



Antenna Composite Gain Test Report

FCC ID	UDX-600200010
Equipment	Cisco Wireless 9178I Series Wi-Fi 7 Access Point
Brand Name	CISCO
Model Name	CW9178I
Applicant	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Standard	KDB662911 D03 v01
Sample Received	Jan. 17, 2024
Start Test Date	Feb. 01, 2024
Final Test Date	Feb. 03, 2024

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
1. Operation Mode and Antenna Information	4
2. Test Frequency	6
3. Testing Location.....	7
4. Test Facility and Configuration.....	8
5. Reference Calibration	9
6. Test Method	10
7. Measured Values and Calculation of Maximum Gain Positions.....	11
8. Summary of Test Result	17
9. Test Setup	21
10. Test Equipment and Calibration Data	22
11. Test Results	23



1. Operation Mode and Antenna Information

Antenna Position	Ant.	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G 5GLAnt1	1	WNC	95XEAK15.G98	PIFA	I-PEX	2.4GHz, 5GHz
2G 5GLAnt2	2	WNC	95XEAK15.G96	PCB	I-PEX	2.4GHz, 5GHz
2G 5GLAnt3	3	WNC	95XEAK15.G97	PCB	I-PEX	2.4GHz, 5GHz
2G 5GLAnt4	4	WNC	95XEAK15.G99	PIFA	I-PEX	2.4GHz, 5GHz
5G Ant1	1	WNC	95XEAK15.GA3	PIFA	I-PEX	5GHz
5G Ant2	2	WNC	95XEAK15.GA1	PCB	I-PEX	5GHz
5G Ant3	3	WNC	95XEAK15.GA2	PCB	I-PEX	5GHz
5G Ant4	4	WNC	95XEAK15.GA4	PIFA	I-PEX	5GHz
6G Ant1	1	WNC	95XEAK15.GA7	PIFA	I-PEX	6GHz
6G Ant2	2	WNC	95XEAK15.GA5	PCB	I-PEX	6GHz
6G Ant3	3	WNC	95XEAK15.GA6	PCB	I-PEX	6GHz
6G Ant4	4	WNC	95XEAK15.GA8	PIFA	I-PEX	6GHz
Scan Ant1	1	WNC	95XEAK15.GAB	PIFA	I-PEX	2.4GHz, 5GHz, 6GHz
Scan Ant2	2	WNC	95XEAK15.GAC	PIFA	I-PEX	2.4GHz, 5GHz, 6GHz
BT	3	WNC	95XEAK15.GA9	PIFA	I-PEX	Bluetooth/Zigbee



Note1:

Antenna Position	Port														
	R1: WLAN 2.4GHz			R2: WLAN 5GHz			R3: WLAN 5GHz			R4: WLAN 6GHz			R5: WLAN 2.4GHz, WLAN 5GHz, WLAN 6GHz	Bluetooth/ Zigbee	
	1TX	2TX	4TX	1TX	2TX	4TX	1TX	2TX	4TX	1TX	2TX	4TX	1TX	1TX	
2G 5GLAnt1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-
2G 5GLAnt2	-	-	4	-	-	4	-	-	-	-	-	-	-	-	-
2G 5GLAnt3	-	2	2	-	2	2	-	-	-	-	-	-	-	-	-
2G 5GLAnt4	-	-	3	-	-	3	-	-	-	-	-	-	-	-	-
5G Ant1	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-
5G Ant2	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
5G Ant3	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
5G Ant4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
6G Ant1	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
6G Ant2	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
6G Ant3	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-
6G Ant4	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-
Scan Ant1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Scan Ant2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
BT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Note2: R means Radio.

**For Radio 1 and Radio 2
2.4GHz and 5GHz Operation Mode (1TX, 2TX, 4TX/4RX)**

For 1TX

Only 2G 5GLAnt1 can be use as transmitting antenna.

For 2TX

Only 2G 5GLAnt1 and 2G 5GLAnt3 can be use as transmitting antenna.

2G 5GLAnt1 and 2G 5GLAnt3 could transmit simultaneously.

For 4TX/4RX

2G 5GLAnt1~4 can be used as transmitting/receiving antenna.

2G 5GLAnt1~4 could transmit/receive simultaneously.

**For Radio 3
5GHz Operation Mode (1TX, 2TX, 4TX/4RX)**

For 1TX

Only 5G Ant2 can be use as transmitting antenna.

For 2TX

Only 5G Ant1 and 5G Ant2 can be use as transmitting antenna.

5G Ant1 and 5G Ant2 could transmit simultaneously.

For 4TX/4RX

5G Ant1~4 can be used as transmitting/receiving antenna.

5G Ant1~4 could transmit/receive simultaneously.



For Radio 4

6GHz Operation Mode (1TX, 2TX, 4TX/4RX)

For 1TX

Only 6G Ant3 can be use as transmitting antenna.

For 2TX

Only 6G Ant3 and 6G Ant4 can be use as transmitting antenna.

6G Ant3 and 6G Ant4 could transmit simultaneously.

For 4TX/4RX

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

6G Ant1~4 could transmit/receive simultaneously.

For Scanning Radio 5

2.4GHz, 5GHz and 6GHz Operation Mode (1TX/2RX)

For 1TX

Only Scan Ant1 can be use as transmitting antenna.

For 2RX

Scan Ant1 and Scan Ant2 can be use as receiving antenna.

For Radio 6

Bluetooth/Zigbee Operation Mode (1TX/1RX)

BT can be use 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
5850-5895	5885
5925-6425	6175
6425-6525	6475
6525-6875	6695
6875-7125	6995



3. Testing Location

Testing Location		
Sporton International Inc. Hsinhua Laboratory		
<input checked="" type="checkbox"/>	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	Feb. 01, 2024 ~ Feb. 03, 2024

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

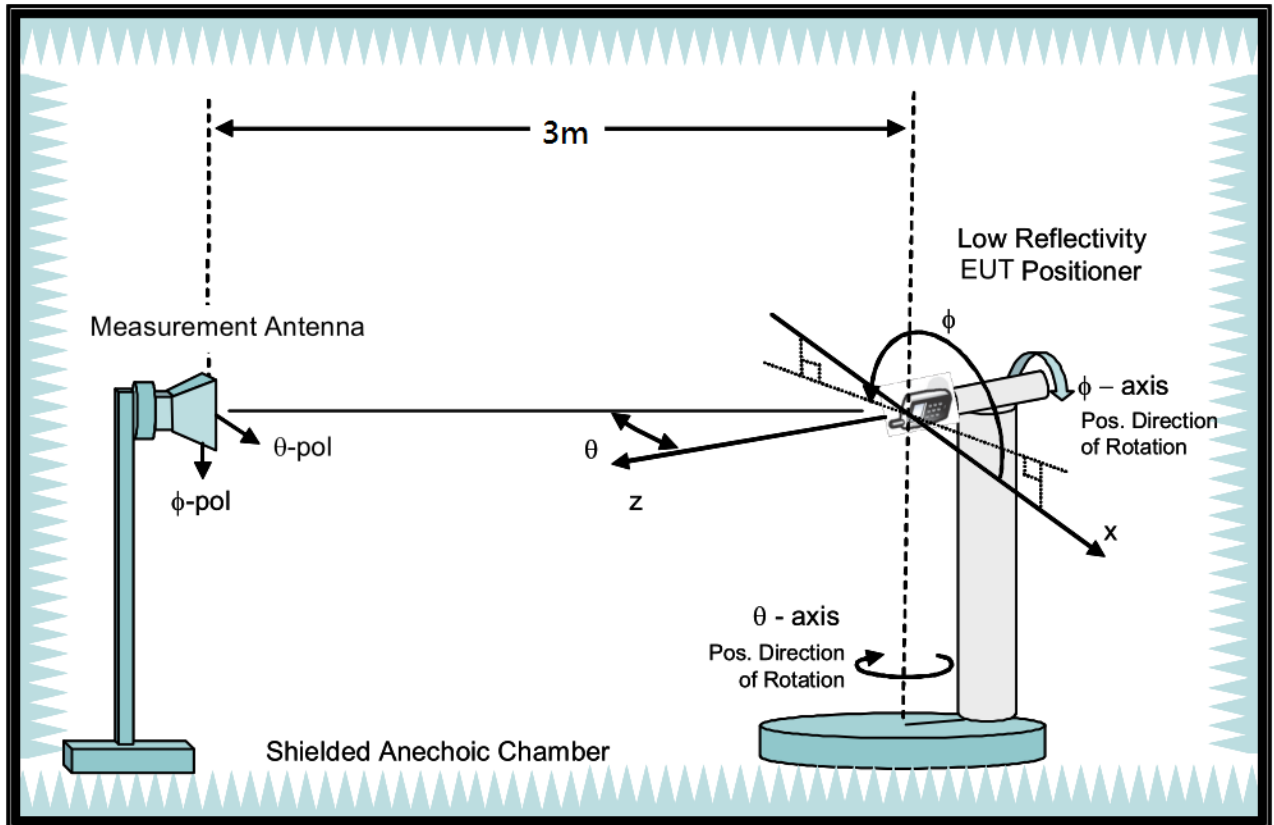
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

