13.69/-18.49	-13.97/-17.34	-15.86/-13.62	-8.13/-6.85	-4.81/-6.63	-5.6/-5.33	-9.27/-12.38	-17												



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ(67.5°)	-11.3/-7.33	-5.76/-4.91	-2.44/-5.82	-7.03/-6.08	-3.33/-6.44	-4.78/-4.6	-4.9/-2.38	-2.97/-0.11	-1.67/-4.09	-2.34/-1.85	-1.35/-0.01	-0.49/-2.52	-2.96/-4.11	-1.15/-3.22	0.29/-3.05	0.05/0.3	0.09/-3.05	-3.11/-4.53	-7.84/-6.54	-6.55/-4.07	-3.09/-0.36	0.45/-0.74	0.9/-1.59	-2.88/-5.23
Θ(75°)	-5.67/-7.3	-3.23/-5.26	-3.59/-7.27	-3.78/-6.43	-5.46/-8.06	-5.69/-3.45	-3.25/-0.89	-0.95/-1.44	-3.01/-3.65	-4.06/-4.01	-3.42/-1.05	0.13/-3	-5.16/-5.65	-5.19/-4.45	-3.36/-2.37	0.98/-1.97	0.86/-5.19	-1.46/-1.94	-0.51/-8.77	-11.68/-1.95	-1.15/-1.33	0.56/0.97	0.97/-3.18	-6.7/-7.41
Θ(82.5°)	-6.25/-4.98	-3.32/-5.32	-4.36/-9.06	-3.11/-7.16	-7.48/-8.2	-6.17/-3.03	-5.59/-6.4	-1.37/-1.79	-4.36/-3.22	-5.26/-5.75	-5.27/-1.47	-0.8/-4.32	-5.89/-6.34	-7.39/-7.3	-4.63/-1.14	-0.29/-2.99	-0.26/-7	-0.29/-1.22	-1.84/-6.38	-6.82/-1.24	-1.31/-94	0.02/0.53	0.45/-6.65	-16.44/-8.92
Θ(90°)	-8.07/-5.98	-5.02/-6.54	-6.45/-10.81	-3.98/-7.55	-12.44/-9.15	-6.86/-3.49	-4.93/-1.95	-2.61/-2.15	-3.91/-3.97	-5.26/-8.46	-6.11/-3.25	-1.84/-5.05	-5.9/-7.51	-7.38/-9.59	-5.83/-1.32	-0.41/-5.49	-1.1/-9.07	-2.53/-2.37	1.4/-3.93	-7.32/-3.51	-2.31/-0.08	-1.64/-1.31	-1.09/-11.44	-17.71/-9.39
Θ(97.5°)	-9.63/-7.07	-7.78/-9.13	-8.95/-13.68	-5.41/-9.24	-11.7/-8.3	-7.79/-4.86	-6.86/-3.06	-4.77/-3.94	-4.16/-4.44	-5.54/-8.73	-6.77/-4.45	-3.85/-6.3	-6.86/-7.29	-7.39/-2.47	-1.32/-6.79	-5.15/-5.04	-0.21/-6.89	-10.53/-8.2	-5.46/-2.33	-4.39/-3.16	-2.4/-2.41	-15.16/-10.26	-18.06/-10.26	
Θ(105°)	-9.01/-11.06	-10.36/-13.94	-10.36/-12.66	-8.36/-11.97	-11.73/-9.16	-7.97/-6.16	-7.68/-5.41	-5.95/-6.1	-4.88/-5.14	-6.78/-8.41	-8.27/-5.74	-5.36/-6.05	-7.05/-6.39	-8.19/-9.25	-7.54/-4.4	-2.28/-6.84	-8.24/-12.61	-14.19/-10.63	-4.67/-8.77	-12.49/-16.29	-8.86/-5.39	-8.15/-5.5	-5.96/-13.23	-17.63/-10.37
Θ(112.5°)	-12.29/-16.65	-14.97/-18.11	-10.81/-9.93	-11.98/-17.11	-11.39/-9.97	-8.18/-8.52	-8.57/-8.04	-9.28/-8.21	-6.24/-6.71	-6.06/-8.66	-7.08/-9.71	-6.82/-7.07	-7.64/-8.11	-7.82/-14.08	-8.64/-7.3	-3.61/-8.17	-7.2/-15.74	-17.62/-18.35	-7.76/-13.25	-13.58/-14.26	-12.79/-6.59	-7.89/-8.19	-11.75/-16.52	-13.64/-13.82
Θ(120°)	-15.57/-19.18	-18.39/-15.67	-8.79/-13.87	-15.41/-14.69	-12.41/-12.33	-7.79/-8.49	-11.66/-9.4	-11.32/-8.86	-6.82/-6.72	-9.64/-8.39	-6.27/-10.17	-8.46/-10.7	-13.7/-12.07	-9.37/-11.03	-12.99/-7.73	-5.52/-4.14	-10.68/-14.55	-12.72/-14.93	-6.79/-12.72	-11.65/-16.43	-18.21/-11.51	-9.5/-11.2	-18.57/-12.5	-14.03/-15.52