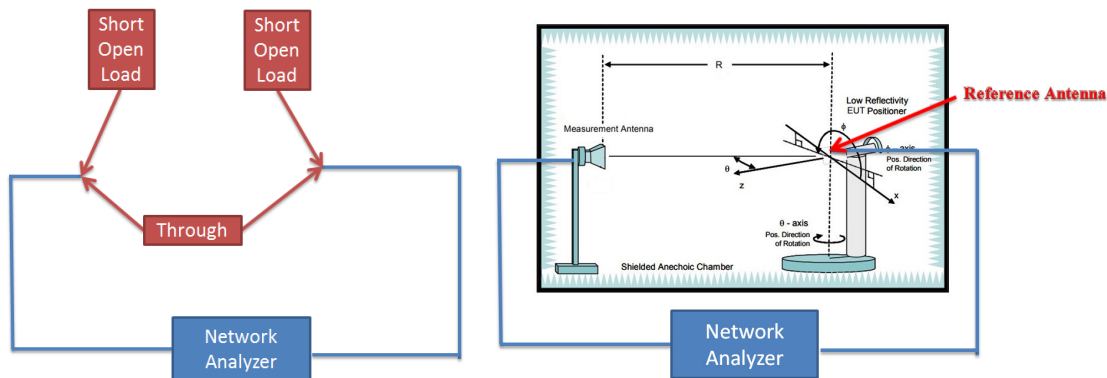
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



5. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.75	-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:

$$G \text{ reading (dB)} = 20 \cdot \log(V2/V1) = 10 \cdot \log(P2/P1)$$

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

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

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



6. Test Method

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

DG steps:

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

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



7. Measured Values and Calculation of Maximum Gain Positions

For 2G 5GLAnt1~4:

For 2TX

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-0.68	-6.09	-7.28	2.78	4.52
Ant. 3 (dBi)	3.17	3.55	3.22	-6.56	-15.11
DG [1SS] (dBi)	4.47	3.01	2.48	2.32	2.37
Polarization	Phi	Phi	Phi	Theta	Theta
Θ(°)	45	67.5	60	22.5	60
Φ(°)	120	157.5	180	247.5	105

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^(-0.68/20)	10^(-6.09/20)	10^(-7.28/20)	10^(2.78/20)	10^(4.52/20)
Ant. 3 [10^(G/20)]	10^(3.17/20)	10^(3.55/20)	10^(3.22/20)	10^(-6.56/20)	10^(-15.11/20)
Ant. 1 [10^(G/20)] value	0.925	0.496	0.433	1.377	1.683
Ant. 3 [10^(G/20)] value	1.44	1.505	1.449	0.47	0.176
Sum All Antenna [Amax]	2.365	2.001	1.881	1.847	1.858
DG [10*log(Amax^2/Nant)]	4.47	3.01	2.48	2.32	2.37

Note:

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

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



For 4TX

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-1.33	-7.95	-9.79	-8.39	2.6
Ant. 2 (dBi)	2.96	3.53	2.38	3.48	-2.58
Ant. 3 (dBi)	2.65	1.84	2.57	-0.45	-9.57
Ant. 4 (dBi))	-1.28	-6.7	-13.57	-1.92	1.97
DG [1SS] (dBi)	7.01	5.11	4.06	5.16	5.29
Polarization	Phi	Phi	Phi	Phi	Theta
$\Theta(^{\circ})$	45	67.5	67.5	67.5	45
$\Phi(^{\circ})$	210	127.5	142.5	7.5	112.5

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 ^(-1.33/20)	10 ^(-7.95/20)	10 ^(-9.79/20)	10 ^(-8.39/20)	10 ^(2.6/20)
Ant. 2 [10 ^(G/20)]	10 ^(2.96/20)	10 ^(3.53/20)	10 ^(2.38/20)	10 ^(3.48/20)	10 ^(-2.58/20)
Ant. 3 [10 ^(G/20)]	10 ^(2.65/20)	10 ^(1.84/20)	10 ^(2.57/20)	10 ^(-0.45/20)	10 ^(-9.57/20)
Ant. 4 [10 ^(G/20)]	10 ^(-1.28/20)	10 ^(-6.7/20)	10 ^(-13.57/20)	10 ^(-1.92/20)	10 ^(1.97/20)
Ant. 1 [10 ^(G/20)] value	0.858	0.4	0.324	0.381	1.349
Ant. 2 [10 ^(G/20)] value	1.406	1.501	1.315	1.493	0.743
Ant. 3 [10 ^(G/20)] value	1.357	1.236	1.344	0.95	0.332
Ant. 4 [10 ^(G/20)] value	0.863	0.462	0.21	0.802	1.255
Sum All Antenna [Amax]	4.484	3.6	3.193	3.625	3.679
DG [10*log(Amax ² /Nant)]	7.01	5.11	4.06	5.16	5.29

Note:

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

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



For 5G Ant1~4:

For 2TX

DG_1SS max value position

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-3.76	-1.26	-3.07	-3.45
Ant. 2 (dBi)	4.42	2.53	3.57	3.23
DG [1SS] (dBi)	4.27	3.85	3.88	3.53
Polarization	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	45	45	60	52.5
$\Phi(^{\circ})$	142.5	180	22.5	37.5

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)	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(-3.76/20)}$	$10^{(-1.26/20)}$	$10^{(-3.07/20)}$	$10^{(-3.45/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(4.42/20)}$	$10^{(2.53/20)}$	$10^{(3.57/20)}$	$10^{(3.23/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.649	0.865	0.702	0.672
Ant. 2 [$10^{(G/20)}$] value	1.663	1.338	1.508	1.45
Sum All Antenna [Amax]	2.312	2.203	2.211	2.123
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.27	3.85	3.88	3.53

Note:

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

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



For 4TX

DG_1SS max value position

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-5.12	-6.17	-7.25	-6.97
Ant. 2 (dBi)	4.64	2.12	2.87	1.34
Ant. 3 (dBi)	3.18	3.47	4.03	2.58
Ant. 4 (dBi))	-2.43	-4.59	-2.7	-2.93
DG [1SS] (dBi)	6.96	5.69	6.34	5.28
Polarization	Phi	Phi	Phi	Phi
Θ(°)	45	60	60	60
Φ(°)	135	337.5	337.5	337.5

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)	5.2G	5.3G	5.6G	5.785G
Ant. 1 [10^(G/20)]	10^(-5.12/20)	10^(-6.17/20)	10^(-7.25/20)	10^(-6.97/20)
Ant. 2 [10^(G/20)]	10^(4.64/20)	10^(2.12/20)	10^(2.87/20)	10^(1.34/20)
Ant. 3 [10^(G/20)]	10^(3.18/20)	10^(3.47/20)	10^(4.03/20)	10^(2.58/20)
Ant. 4 [10^(G/20)]	10^(-2.43/20)	10^(-4.59/20)	10^(-2.7/20)	10^(-2.93/20)
Ant. 1 [10^(G/20)] value	0.555	0.491	0.434	0.448
Ant. 2 [10^(G/20)] value	1.706	1.276	1.392	1.167
Ant. 3 [10^(G/20)] value	1.442	1.491	1.59	1.346
Ant. 4 [10^(G/20)] value	0.756	0.59	0.733	0.714
Sum All Antenna [Amax]	4.459	3.849	4.149	3.675
DG [10*log(Amax^2/Nant)]	6.96	5.69	6.34	5.28

Note:

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

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



For 6G Ant1~4:

For 2TX

DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 3 (dBi)	4.59	2.62	2.41	2.95
Ant. 4 (dBi)	-1.84	0.75	-1.22	-0.92
DG [1SS] (dBi)	4.97	4.75	3.79	4.24
Polarization	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	52.5	45	52.5	75
$\Phi(^{\circ})$	172.5	352.5	345	187.5

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

DG_1SS max value position calculation

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 3 [10^(G/20)]	10^(4.59/20)	10^(2.62/20)	10^(2.41/20)	10^(2.95/20)
Ant. 4 [10^(G/20)]	10^(-1.84/20)	10^(0.75/20)	10^(-1.22/20)	10^(-0.92/20)
Ant. 3 [10^(G/20)] value	1.696	1.352	1.32	1.404
Ant. 4 [10^(G/20)] value	0.809	1.09	0.869	0.899
Sum All Antenna [Amax]	2.505	2.442	2.189	2.304
DG [10*log(Amax^2/Nant)]	4.97	4.75	3.79	4.24

Note:

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

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



For 4TX

DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	-8.72	-8.25	-18.59	-9.06
Ant. 2 (dBi)	3.77	2.78	4.58	2.9
Ant. 3 (dBi)	3.54	3.06	2.41	1.38
Ant. 4 (dBi)	-3.87	-1.45	-1.22	-1.61
DG [1SS] (dBi)	6.14	6.09	6.02	5.46
Polarization	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	52.5	37.5	52.5	45
$\Phi(^{\circ})$	135	307.5	345	337.5

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^(-8.72/20)	10^(-8.25/20)	10^(-18.59/20)	10^(-9.06/20)
Ant. 2 [10^(G/20)]	10^(3.77/20)	10^(2.78/20)	10^(4.58/20)	10^(2.9/20)
Ant. 3 [10^(G/20)]	10^(3.54/20)	10^(3.06/20)	10^(2.41/20)	10^(1.38/20)
Ant. 4 [10^(G/20)]	10^(-3.87/20)	10^(-1.45/20)	10^(-1.22/20)	10^(-1.61/20)
Ant. 1 [10^(G/20)] value	0.366	0.387	0.118	0.352
Ant. 2 [10^(G/20)] value	1.543	1.377	1.694	1.396
Ant. 3 [10^(G/20)] value	1.503	1.422	1.32	1.172
Ant. 4 [10^(G/20)] value	0.64	0.846	0.869	0.831
Sum All Antenna [Amax]	4.054	4.033	4.001	3.752
DG [10*log(Amax^2/Nant)]	6.14	6.09	6.02	5.46

Note:

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

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



8. Summary of Test Result

For 2G 5GLAnt1~4:

For 2TX

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.85	3.51	3.24	4.54	4.52
Ant. 3 Max Gain (dBi)	3.85	3.93	3.85	2.3	2.03
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/150	Theta/60/97.5	Theta/60/97.5	Theta/60/210	Theta/60/105
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/45/67.5	Phi/67.5/187.5	Phi/60/187.5	Phi/75/97.5	Phi/75/97.5
Max Gain (dBi)	3.85	3.93	3.85	4.54	4.52
DG [1SS] (dBi)	4.47	3.01	2.48	2.32	2.37
DG [1SS] (dBi) Revised	4.47	3.93	3.85	4.54	4.52
DG [2SS] (dBi)	3.85	3.93	3.85	4.54	4.52

For 4TX

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.85	3.51	3.24	4.54	4.52
Ant. 2 Max Gain (dBi)	3.82	3.53	2.9	3.48	2.18
Ant. 3 Max Gain (dBi)	3.85	3.93	3.85	2.3	2.03
Ant. 4 Max Gain (dBi)	2.41	4.97	3.73	3.93	3.97
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/150	Theta/60/97.5	Theta/60/97.5	Theta/60/210	Theta/60/105
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/45/292.5	Phi/67.5/127.5	Phi/67.5/135	Phi/67.5/7.5	Phi/75/37.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/45/67.5	Phi/67.5/187.5	Phi/60/187.5	Phi/75/97.5	Phi/75/97.5
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/0/22.5	Theta/67.5/52.5	Theta/67.5/45	Theta/75/60	Theta/75/60
Max Gain (dBi)	3.85	4.97	3.85	4.54	4.52
DG [1SS] (dBi)	7.01	5.11	4.06	5.16	5.29
DG [2SS] (dBi)	4.01	4.97	3.85	4.54	4.52
DG [4SS] (dBi)	3.85	4.97	3.85	4.54	4.52

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. If directional gain (1SS) is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii).
4. 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)
5. 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)



For 5G Ant1~4:

For 2TX

Table with 5 columns: Freq(Hz), 5.2G, 5.3G, 5.6G, 5.785G. Rows include Ant. 1 Max Gain, Ant. 2 Max Gain, Ant. 1 Polarization, Ant. 2 Polarization, Max Gain, DG [1SS], DG [1SS] Revised, and DG [2SS].

For 4TX

Table with 5 columns: Freq(Hz), 5.2G, 5.3G, 5.6G, 5.785G. Rows include Ant. 1 Max Gain, Ant. 2 Max Gain, Ant. 3 Max Gain, Ant. 4 Max Gain, Ant. 1 Polarization, Ant. 2 Polarization, Ant. 3 Polarization, Ant. 4 Polarization, Max Gain, DG [1SS], DG [2SS], and DG [4SS].

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. If directional gain (1SS) is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii).
4. 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)
5. 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)



For 6G Ant1~4:

For 2TX

Table with 5 columns: Freq(Hz), 6.175G, 6.475G, 6.695G, 6.995G. Rows include Ant. 3 Max Gain, Ant. 4 Max Gain, Ant. 3 Polarization, Ant. 4 Polarization, Max Gain, DG [1SS], DG [1SS] Revised, and DG [2SS].

For 4TX

Table with 5 columns: Freq(Hz), 6.175G, 6.475G, 6.695G, 6.995G. Rows include Ant. 1 Max Gain, Ant. 2 Max Gain, Ant. 3 Max Gain, Ant. 4 Max Gain, Ant. 1 Polarization, Ant. 2 Polarization, Ant. 3 Polarization, Ant. 4 Polarization, Max Gain, DG [1SS], DG [2SS], and DG [4SS].