Θ(127.5°)	-10.2/-14.06	-15.76/-14.22	-16.4/-17.97	-14.41/-15.85	-16.09/-18.92	-15/-13.96	-18.19/-9.83	-8.96/-11.12	-6.39/-5.96	-8.91/-8.86	-9.57/-9.28	-10.47/-10.6	-11.48/-9.19	-10.7/-7.89	-12.2/-12.4	-5.52/-3.14	-8.76/-16.75	-10.37/-14.21	-9.67/-18.65	-17.13/-13.63	-19.22/-12.77	-12.42/-9.76	-17.98/-18.43	-18.25/-14.47
Θ(135°)	-16.17/-15.99	-17.78/-17.8	-18.49/-17.01	-15.23/-16.51	-16.09/-15.39	-12.05/-11.35	-10.15/-10.3	-8.31/-9.84	-11.64/-10.59	-7.49/-8.64	-12.19/-14.17	-7.95/-11.69	-8.57/-11.48	-12.85/-10.09	-11.77/-9.44	-13.98/-5.62	-8.79/-12.65	-8.67/-8.68	-9.5/-13.7	-15.85/-15.88	-15.9/-17.83	-12.18/-18.32	-17.24/-10.45	-18.07/-17.74
Θ(142.5°)	-11.96/-12.87	-12.36/-13.94	-17.32/-17.92	-18.47/-18.12	-18.4/-18.1	-19.04/-13.57	-11.94/-11.44	-11.86/-14.05	-10.83/-10.86	-11.81/-12.81	-10.06/-8.48	-12.04/-13.55	-16.51/-12.79	-12.14/-11.51	-10.43/-8.74	-10.13/-12.94	-10.97/-13.98	-16.69/-18.74	-10.72/-10.88	-17.89/-17.77	-16.13/-13.23	-19.24/-18.79	-16.06/-13.92	-17.16/-10.58
Θ(150°)	-15.88/-17.76	-17.95/-17.52	-13.14/-10.5	-15.2/-17.79	-17.91/-13.08	-11.57/-11.53	-10.74/-11.51	-10.64/-11.54	-10.76/-10.11	-10.81/-12.67	-10.06/-10.88	-13.49/-11.02	-9.84/-11.51	-8.03/-10.58	-9.32/-12.9	-16.44/-17.38	-13.73/-16.02	-18.14/-18.76	-17.57/-18.47	-18.09/-17.33	-16.44/-18.73	-15.52/-15.25	-19.29/-18.46	
Θ(157.5°)	-16.09/-12.18	-12.04/-14.15	-18.05/-17.81	-16.75/-12.31	-10.38/-11.76	-11.53/-14.3	-12.45/-10.4	-10.74/-14.89	-18.17/-17.52	-17.74/-13.05	-13.12/-13.41	-15.37/-17.76	-18.66/-18.16	-14.49/-12.3	-13.68/-11.87	-10.96/-16.78	-17.85/-13.73	-12.67/-13.94	-15.73/-15.36	-18.01/-17.66	-17.82/-18.91	-17.67/-18.72	-18.97/-18.96	-16.34/-14.79
Θ(165°)	-17.45/-15.67	-14.5/-13.56	-11.32/-9.6	-8.18/-8.59	-11.13/-10.5	-13.77/-14.58	-13.67/-11.17	-14.62/-10.57	-10.64/-11.14	-12.06/-13.97	-13.88/-14.88	-15.99/-14.76	-13.54/-16.57	-18.7/-18.42	-19.01/-15.03	-15.89/-19.19	-17.85/-17.61	-17.3/-18.37	-17.82/-12.27	-16.70/-14.98	-11.87/-12.31	-14.68/-17.84	-19.33/-17.37	-18.18/-19.26
Θ(172.5°)	-17.96/-19.04	-17.89/-18.31	-15.61/-15.51	-15.39/-16.12	-18.97/-15.64	-16.63/-18.63	-16.83/-18.88	-19.04/-17.89	-18.12/-18.85	-18.4/-18.12	-14.2/-14.5	-14.2/-16.86	-18.28/-16.7	-17.73/-18.26	-17.75/-16.95	-16.3/-17.86	-19.32/-17.77	-16.69/-17.61	-19.3/-17.61	-17.74/-18.03	-18.44/-18.57	-19.18/-18.43		
Θ(180°)	-18.04/-19.18	-18.43/-17.44	-19.27/-17.82	-18.23/-18.13	-18.61/-15.54	-17.53/-15.74	-14.93/-18.77	-17.92/-14.89	-13.23/-13.95	-14.91/-16.02	-18.38/-18.7	-18.59/-19.37	-19.16/-18.34	-18.77/-19.03	-17.65/-18.6	-18.89/-18.07	-18.64/-14.5	-12.79/-15.62	-17.65/-16.91	-18.46/-17.93	-16.3/-17.7	-17.24/-18.29	-16.86/-17.53	-18.26/-18.85
Freq(Hz)	5.66/Pol.	Phi/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-9.52/-8.87	-9.04/-9.01	-8.05/-8.21	-9.14/-9.79	-10.87/-12.06	-15.06/-14.49	-19.27/-18.93	-19.03/-18.8	-18.49/-12.88	-12.7/-11.29	-9.92/-8.29	-7.59/-7.48	-6.74/-6.67	-7.17/-6.89	-6.54/-6.83	-8.35/-9.82	-10.02/-10.13	-11.43/-15.35	-15.9/-16.17	-18.69/-19.24	-19.12/-16.63	-14/-14.36	-11.86/-9.63	-10/-10.22
Θ(7.5°)	-6.64/-6.61	-6.49/-6.76	-6.98/-6.02	-10.14/-12.24	-13.3/-12.68	-14.06/-18.47	-18.22/-17.39	-18.03/-17.7	-17.92/-15.21	-13.92/-14.03	-11.46/-10.17	-9.26/-8.71	-9.51/-8.87	-8.14/-7.26	-7.09/-7.79	-7.98/-9.1	-9.61/-10.63	-12.69/-16.2	-18.5/-14.76	-18.4/-18.24	-15.88/-18.24	-17.85/-12.45	-12.32/-14.4	-6.47/-7.59
Θ(15°)	-13.48/-17.93	-14.88/-12.77	-12.17/-12.6	-13.69/-12.34	-15.27/-16.8	-17.53/-17.68	-17.53/-17.68	-17.53/-17.68	-18.23/-16.55	-15.27/-15.29	-14.94/-11.49	-10.47/-9.85	-9.87/-10.1	-10.63/-10.29	-9.65/-7.88	-8.25/-5.09	-4.81/-6.21	-9.37/-12.74	-17.32/-17.97	-18.4/-18.16	-15.79/-12.71	-10.72/-10.27	-9.26/-7.88	-8.99/-14.85
Θ(22.5°)	-9.59/-12.54	-14.52/-13.87	-15.16/-16.79	-18.88/-17.48	-19/-19.4	-18.23/-18.98	-17.74/-19.1	-15.77/-14.92	-14.56/-15.07	-17.39/-17.49	-17.17/-17.83	-14.08/-13.48	-13.86/-9.93	-8.53/-7.84	-7.15/-6.9	-8.54/-10.39	-8.96/-7.19	-8.33/-14.06	-18.94/-15.74	-10.78/-17.46	-16.67/-9.16	-9.27/-11.65	-10.59/-9.55	-7.59/-9.52
Θ(30°)	-16.78/-12.69	-12.32/-18.46	-19.04/-18.17	-17.86/-19.4	-15.12/-13.7	-17.55/-13.3	-16.35/-19	-16.01/-11.65	-10.81/-10.21	-11.34/-18.17	-19.14/-18.13	-17.04/-18.02	-10.21/-13.7	-12.31/-7.3	-8.88/-8.04	-7.53/-9.39	-8.58/-11.03	-14.73/-14.25	-17.53/-18.13	-12.34/-11.12	-17.41/-15.32	-14.67/-12.04	-10.39/-17.37	-5.15/-11.42
Θ(37.5°)	-10.25/-17	-10.49/-17.12	-18.47/-18.58	-15.66/-14.44	-18.95/-15.53	-14.17/-17.61	-16.76/-18.66	-14.05/-13.23	-12.37/-8.2	-12.66/-18.66	-8.71/-13.82	-10.98/-18.52	-17.31/-11.85	-12.87/-12.67	-9.67/-9.75	-10.49/-7.43	-8.89/-8.46	-5.89/-7.66	-11.5/-7.65	-12.65/-9.47	-16.58/-10.85	-15/-17.07	-9.68/-3.88	-7.54/-16.12
Θ(45°)	-10.79/-14.21	-19/-16.37	-16.48/-18.48	-17.04/-11.12	-14.57/-16.54	-18.48/-18.45	-17.53/-17.84	-13.77/-9.57	-6.42/-5.74	-6.79/-8.3	-15.27/-18.29	-18.7/-16.86	-15.31/-17.75	-10.76/-13.4	-7.21/-10.55	-8.44/-16	-14.74/-7.38	-8.86/-8.39	-3.65/-5.52	-5.78/-18.81	-18.42/-7.31	-10.18/-11.97	-11.28/-6.43	-5.49/-12.69
Θ(52.5°)	-11.45/-11.67	-16.87/-15.99	-17.31/-18.51	-18.65/-13.85	-11.5/-15.81	-16.51/-15.99	-18.19/-17.56	-10.52/-8.11	-6.69/-7.15	-7.62/-7.03	-9.42/-16.38	-18.03/-16.72	-17.73/-18.61	-12.19/-15.8	-8.87/-10.7	-14.49/-14.21	-14.76/-18.36	-5.46/-16.35	-4.46/-11.16	-4.61/-17.93	-18.82/-5.64	-12.46/-12.04	-7.85/-4.97	-6.92/-9.45