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. If directional gain (1SS) is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii).
4. 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)
5. 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)

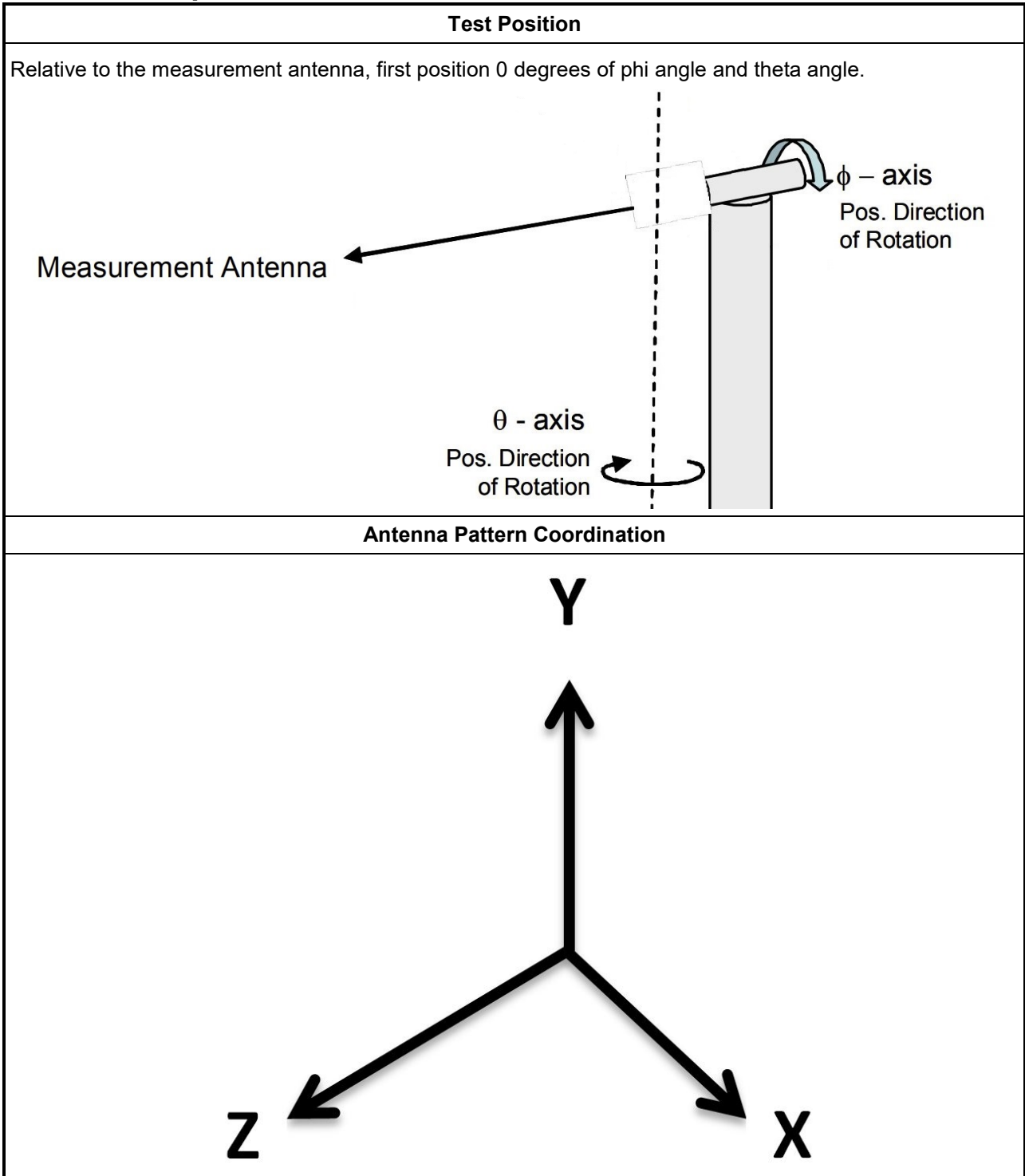


For Scan Ant1~2 and BT Ant3:

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Scan Ant. 1 Max Gain (dBi)	2.17	2.74	3.39	4.78	3.51
Scan Ant. 2 Max Gain (dBi)	1.83	5.46	4.17	6.68	6.06
BT Ant. 3 Max Gain (dBi)	2.91	-	-	-	-
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/22.5	Theta/67.5/52.5	Theta/52.5/232.5	Theta/60/127.5	Theta/60/127.5
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/52.5/82.5	Theta/75/52.5	Theta/75/52.5	Theta/67.5/52.5	Theta/67.5/52.5
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/120	-	-	-	-

Freq(Hz)	5.885G	6.175G	6.475G	6.695G	6.995G
Scan Ant. 1 Max Gain (dBi)	4.94	3.96	4.67	4.31	4.8
Scan Ant. 2 Max Gain (dBi)	6.03	5.1	4.49	4.37	4.7
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/75	Theta/82.5/232.5	Theta/90/240	Theta/82.5/240	Theta/82.5/240
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/75/45	Theta/67.5/157.5	Theta/75/37.5	Theta/67.5/67.5	Theta/75/30

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 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. 28, 2023	Jul. 27, 2024
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 Radio 1 2.4GHz, Radio 2 5GHz-2TX.....	Page 22
Appendix B – Radiated Composite Gain of Radio 1 2.4GHz, Radio 2 5GHz-4TX.....	Page 26
Appendix C – Radiated Composite Gain of Radio 3 5GHz-2TX.....	Page 40
Appendix D – Radiated Composite Gain of Radio 3 5GHz-4TX.....	Page 43
Appendix E – Radiated Composite Gain of Radio 4 6GHz-2TX.....	Page 54
Appendix F – Radiated Composite Gain of Radio 4 6GHz-4TX.....	Page 57
Appendix G – Radiated Composite Gain of Radio 5 2.4GHz, 5GHz, 6GHz and Radio 6 Bluetooth/Zigbee.....	Page 68
Appendix H – Antenna Pattern of Radio 1 2.4GHz, Radio 2 5GHz.....	Page 79
Appendix I – Antenna Pattern of Radio 3 5GHz.....	Page 86
Appendix J – Antenna Pattern of Radio 4 6GHz.....	Page 93
Appendix K – Antenna Pattern of Radio 5 2.4GHz, 5GHz, 6GHz and Radio 6 Bluetooth/Zigbee.....	Page 99
Appendix L – Test Photos.....	Page 106



Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.85	3.51	3.24	4.54	4.52
Ant. 3 Max Gain (dBi)	3.85	3.93	3.85	2.3	2.03
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/150	Theta/60/97.5	Theta/60/97.5	Theta/60/210	Theta/60/105
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/45/67.5	Phi/67.5/187.5	Phi/60/187.5	Phi/75/97.5	Phi/75/97.5
Max Gain (dBi)	3.85	3.93	3.85	4.54	4.52
DG [1SS] (dBi)	4.47	3.01	2.48	2.32	2.37
DG [1SS] (dBi) Revised	4.47	3.93	3.85	4.54	4.52
DG [2SS] (dBi)	3.85	3.93	3.85	4.54	4.52