Θ(60°)	-11.19/-15.03	-12.95/-12.05	-18.43/-18.34	-13.25/-18.34	-13.17/-13.18	-16.54/-19.74	-17.75/-17.62	-15.38/-14.67	-6.22/-5.76	-7.27/-6.2	-9.96/-12.49	-12.91/-13.72	-15.58/-17.92	-18.55/-12.24	-13.43/-17.82	-7.56/-15.73	-18.53/-18.16	-11.63/-17.51	-13.2/-18.77	-5.04/-18.05	-9.76/-14.21	-5.05/-9.05	-6.1/-11.52	-7.28/-14.51
Θ(67.5°)	-12.68/-7.58	-10.13/-9.19	-13.03/-15.8	-10.12/-13.91	-19.33/-14.63	-18.91/-9.17	-11.88/-18.15	-19.2/-14.02	-5.92/-7.18	-8.45/-9.45	-8.3/-11.62	-12.18/-8.81	-11.14/-18.62	-14.95/-13.38	-14.9/-17.19	-9.01/-13.71	-14.35/-17.39	-10.93/-15.53	-11.05/-16.78	-9.89/-9.18	-6.1/-18.46	-9.87/-11.02	-15.98/-10.21	-6.45/-14.51
Θ(75°)	-6.43/-3.7	-5.73/-6.24	-15.24/-19.02	-15/-13.61	-17.95/-17.21	-18.12/-10.76	-9.42/-14.97	-11.72/-14.77	-7.1/-7.53	-8.44/-9.97	-9.14/-9.89	-12.57/-9.2	-10.8/-15.15	-18.68/-15.1	-18.44/-8.41	-14.8/-9.38	-17.99/-10.98	-10.06/-14.88	-12.36/-11.82	-18.91/-9.25	-8.46/-16.46	-5.73/-13.83	-12.29/-11.48	-7.06/-7.33
Θ(82.5°)	-4.17/-3.23	-4.54/-5.28	-9.68/-18.87	-19.11/-14.91	-15.64/-18.87	-16.56/-10.72	-10.98/-14.34	-11.01/-18.28	-10.12/-7.15	-10.29/-8.82	-8.45/-12.79	-13.14/-11.21	-11.05/-16.92	-17.91/-18.67	-17.91/-10.38	-12.09/-7.28	-14.8/-13.15	-12.44/-10.47	-9.7/-14.01	-11.72/-9.71	-8.58/-13.37	-6.18/-18.08	-6.88/-12.34	-9.2/-4.7
Θ(90°)	-3.49/-4.26	-4.21/-5.54	-9.28/-13.96	-17.98/-18.64	-16.57/-18.96	-16.84/-11.18	-12.12/-15.35	-11.97/-18.36	-10.45/-6.65	-11.11/-10.19	-9.8/-13.94	-14.24/-13.02	-11.72/-14.44	-17.64/-18.15	-14.65/-9.24	-13.45/-8.88	-8.97/-10.72	-11.13/-9.51	-17.69/-15.18	-12.91/-12.71	-11.26/-10.51	-8.46/-14.9	-6.08/-10.74	-9.36/-4.33
Θ(97.5°)	-4.73/-5.69	-5.21/-8.78	-10.24/-16.03	-19.37/-18.9	-12.69/-18.72	-16.57/-13.31	-13.18/-15.53	-13.49/-18.03	-10.46/-7	-13.35/-10.29	-11.94/-12.32	-13.99/-11.41	-11.65/-14.67	-18.42/-19.13	-16.83/-11.01	-13.56/-9.05	-7.65/-9.93	-10.74/-10.59	-15.05/-17.54	-11.69/-10.82	-17.77/-10.38	-10.68/-11.14	-7.26/-13.59	-8.2/-3.55
Θ(105°)	-8/-7.49	-8.81/-12.3	-12.84/-17.31	-17.51/-18.28	-12.17/-17.34	-18/-15.88	-16.2/-19.12	-16.02/-16.99	-10.6/-8.35	-16/-13.83	-12.17/-15.79	-13.04/-11.56	-12.09/-11.11	-18.74/-16.36	-14.54/-13.63	-15.13/-10.68	-11.31/-9	-11.59/-10.7	-18.97/-18.68	-17.21/-17.99	-18.85/-11.96	-18.22/-8.5	-10.84/-16.34	-10.41/-6.42
Θ(112.5°)	-10.78/-12.74																							



Radiated Composite Gain Data_Radio 1 (4TX)

Appendix A.1

Θ (120°)	-18.87/-15.6	-18.49/-12.08	-12.22/-18.42	-15.7/-7.28	-7.88/-8.8	-7.97/-6.7	-10.27/-12.51	-6.87/-5.48	-8.82/-9.73	-12.87/-10.18	-6.07/-5.09	-5.47/-9.93	-9.09/-9.67	-5.51/-6.21	-6.18/-7.61	-5.7/-3.21	-7.63/-6.55	-13.31/-9.26	-10.38/-14.72	-18.06/-16.4	-17.56/-6.42	-6.64/-10.83	-16.51/-5.96	-18.22/-18.84
Θ (127.5°)	-18.92/-12.66	-15.93/-17.32	-18.92/-16.44	-14.39/-8.75	-9.04/-9.47	-9.02/-13.96	-15.88/-17.66	-9.52/-5.48	-10.42/-13.65	-9.82/-8.33	-9.35/-4.71	-5.95/-6.25	-8.45/-6.92	-7.14/-6.83	-8.57/-7.6	-6.28/-3	-6.56/-8.62	-18.3/-12.41	-12.11/-12.26	-19.05/-16.74	-9.46/-7.45	-11.94/-11.44	-9.57/-6.63	-18.91/-18.42
Θ (135°)	-12.84/-14.25	-17.99/-13.24	-11.1/-14.2	-19.18/-12.02	-16.39/-17.29	-17.03/-17.59	-19.05/-17.05	-13.65/-12.35	-6.4/-8.7	-10.04/-10.4	-8.31/-11.03	-9.67/-10.63	-17.42/-11.74	-7.61/-7.94	-7.02/-7.93	-8.94/-9.51	-11.78/-10.92	-13.75/-14.55	-19.95/-18.36	-13.63/-10.51	-13.13/-18.03	-13.15/-11.32	-17.8/-15.72	
Θ (142.5°)	-12.73/-11.68	-13.11/-14.06	-17.68/-17.71	-16.54/-13.72	-18.15/-17.52	-18.45/-17.82	-18.5/-17.92	-14.19/-10.35	-8.07/-7.54	-8.11/-8.38	-8.83/-7.59	-5.98/-6.8	-9.18/-12.61	-8.99/-9.49	-7.3/-7.68	-7.09/-14.49	-18.02/-12.94	-15.65/-18.66	-18.93/-17.58	-17.21/-18.05	-11.42/-19.12	-18.68/-17.3	-10.43/-13.13	-18.98/-18.89
Θ (150°)	-18.38/-11.49	-14.24/-14.56	-13.71/-16.26	-18.81/-5	-13.65/-19.36	-18.07/-14.95	-16.45/-17.74	-11.62/-10.07	-11.38/-10.64	-8.42/-7.96	-9.04/-9.6	-10.87/-11.72	-12.29/-17.55	-11.18/-17.7	-10.04/-8.51	-9.22/-9.42	-12.79/-13.12	-14.65/-14.33	-12.17/-18.63	-17.42/-17.14	-18.52/-18.15	-16.43/-17.41	-14.24/-18.63	-14.95/-14.13
Θ (157.5°)	-16.21/-15.9	-18.84/-18.93	-14.71/-11.86	-9.28/-9.15	-9.32/-15.95	-16.82/-12.32	-13.19/-16	-17.76/-17.6	-13.26/-12.71	-12.36/-11.88	-10.14/-9.16	-9.52/-9.2	-10.03/-10.47	-9.23/-11.39	-14.4/-11.67	-11.18/-12.2	-13.83/-18.28	-18.55/-15.14	-14.46/-18.81	-18.67/-17.91	-15.89/-13.6	-15.02/-18.38	-18.08/-16.83	-17.95/-18.7
Θ (165°)	-14.56/-12.21	-12.44/-11.39	-11.25/-11.97	-15.19/-17.17	-17.81/-18.85	-17.56/-13.85	-16.82/-14.21	-17.81/-18.79	-18.16/-17.14	-18.75/-16.45	-14.53/-15.77	-18.15/-18.43	-17.19/-17.83	-18.8/-16.69	-11.68/-11.41	-13/-18.58	-18.4/-18.43	-15.01/-13.8	-18.28/-18.61	-17.67/-17.99	-15.3/-14	-13.13/-18.46	-18.9/-19.23	-18.22/-17.86
Θ (172.5°)	-15.45/-15.07	-14.78/-13.63	-16.23/-16.94	-16.27/-17.29	-17.24/-17.86	-16.55/-18.51	-16.4/-18.97	-17.1/-17.55	-18.51/-15.82	-14.74/-14.97	-15.69/-15.93	-13.56/-13.88	-18.78/-17.47	-18.81/-17.94	-17.41/-17.43	-17.79/-14.73	-12.9/-14.76	-15.16/-16.27	-17.91/-18.34	-18.53/-17.95	-18.27/-19	-18.77/-18.7	-17.42/-16.03	-15.73/-16.33