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_2TX

Appendix A

θ (67.5°)	-1.55/-3.39	-1.34/-0.18	-0.94/-2.97	-4.15/-7.66	-9.56/-7.96	-5.74/-3.51	-1.23/-0.95	-1.41/-1.27	-2.01/-1.57	-2.11/-1.47	-0.06/1.24	-0.28/0.53	1.01/-0.2	-1.14/-0.64	-0.97/-2.7	-3.3/-5.03	-3.45/-5.26	-3.06/-2.32	-3.19/-3.01	-3.39/-4.04	-5.69/-4.25	-2.99/-4.87	-6.12/-2.44	-0.91/-1.18
θ (75°)	-0.83/-2.17	-0.47/0.18	-1.51/-3.88	-4.29/-5.84	-7.02/-6.06	-3.54/-1.6	-0.19/0.63	-1.18/-1.02	-2.88/-2.67	-3.29/-2.41	-1.42/-0.26	-0.42/-0.93	0.31/0.02	-0.73/-1.26	-1.26/-2.67	-2.44/-5.26	-3.02/-4.41	-2.82/-0.85	-2.65/-2.38	-2.58/-4.39	-5.2/-2.54	-1.56/-4.13	-6.25/-2.07	0.31/-0.53
θ (82.5°)	-1.8/-3.15	-1.14/-1.89	-3.68/-5.04	-6.05/-5.84	-6.57/-5.11	-3.35/-2.39	-1.52/-1.71	-2.18/-1.44	-4.48/-5.19	-4.82/-4.33	-3.53/-1.71	-2.04/-2.19	-0.51/-0.13	-1.28/-2.35	-2.77/-3.89	-3.4/-6.53	-3.81/-4.12	-2.98/-0.68	-2.46/-2.35	-1.51/-4.17	-3.15/-1.96	-1.11/-4.66	-6.3/-2.74	-0.45/-1.43
θ (90°)	-3.78/-4.32	-2.61/-4.56	-5.74/-7.2	-8.39/-7.22	-8.1/-5.43	-4.2/-4.43	-3.19/-3.64	-3.64/-2.58	-5.61/-7.48	-7.07/-6.08	-5.09/-4.36	-4.42/-5.8	-3.13/-2.78	-3.23/-3.77	-3.27/-4.62	-4.93/-9.92	-6.11/-6.11	-3.77/-2.55	-3.67/-3.93	-3.2/-5.73	-4.99/-3.35	-2.97/-6.84	-8.34/-4.39	-1.48/-3.4
θ (97.5°)	-5.68/-6.12	-4.65/-7.88	-7.21/-8.47	-10.74/-9.38	-9.36/-6.18	-6.16/-6.09	-5.26/-5.89	-5.77/-4.76	-7.6/-8.76	-7.85/-7.05	-6.35/-5.65	-5.87/-7.66	-4.09/-4.34	-5.37/-4.56	-4.94/-5.8	-5.78/-8.93	-8.23/-9.04	-6.34/-5.23	-5.91/-5.36	-5.5/-8.68	-7.69/-5.7	-5.4/-9.86	-10.34/-5.31	-3.72/-5.34
θ (105°)	-8.23/-9.83	-7.65/-8.67	-8.19/-9.9	-11.45/-12.07	-9.94/-9.24	-8.54/-9.14	-7.32/-6.98	-6.62/-6.57	-9.16/-9.57	-8.78/-8.59	-7.62/-6.99	-6.88/-8.22	-8.28/-7.57	-7.94/-5.2	-6.62/-8.47	-5.99/-7.75	-10.61/-11.54	-8.32/-9.63	-10.18/-9.78	-9.97/-11.25	-11.56/-9.23	-8.74/-13.76	-12.82/-8.25	-6.87/-7.9
θ (112.5°)	-9.11/-11.7	-10.08/-9.76	-12.18/-10.29	-12.43/-14.12	-10.78/-10.51	-10.45/-10.53	-8.1/-8.61	-8.58/-9.61	-10.67/-10.07	-8.88/-7.52	-7.88/-7.59	-7.15/-10.13	-10.85/-9.22	-8.45/-8.13	-7.42/-8.82	-7.74/-8.24	-11.01/-11.42	-10.71/-11.08	-11.14/-12.29	-11.32/-12.19	-14.44/-13.95	-12.18/-14.03	-14.31/-8.93	-9.25/-9.81
θ (120°)	-11.05/-13.74	-10.28/-11.76	-10.74/-12.06	-14.54/-13.19	-12.41/-11.42	-11.37/-12.52	-10.93/-11.2	-11.64/-11.16	-10.61/-11.63	-9.64/-7.92	-7.83/-7.37	-7.28/-8.95	-9.64/-10.84	-10.66/-9.07	-11.81/-9.53	-10.07/-13.71	-10.85/-7.74	-11.35/-10.54	-10.23/-10.61	-10.52/-11.44	-15.54/-14.19	-12.72/-13.01	-14.12/-12.83	-11.43/-10.14
θ (127.5°)	-13.13/-12.59	-13.27/-11.33	-10.95/-13.09	-13.47/-11.74	-15.89/-14.54	-12.32/-10.23	-8.8/-9.65	-11.3/-11.45	-13.25/-11.68	-9.61/-9.59	-7.11/-6.82	-8.01/-11.15	-10.44/-10.34	-13.77/-8.99	-10.41/-13.1	-12.12/-12.95	-14.67/-13.59	-15.52/-10.74	-12.31/-9.71	-14.94/-15.09	-15.15/-15.49	-14.17/-15.52	-15.02/-14.23	-11.42/-11.54
θ (135°)	-13.88/-12	-11.85/-12.67	-10.96/-14.1	-13.11/-14.93	-15.22/-13.99	-13.85/-13.16	-10.85/-10.13	-11.45/-11.7	-11.85/-10.4	-10.48/-10.11	-11.27/-9.06	-8.03/-10.51	-10.63/-9.87	-8.88/-10.85	-14.88/-8.85	-13.2/-12.77	-15.31/-15.33	-15.38/-15.67	-15.35/-12.77	-15.19/-14.75	-15.17/-15.29	-15.03/-15.93	-15.68/-14.6	-13.57/-13.97
θ (142.5°)	-15.01/-11.71	-11.81/-14.47	-13.86/-16.06	-15.69/-14.73	-13.59/-11.83	-11.9/-13.09	-13.1/-13.24	-13.52/-14.48	-15.2/-13.82	-10.48/-10.04	-11.34/-10.49	-9.93/-8.71	-9.43/-10.36	-12.43/-12.3	-11.57/-10.27	-13.86/-15.44	-15.39/-15.86	-13.75/-12.47	-14.94/-14.75	-15.53/-15.59	-15.09/-15.54	-15.56/-15.2	-14.78/-15.51	-15.57/-15.63
θ (150°)	-14.92/-15.09	-15.19/-15.37	-14.88/-14.57	-13.65/-12.14	-12.86/-12.99	-12.85/-13.53	-15.21/-15.62	-15.18/-15.24	-16.23/-13.69	-13.52/-12	-9.77/-9.43	-10.63/-11.66	-11.08/-11.23	-10.89/-12.99	-14.74/-14.89	-15.01/-14.07	-13.12/-14.39	-15.78/-12.93	-14.85/-16.25	-14.94/-14.29	-15.41/-15.03	-14.88/-15.06	-14.93/-15.13	-14.97/-15.24
θ (157.5°)	-14.34/-14.18	-15.64/-14.69	-15.51/-15.04	-15.77/-13.53	-13.31/-15.34	-15.33/-15.53	-14.86/-15.84	-15.78/-14.48	-15.87/-15.78	-15.18/-13.22	-12.37/-12.04	-11.26/-12.77	-13.89/-11.89	-11.95/-14.98	-15.14/-15.07	-16.04/-15.11	-15.01/-14.93	-15.65/-14.13	-15.56/-15.18	-14.08/-15.29	-15.26/-15.27	-15.09/-14.16	-13.72/-13.6	-15.17/-14.68
θ (165°)	-13.78/-13.38	-15.97/-13.11	-12.39/-12.98	-12.48/-14.82	-15.73/-15.24	-15.4/-15.14	-14.9/-15.38	-15.36/-15.22	-15.88/-15.08	-15.62/-14.99	-14.47/-12.75	-12.96/-13.63	-13.75/-13.58	-14.68/-15.07	-14.79/-15.19	-16.04/-15.75	-15.6/-14.55	-15.27/-14.83	-14.96/-15.91	-15.19/-13.2	-12.77/-13.19	-13.38/-15.69	-16.06/-12.43	-15.57/-15.63
θ (172.5°)	-15.27/-15.05	-15.29/-16.03	-15.83/-15.44	-15.83/-14.91	-15.34/-15.43	-15.27/-15.24	-15.67/-15.16	-14.14/-15.87	-14.93/-14.26	-15.1/-14.34	-12.91/-12.17	-12.44/-13.28	-14.46/-13.2	-13.57/-14.76	-15.26/-15.65	-14.67/-15.61	-15.56/-15.35	-16.38/-14.52	-14.61/-14.55	-15.01/-14.74	-15.52/-15.02	-15.44/-15.91	-14.97/-15.44	-15.39/-15.24