Θ (180°)	-13.82/-13.29	-13.49/-11.72	-11.42/-13.11	-12.19/-11.24	-13.1/-14.01	-13.34/-13.86	-18.35/-18.94	-18.45/-15.77	-15.48/-14.24	-18.45/-15.77	-14.72/-13.59	-11.5/-9.76	-10.06/-13.08	-15.05/-15.29	-14.41/-14.37	-16.04/-15.5	-16.19/-18.34	-17.02/-17.77	-18.37/-18.31	-18.93/-17.94	-17.05/-17.15	-15.28/-15.36	-16.14/-14.98	
Freq(Hz)	2.45GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)°Φ(7.5°)	Φ(15°)°Φ(22.5°)	Φ(30°)°Φ(37.5°)	Φ(45°)°Φ(52.5°)	Φ(60°)°Φ(67.5°)	Φ(75°)°Φ(82.5°)	Φ(90°)°Φ(97.5°)	Φ(105°)°Φ(112.5°)	Φ(120°)°Φ(127.5°)	Φ(135°)°Φ(142.5°)	Φ(150°)°Φ(157.5°)	Φ(165°)°Φ(172.5°)	Φ(180°)°Φ(187.5°)	Φ(195°)°Φ(202.5°)	Φ(210°)°Φ(217.5°)	Φ(225°)°Φ(232.5°)	Φ(240°)°Φ(247.5°)	Φ(255°)°Φ(262.5°)	Φ(270°)°Φ(277.5°)	Φ(285°)°Φ(292.5°)	Φ(300°)°Φ(307.5°)	Φ(315°)°Φ(322.5°)	Φ(330°)°Φ(337.5°)	Φ(345°)°Φ(352.5°)
Θ (0°)	-5.97/-6.61	-7.42/-8.59	-10.15/-18.78	-11.12/-11.12	-9.98/-13.61	-7.03/-6.12	-5.34/-6.1	-3.92/-3.35	-2.98/-2.71	-2.44/-2.35	-2.53/-2.93	-3.5/-4.54	-8.41/-8.9	-9.22/-9.73	-10.45/-10.8	-10.58/-9.73	-8.3/-6.79	-5.45/-4.44	-3.7/-3.21	-2.92/-2.86	-3.02/-3.34	-3.76/-4.26	-4.71/-5.16	
Θ (7.5°)	-5.9/-6.46	-7.32/-8.76	-10.24/-11.15	-10.54/-8.73	-7.07/-5.9	-5.05/-4.43	-3.96/-3.62	-3.38/-3.18	-3.15/-3.11	-2.91/-2.78	-2.88/-3.27	-3.8/-4.8	-6.15/-8	-9.96/-10.84	-10.65/-10.35	-10.34/-10.46	-10.46/-10.08	-9.14/-7.74	-6.41/-5.33	-4.45/-3.74	-3.3/-3.17	-3.22/-3.44	-3.79/-4.27	-4.79/-5.22
Θ (15°)	-5.54/-6.21	-7.45/-9.22	-11.11/-11.28	-9.04/-6.55	-4.89/-8.7	-3.27/-2.94	-2.87/-3.14	-3.72/-4.38	-4.83/-4.98	-4.74/-4.41	-4.24/-4.28	-4.34/-4.77	-5.63/-7.15	-9.26/-10.47	-10.32/-9.78	-9.64/-9.9	-10.26/-10.34	-9.81/-8.6	-7.46/-6.56	-5.79/-5.39	-5.37/-6.63	-5.74/-5.56	-5.28/-4.99	-4.9/-5.03
Θ (22.5°)	-5.49/-6.7	-8.29/-10.64	-12.72/-10.8	-7.09/-4.46	-3.13/-2.61	-2.54/-2.59	-2.77/-3.27	-4.15/-10.7	-6.04/-6.59	-6.7/-6.42	-5.97/-5.48	-4.96/-4.8	-5.16/-6.27	-8.06/-9.47	-9.52/-8.84	-8.45/-8.77	-11.62/-10.32	-8.81/-7.62	-6.75/-6.5	-7.03/-8.19	-9.39/-9.43	-4.18/-6.51	-5.95/-5.03	
Θ (30°)	-6.17/-7.94	-10.41/-13.59	-15.46/-10.51	-5.97/-3.31	-2.3/-2.43	-3.15/-3.74	-3.76/-3.71	-3.97/-4.64	-5.72/-6.89	-7.77/-8.12	-8.01/-7.41	-6.57/-5.99	-5.84/-6.38	-7.74/-8.9	-9.11/-8.42	-7.9/-8.22	-9.36/-11.22	-12.52/-11.74	-10.04/-8.6	-7.62/-7.29	-7.82/-9.1	-10.68/-11.24	-9.62/-7.33	-5.77/-5.39
Θ (37.5°)	-7.13/-8.41	-10.92/-15.16	-17.22/-11	-5.91/-3.02	-2.15/-2.91	-4.78/-6.27	-5.52/-4	-3.13/-3.18	-4.06/-5.46	-6.93/-8.12	-8.82/-8.65	-7.65/-8.3	-6.87/-5.99	-8.84/-9.47	-9.26/-8.5	-8.07/-8.18	-9.12/-10.45	-11.1/-10.21	-9.13/-8.69	-8.69/-8.95	-9.28/-9.55	-9.82/-9.48	-8.11/-6.62	-6.02/-6.29
Θ (45°)	-8.13/-7.9	-9.1/-13.6	-17.95/-12.34	-6.93/-3.61	-2.54/-3.29	-5.64/-6.05	-8.21/-4.71	-2.86/-2.77	-3.8/-5.3	-4.69/-9.34	-9.02/-9.32	-8.75/-8.13	-8.26/-9.23	-10.35/-10.59	-10.29/-9.8	-9.25/-8.72	-8.83/-9.7	-9.8/-8.9	-8.24/-8.79	-8.24/-8.18	-11.49/-9.81	-8.6/-7.82	-6.74/-6.02	-6.61/-8.37
Θ (52.5°)	-8.08/-6.12	-6.93/-12.2	-17.29/-14.02	-9.57/-5.58	-4.09/-4.29	-5.89/-9.46	-9.32/-5.03	-3.21/-3.71	-5.44/-6.83	-7.62/-8.38	-8.94/-9.13	-9.74/-10.2	-10.21/-10.72	-11.44/-12.16	-13.12/-13.31	-11.38/-8.86	-7.58/-7.89	-8.3/-7.74	-7.75/-9.21	-12.15/-14.98	-12.8/-9.26	-7.16/-6.06	-5.14/-4.78	-6.06/-8.52
Θ (60°)	-6.27/-6.46	-5.6/-12.6	-15.89/-11.45	-13.3/-9.45	-6.95/-9.7	-5.97/-9.47	-9.9/-5.25	-4.11/-5.87	-8.79/-9.81	-9.4/-8.9	-8.27/-9.6	-9.26/-11.48	-11.97/-11.76	-11.99/-13.77	-16.64/-12.51	-13.92/-9.22	-7.97/-8.65	-6.84/-6.46	-6.87/-9.03	-13.37/-15.77	-13.45/-8.45	-5.59/-4.23	-3.26/-2.75	-3.65/-6.21
Θ (67.5°)	-6.13/-9.7	-4.95/-12.25	-12.82/-12.74	-9.4/-6.04	-5.29/-9.57	-9.51/-4.69	-4.51/-6.02	-11.79/-11.72	-10.97/-9.29	-7.41/-6.88	-8.81/-12.5	-12.72/-12.02	-13.16/-15.61	-18.03/-18.29	-13.69/-14.9	-6.32/-6.11	-6.42/-6.19	-6.84/-9.44	-14.13/-17.65	-13.06/-7.74	-6.88/-3.53	-2.85/-2.31	-2.86/-5.18	
Θ (75°)	-8.21/-5.2	-5.32/-12.55	-12.42/-9.14	-15.7/-19.02	-13.54/-6.66	-4.75/-8.88	-10.23/-4.88	-4.98/-9.15	-12.04/-12.34	-13.02/-10.88	-8.02/-6.68	-8.22/-12.5	-13.62/-12.39	-15.02/-19.04	-19.31/-17.38	-12.49/-8.88	-7.05/-7.51	-8.23/-7.12	-7.09/-9.54	-14.39/-18.56	-14.47/-7.79	-4.48/-3.68	-3.77/-3.6	-3.97/-6.32
Θ (82.5°)	-9.8/-6.05	-6.23/-14.55	-18.88/-17.72	-13.89/-18.86	-17.41/-7.96	-5.36/-9.27	-9.92/-9.51	-6.97/-10.31	-8.92/-9.67	-12.57/-11.3	-7.68/-6.56	-7.39/-12.46	-13.71/-12.23	-16.71/-18.84	-18.02/-17.93	-14.93/-11.14	-8.81/-8.66	-8.6/-54	-6.9/-10.32	-17.12/-17.92	-14.95/-7.6	-4.25/-3.8	-4.5/-4.71	-5.34/-6.02
Θ (90°)	-8.84/-5.46	-4.82/-12.12	-9.2/-7.2	-12.87/-18.9	-18.18/-8.84	-6.15/-10.41	-8.74/-5.34	-7.87/-13.05	-8.25/-8.8	-14.37/-15.45	-9.82/-6.68	-7.54/-12.24	-14.67/-12.6	-15.89/-17.3	-17.89/-17.87	-18.62/-12.31	-8.7/-8.53	-8.67/-7.34	-17.4/-11.43	-19.2/-18.01	-17.16/-8.29	-3.22/-3.59	-4.4/-5.56	-4.88/-7.37
Θ (97.5°)	-8.63/-5.15	-5.02/-11.55	-10.87/-9.51	-18.24/-19.1	-19.09/-8.32	-6.5/-12.61	-9.05/-5.14	-7.4/-12.09	-7.72/-8.52	-14.91/-15.89	-9.81/-6.95	-8.37/-14.7	-16.6/-12.47	-15.03/-19.12	-18.73/-18.68	-18.09/-12.96	-10.29/-10.21	-8.85/-6.87	-7.28/-11.22	-18.33/-17.81	-19.05/-9.08	-5.05/-4.54	-5.32/-4.94	-4.89/-6.93
Θ (105°)	-9.19/-5.63	-5.01/-11.58	-12.07/-10.2	-18.6/-18.7	-18.42/-8.37	-6.44/-12.66	-10.91/-6.23	-8.48/-12.57	-7.81/-8.54	-15.29/-17.62	-11.15/-7.65	-7.98/-11.85	-16.06/-12.82	-14.82/-17.84	-18.52/-18.77	-18.08/-16.81	-11.22/-9.82	-9.03/-7.43	-8.05/-13.42	-17.65/-12.37	-16.72/-5.53	-5.35/-4.5	-4.55/-7.03	