θ (180°)	-15.18/-14.67	-14.23/-13.91	-13.92/-14.09	-14.08/-14.16	-13.5/-13.66	-13.67/-12.87	-12.07/-11.59	-12.91/-12.41	-11.85/-12.29	-12.16/-12.27	-12.69/-13.22	-13.17/-12.82	-13.89/-12.88	-14.06/-15.48	-15.43/-15.42	-16.11/-15.12	-14.85/-15.28	-15.64/-13.63	-13.43/-13.16	-13.36/-14.32	-13.09/-13.27	-12.49/-13.19	-13.48/-13.57	-14.1/-14.85
Freq(Hz)	5.7853Pol.	Theta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
θ (0°)	-12.06/-10.76	-9.39/-9.05	-7.49/-6.37	-5.71/-5.09	-4.59/-3.92	-3.59/-3.23	-3.13/-3.16	-3.84/-4.15	-4.58/-5.47	-6.44/-7.85	-9.85/-12.47	-12.94/-13.67	-13.02/-11.48	-10.08/-9.35	-8.55/-7.29	-6.38/-6.1	-5.77/-5.42	-5.65/-5.84	-6.01/-6.72	-7.4/-8.14	-8.91/-10.74	-12.73/-14	-15.49/-15.59	-14.16/-12.77
θ (7.5°)	-11.77/-10.16	-9.29/-8.72	-8.07/-7.44	-7.01/-6.77	-7.17/-7.19	-7.03/-6.48	-7.36/-7.22	-7.59/-8.43	-9.23/-10.06	-11.75/-13.21	-13.59/-13.13	-13.36/-12.65	-10.83/-8.98	-7.81/-6.9	-5.98/-4.99	-3.89/-3.09	-2.51/-2.02	-1.7/-1.84	-2.26/-2.79	-3.43/-4.33	-5.93/-7.32	-8.88/-9.84	-12.84/-16.02	-15.15/-13.76
θ (15°)	-9.95/-8.94	-7.15/-6.16	-5.66/-5.85	-6.36/-7.07	-7.76/-9.44	-10.49/-10.82	-11.13/-11.7	-12.73/-12.07	-13.67/-13.62	-15.46/-15.52	-15.11/-13.55	-12.49/-12.32	-9.94/-8.23	-6.22/-4.11	-2.47/-1.06	0.03/0.6	1.24/1.54	1.68/1.49	0.77/0.08	-0.84/-2.14	-3.46/-4.84	-6.28/-7.43	-9.12/-11.64	-12.21/-11.17
θ (22.5°)	-10.75/-11.02	-7.94/-6.4	-6.25/-6.19	-5.42/-4.92	-5.11/-5.71	-5.55/-6.24	-6.88/-7	-8.31/-8.82	-8.54/-8.16	-7.64/-7.66	-8.16/-9.43	-10.58/-10.72	-9.34/-6.64	-4.74/-3.63	-2.58/-1.45	-0.14/0.68	1.22/1.54	1.57/1.57	1.05/0.24	-0.46/-1.45	-2.22/-3.07	-3.57/-5.12	-6.34/-8.22	-10.13/-9.93
θ (30°)	-7.94/-7.38	-5.23/-4.52	-4.08/-3.58	-2.89/-2.33	-2.53/-2.48	-3.01/-3.65	-2.88/-2.01	-2.42/-2.96	-3.19/-4.02	-3.17/-2.75	-3.76/-4.28	-4.4/-4.55	-4.35/-4.42	-4.84/-3.68	-1.85/-0.11	1.12/1.35	1.43/1.03	0.92/1.37	0.99/-0.1	-1.16/-1.83	-2.93/-3.55	-4.09/-5.02	-6.31/-7.03	-9.46/-9.95
θ (37.5°)	-5.8/-3.8	-3.25/-2.47	-1.81/-1.21	-0.51/-0.84	-1.79/-2.09	-2.07/-1.52	-1.12/-0.61	0.35/0.44	0.03/-0.99	-1.96/-2.5	-4.24/-4.13	-2.78/-1.86	-2.37/-3.31	-2.81/-1.58	-0.33/0.05	0.35/0.61	-0.02/-0.83	-0.87/-0.05	0.31/-0.56	-1.5/-2.16	-2.91/-4.72	-6.74/-7.56	-6.21/-6.12	-8.12/-7.71
θ (45°)	-5.02/-2.69	-2.11/-1.31	-0.94/-0.03	0.77/0.97	0.6/-0.07	0.46/1.36	1.81/1.9	1.31/1.5	1.05/0.91	-0.19/-1.89	-2.28/-3.33	-3.22/-2.01	-2.26/-2.24	-1.41/-1	-0.26/-0.68	-0.96/-0.81	-1.58/-2.37	-2.39/-1.57	-1.19/-1.78	-2.86/-3.16	-2.93/-4.34	-6.9/-6.19	-5.08/-3.81	-5.55/-6.4
θ (52.5°)	-2.79/-1.87	-2.23/-1.15	-0.55/0.08	0.61/1.19	1.21/1.19	0.96/0.76	1.24/2.15	2.1/3.3	0.85/0.5	-0.28/-1.3	-1.42/-1.22	-1.6/-2	-2.74/-1.61	-0.57/0.07	0.62/0.03	-0.97/-1.23	-2.65/-3.86	-3.89/-3.11	-3.76/-3.52	-2.59/-2.42	-2.72/-3.08	-4.51/-3.53	-2.66/-1.79	-2.78/-3.77
θ (60°)	-1.14/-1.04	-2.59/-1.88	-2.25/-1.75	-1.3/-0.06	1.31/1.42	-0.6/-2.21	-1.11/1.65	2.37/1.69	0.06/-0.29	-0.66/-1.24	-1.25/-0.34	-1.03/-1.22	-1.87/-1.32	-0.59/0.46	1.66/1.15	-0.42/-1.85	-3.46/-4.89	-6.61/-6.24	-6.03/-5.04	-4/-2.96	-2.87/-1.4	-2.41/-1.79	-1.8/-1.16	-2.94/-2.39
θ (67.5°)	-0.12/-0.52	-3.13/-3.48	-3.78/-3.43	-2.3/-1.07	0.71/0.39	-1.4/-2.54	-1.43/0.84	1.39/0.87	-0.82/-0.81	-0.47/-1.39	-0.64/-0.29	-0.16/-1.36	-0.71/-0.42	-0.43/0.86	1.87/1.27	-0.03/-2.92	-4.34/-5.19	-6.05/-7.24	-6.44/-7.03	-4.46/-2.7	-3.07/-1.24	-1.19/-1.15	-2.03/-1.99	-3.52/-1.26
θ (75°)	0.75/-0.23	-2.89/-2.79	-3.51/-3.55	-2.19/-1.51	-0.13/-0.81	-1.57/-1.75	-1.74/-0.59	0.5/0.26	-0.54/-1.59	-0.22/-0.17	-0.2/-0.31	0.26/-1.03	-1.03/-0.06	-0.83/0.29	0.96/0.82	-1.09/-3.33	-5.31/-4.47	-5.34/-7.99	-6.71/-7.49	-4.34/-2.46	-3.27/-1.51	-1.31/-0.7	-2.29/-2.48	-3.5/-0.8
θ (82.5°)	0.12/-1.16	-3/-2.95	-3.99/-4.25	-3.44/-2.43	-1.44/-2.32	-2.57/-2.18	-2.43/-1.65	-0.30/0.49	-0.27/-1.51	-0.23/-0.39	-0.13/-0.31	0.15/-2.26	-0.67/-1.25	-1.18/-0.68	-0.88/-0.81	-2.47/-4.89	-5.59/-4.71	-5.47/-8.27	-7.11/-7.3	-5.45/-2.56	-2.77/-1.95	-2.52/-1.32	-3.06/-3.82	-4.25/-1.42
θ (90°)	-1.34/-2.59	-3.74/-4.5	-5.82/-5.74	-5.92/-3.99	-2.58/-3.67	-3.66/-3.67	-4.32/-2.69	-1.07/0.27	-0.23/-1.79	-0.85/-1.12	-0.16/-1.43	-0.79/-1.77	-2.08/-2.56	-3.28/-2.2	-2.27/-2.08	-3.68/-4.21	-5.15/-4.51	-5.89/-8.81	-8.72/-9.7	-5.33/-3.18	-3.06/-2.51	-5.3/-2.92	-4.94/-5.33	-7.35/-2.79
θ (97.5°)	-3.74/-4.97	-5.88/-6.53	-7.61/-7.5	-7.76/-5.79	-4.1/-5.65	-5.17/-5.06	-6/-3.67	-1.52/-0.17	-0.57/-2.71	-2.26/-2.19	-1.23/-2.28	-2.46/-4.85	-2.76/-3.92	-5.11/-4.84	-4.53/-4.51	-5.23/-6.18	-6.77/-5.69	-6.81/-8.76	-10.01/-12.03	-5.41/-3.73	-5.16/-4.76	-7.21/-5.93	-7.31/-6.95	-9.21/-4.88
θ (105°)	-5.51/-6.86	-7.69/-9.34	-9.19/-8.74	-8.94/-6.8	-6.62/-7.94	-7.83/-5.53	-6.33/-4.14	-3.32/-2.34	-1.55/-3.73	-3.88/-3.82	-3.22/-3.46	-5.1/-3.94	-5.16/-5.52	-6.07/-6.24	-6.48/-7.47	-7.12/-7.13	-10.85/-7.31	-6.88/-9.88	-9.61/-11.72	-8.25/-6.59	-8.82/-8.91	-7.08/-8.32	-10.31/-9.66	-11.15/-6.7
θ (112.5°)	-7.91/-8.5	-10.46/-9.84	-9.75/-10.23	-8.83/-6.49	-7.74/-10.16	-9.69/-7.63	-6.46/-6.11	-5.92/-3.93	-3.96/-5.61	-5.75/-6.22	-5.54/-6.02	-5.75/-5.96</												