Θ (112.5°)	-12.26/-6.88	-5.92/-12.57	-12.14/-9.95	-18.39/-18.64	-17.92/-6.22	-6.88/-13.88	-10.74/-13.3	-8.25/-13.66	-9.06/-9.86	-19.48/-12.92	-9.51/-7.61	-8.54/-13.5	-10.93/-12.78	-14.92/-19.42	-18.75/-18.81	-14.93/-15.98	-11.91/-11.98	-9.97/-7.07	-7.34/-11.39	-19.18/-18.33	-17.54/-12.92	-6.99/-5.75	-4.45/-4.65	-4.57/-9.33
Θ (120°)	-11.65/-7.53	-6.84/-11.8	-14.92/-11.65	-18.3/-18.38	-18.17/-9.75	-8.41/-16.51	-11.91/-6.87	-8.14/-13.14	-11.34/-11.06	-12.23/-10.63	-8.98/-8.1	-8.82/-11.95	-15.83/-13.58	-13.75/-18.61	-18.71/-17.98	-17.69/-18.82	-13.67/-11.34	-8.88/-6.65	-6.95/-11.25	-19.34/-16.23	-17.64/-18.24	-11.2/-8.54	-6.63/-4.97	-5.93/-10.77
Θ (127.5°)	-10.35/-8.25	-8.69/-13.27	-17.71/-15.53	-17.21/-14.72	-18.35/-13.98	-12.54/-17.96	-12.49/-8.34	-9.66/-14.16	-15.08/-13.63	-12.3/-11.57	-11.11/-10.11	-9.94/-11.97	-12.84/-11.47	-13.52/-18.55	-17.56/-17.91	-17.39/-17.31	-13.2/-12.82	-11.65/-9.42	-9.48/-14.32	-18.5/-12.99	-12.91/-18.99	-18.08/-11.53	-7.49/-5.33	-6.34/-10.31
Θ (135°)	-11.47/-11.65	-14.88/-18.08	-17.94/-18.77	-18.82/-19.17	-17.42/-17.97	-15.16/-18.52	-14.28/-10.39	-10.71/-13.84	-18.27/-14.36	-12.79/-12.04	-11.39/-10.91	-10.95/-11.92	-12.6/-13.58	-17.37/-18.43	-18.36/-19.14	-18.67/-17.47	-16.69/-18.49	-14.26/-9.91	-8.9/-10.7	-14.8/-14.92	-14.26/-17.78	-19.3/-15.69	-10.15/-7.15	-7.34/-10.3
Θ (142.5°)	-17.55/-19.3	-18.03/-18.89	-16.99/-14.74	-14.15/-10.5	-17.49/-18.39	-18.09/-19.03	-19.17/-15.31	-13.43/-13.98	-16.11/-16.73	-14.24/-11.9	-11.2/-12.79	-14.97/-13.7	-12.12/-12.58	-14.76/-16.3	-19.37/-17.83	-19.37/-18.27	-18.46/-19.37	-14.15/-10.67	-9.53/-10.23	-12.37/-14.81	-17.47/-18.13	-18.61/-18.52	-16.9/-12.26	-11.45/-13.54
Θ (150°)	-18.41/-19.03	-18.92/-16.88	-14.77/-12.08	-9.98/-9.24	-9.99/-12.22	-15.48/-18.19	-18.08/-16.64	-15.22/-14.99	-11.99/-10.92	-9.97/-9.62	-10.65/-13.63	-18.02/-17.76	-15.22/-14.93	-15.96/-17.43	-18.11/-17.84	-18.15/-18.56	-19.01/-18.23	-17.37/-13.28	-10.95/-10.23	-11.05/-14.34	-17.37/-19.01	-17.74/-16.77	-19.02/-17.92	-18.43/-19.05
Θ (157.5°)	-17.66/-16.56	-17.51/-17.87	-17.82/-13.5	-10.47/-9.09	-9.08/-10.3	-11.64/-13.04	-14.2/-15.16	-14.71/-12.95	-11.01/-9.77	-9.11/-9.29	-10.45/-12.3	-13.75/-13.51	-12.6/-12.13	-12.36/-13.39	-15.8/-18.46	-18.36/-18.89	-18.79/-18.66	-15.21/-12.23	-10.83/-10.55	-11.38/-13.55	-15.87/-15.88	-14.43/-13.94	-15.07/-18.94	-17.79/-18.2
Θ (165°)	-15.49/-16.76	-18.49/-18.32	-17.99/-18.27	-14.65/-12.71	-12.53/-12.7	-14.25/-14.91	-14.92/-14.66	-13.97/-13.3	-12															