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.85	3.51	3.24	4.54	4.52
Ant. 2 Max Gain (dBi)	3.82	3.53	2.9	3.48	2.18
Ant. 3 Max Gain (dBi)	3.85	3.93	3.85	2.3	2.03
Ant. 4 Max Gain (dBi)	2.41	4.97	3.73	3.93	3.97
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/150	Theta/60/97.5	Theta/60/97.5	Theta/60/210	Theta/60/105
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/45/292.5	Phi/67.5/127.5	Phi/67.5/135	Phi/67.5/7.5	Phi/75/37.5
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/45/67.5	Phi/67.5/187.5	Phi/60/187.5	Phi/75/97.5	Phi/75/97.5
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/0/22.5	Theta/67.5/52.5	Theta/67.5/45	Theta/75/60	Theta/75/60
Max Gain (dBi)	3.85	4.97	3.85	4.54	4.52
DG [1SS] (dBi)	7.01	5.11	4.06	5.16	5.29
DG [2SS] (dBi)	4.01	4.97	3.85	4.54	4.52
DG [4SS] (dBi)	3.85	4.97	3.85	4.54	4.52



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	
Theta(22.5)	-1.091-1.1	-0.93-0.47	-0.13-0.02	-0.04-0.17	-0.52-1.14	-1.81-2.22	-3.25-4.1	-4.54-4.82	-4.01-2.71	-1.97-1.83	-1.89-2.18	-1.93-1.6	-0.76-1.1	0.71-1.1	1.22-0.92	0.54-0.25	-0.08-0.79	-1.91-1.68	-1.18-0.6	-0.21-1.8	0.25-0.26	-0.01-0.88	-1.42-1.54	-1.59-1.47	
Theta(30)	-0.72-0.82	-0.91-0.47	0.05-0.13	-0.01-0.6	-0.19-0.37	-0.62-0.83	-1.71-2.49	-2.86-4.15	-3.08-1.45	-0.91-0.69	-0.31-0.28	-0.66-1.39	-1.36-0.63	0.28-0.75	0.52-0.05	-0.41-0.72	-1.07-1.74	-2.27-3.01	-3.31-1.02	0.96-1.94	2.06-1.43	0.25-0.13	0.25-0.27	-0.79-1.01	
Theta(37.5)	0.22-0.41	-1.68-1.24	-2.89-2.68	-2.02-1.84	-2.11-1.81	-1.42-1.02	-1.32-2.01	-2.79-3.82	-3.32-0.85	0.30-0.58	1.06-0.93	0.63-0.98	0.64-1.1	1.59-1.73	1.14-0.73	0.74-0.49	0.58-0.56	0.65-0.08	-0.81-0.07	1.92-0.94	3.12-2.1	0.83-0.6	1.48-1.55	1.12-0.09	
Theta(45)	1.19-0.8	0.73-0.66	-2.48-2.42	-2.01-1.11	-0.93-1.19	-0.82-1.12	-0.39-0.64	-1.68-1.97	-2.56-0.86	0.76-1.13	1.42-1.45	1.18-1.64	2.19-2.61	2.82-2.66	2.12-2.48	3.05-2.54	2.18	2.11-38	-0.12-0.1	0.99-0.08	3.73-2.89	1.76-1.58	2.21-1.88	1.88-1.66	
Theta(52.5)	2.85-2.7	2.91-1.69	-0.06-0.6	-1.07-0.7	0.17-0.63	-0.67-1.2	-1.04-0.26	-0.56-0.63	-0.76-0.98	2.54-2.73	1.54-1.24	1.04-1.57	1.82-2.25	3.2-3.53	0.91-0.33	1.95-2.37	2.92-2.1	1.58-0.43	-0.56-0.15	1.42-85	3.61-0.05	1.96-2.47	3.22-2.58	2.12-2.37	
Theta(60)	3.39-3.89	3.87-2.64	1.77-1.05	-0.05-0.42	-0.98-0.92	-0.27-1.8	-0.58-1.18	1.14-1.3	1.14-1.3	1.95-2.99	3.33-8.9	3.38-0.1	2.72-4.8	2.75-2.9	0.64-1.1	2.1-2.2	1.7-0.69	-0.11-0.22	0.91-2.37	1.92-0.78	2.36-2.48	3.69-3.97	3.86-3.44		
Theta(67.5)	3.84-3.9	3.91-2.65	2.41-93	1.88-0.8	-0.36-0.12	0.65-0.47	1.16-2.5	2.53-2.77	3.59-3.91	3.74-0.6	3.32-3.18	3.41-0.67	3.63-2.67	1.82-2.05	0.65-0.51	0.72-1.48	1.99-1.67	1.74-2.02	1.42-0.9	1.46-2.52	3.24-3.02	2.33-2.34	3.24-3.76	3.41-3.35	
Theta(75)	2.66-2.96	3.46-2.26	2.28-1.94	2.23-1.45	0.13-0.25	0.50-94	1.61-2.71	3.06-3.33	3.63-8.3	3.22-3.3	3.26-6.3	3.17-3.42	3.59-2.85	1.31-1.14	0.32-0.6	0.01-0.66	1.26-1.31	1.91-0.7	0.94-1.81	2.71-2.73	1.91-1.58	2.29-2.9	3.04-2.9		
Theta(82.5)	1.12-1.4	2.15-0.94	1.01-0.55	1.02-0.04	-0.45-0.41	0.06-2.0	1.12-1.97	2.12-2.59	2.18-2.21	1.69-1.88	1.06-1.02	1.82-2.72	1.81-0.6	-0.8-1.15	-0.94-0.05	-2.08-0.97	0.41-0.44	1.55-1.76	1.46-1.21	0.35-0.95	2.19-2.38	1.19-0.55	0.31-1	1.03-1.2	
Theta(90)	-0.78-0.71	0.17-0.97	-1.16-1.83	-0.86-1.76	-2.41-2.24	-1.38-0.96	-0.41-0.37	0.13-0.73	0.48-0.66	-0.11-0.38	-0.81-1.33	0.27-0.16	0.28-0.16	-1.1-2.55	-2.38-2.09	-2.72-2.28	-1.58-1.11	0.11-0.14	-0.05-0.52	-1.32-0.54	0.72-1.12	-0.16-1.46	-1.48-1.59	-1.33-1.29	
Theta(97.5)	-3.01-1.65	-2.2-2.48	-3.08-3.41	-2.54-4	-4.35-4.37	-2.91-2.63	-2.51-1.81	-1.67-1.06	-1.91-1.28	-1.81-1.46	-2.41-2.7	-1.37-0.93	-2.19-1.75	-2.99-1.58	-4.07-4	-5.41-4.86	-4.19-3.47	-2.61-1.79	-2.61-1.79	-3.21-2.66	-1.36-1.26	-2.81-3.97	-4.74-3.63	-2.81-3.31	
Theta(105)	-5.21-3.42	-4.83-4.02	-5.51-5.14	-5.14-6.03	-5.76-5.94	-5.52-4.78	-4.39-4.4	-4.72-3.4	-3.77-3.25	-4.39-4.4	-4.72-3.4	-3.77-3.25	-4.39-4.4	-4.72-3.4	-3.77-3.25	-4.39-4.4	-4.72-3.4	-3.77-3.25	-4.39-4.4	-4.72-3.4	-3.77-3.25	-4.39-4.4	-4.72-3.4	-3.77-3.25	
Theta(112.5)	-6.08-4.7	-5.37-6.55	-6.81-5.31	-5.46-6.97	-7.62-7.24	-6.89-6.52	-6.58-6.26	-6.71-6.05	-5.42-5.2	-6.21-5.98	-5.65-5.28	-3.91-5.52	-5.62-5.09	-7.03-9.17	-7.89-9.42	-7.49-8.15	-7.51-8.32	-8.64-8.85	-9.65-9.03	-9.33-10.14	-8.18-6.58	-6.98-8.05	-6.64-6.81	-6.51-6.53	
Theta(120)	-6.91-6.12	-6.46-6.61	-7.54-6.01	-5.62-8.23	-10.08-9.67	-9.11-8.73	-8.43-7.97	-8.03-8.4	-7.2-6.87	-6.29-6.56	-7.74-6.16	-6.99-5.99	-8.36-7.98	-7.29-9.16	-9.13-9.34	-8.48-8.34	-7.05-6.54	-8.91-9.54	-10.53-8.57	-7.79-9.04	-7.4-5.46	-8.33-8.39	-9.15-7.59	-6.91-6.58	
Theta(127.5)	-8.34-7.27	-9.51-9.29	-8.41-7.84	-8.14-8.17	-11.01-10.12	-9.97-10.05	-8.75-8.07	-8.84-9.14	-8.37-8.27	-8.68-7.93	-6.81-8.02	-7.45-7.2	-8.49-8.17	-7.94-8.79	-9.46-10.17	-12.22-8.53	-9.92-9.55	-9.41-9.78	-9.19-6.5	-7.68-6.07	-5.27-9.66	-4.67-5.54	-7.2-5.13	-4.97-4.42	
Theta(135)	-9.38-9.31	-9.36-10.26	-8.36-8.47	-10.81-11.56	-12.41-11.96	-10.96-10.63	-9.69-10.08	-10.23-9.88	-10.58-10.16	-7.81-8	-8.55-8.1	-7.51-8.08	-7.94-9.42	-8.55-9.95	-11.22-8.85	-7.88-10.22	-11.62-11	-11.49-10.32	-11.99-10.31	-10.89-9.29	-12.16-11.56	-9.42-7.6	-10.45-9.43	-7.03-8.65	
Theta(142.5)	-10.53-10.84	-8.38-10.01	-12.55-10.76	-9.56-10.17	-12.22-10.56	-11.05-10.58	-10.78-10.35	-11.05-11.51	-10.89-11.33	-8.06-9.16	-8.89-11.74	-6.02-7	-7.21-8.59	-9.69-8.66	-7.68-8.95	-8.8-12.76	-9.56-11.38	-11.25-11.16	-10.71-11.78	-9.66-10.11	-11.99-11.68	-10.49-9.47	-8.42-11.74	-9.99-8.1	
Theta(150)	-9.52-10.97	-9.08-8.85	-10.27-12.62	-11.07-10.72	-11.18-11.08	-10.58-10.08	-9.84-10.96	-11.34-10.01	-9.83-10.52	-10.09-8.88	-8.47-9.02	-9.07-8.7	-7.71-8.45	-9.74-9.7	-10.81-11.75	-12.78-11.85	-10.47-10.97	-10.62-9.55	-10.79-11.74	-12.56-11.48	-11.09-11.63	-12.02-10.91	-8.99-10.35	-10.69-9.19	
Theta(157.5)	-10.27-11.91	-11.95-11.14	-10.1-10.82	-11.91-11.95	-12.22-12.5	-12.82-11.21	-9.79-10.96	-11.66-11.42	-11.52-11.72	-10.8-10	-10.22-10.24	-10.51-9.17	-8.95-10.84	-11.65-11.19	-10.78-9.45	-9.73-9.79	-10.94-12.13	-11.74-11.05	-11.31-12.32	-12.12-11.25	-11.51-11.81	-11.21-12.65	-11.29-11.61	-12.42-11.03	
Theta(165)	-11.67-11.37	-11.61-11.4	-11.91-11.95	-12.27-12.02	-12.09-12.29	-12.31-11.64	-12.28-11.27	-12.38-12.21	-12.52-11.75	-10.87-10.14	-10.51-11.8	-10.02-9.81	-10.22-10.46	-10.99-10.96	-10.51-10.27	-10.62-11.05	-12.21-11.18	-10.89-11.06	-11.55-12.18	-12.29-12.18	-11.51-11.29	-9.78-9.38	-9.05-9.28	-10.55-12.4	
Theta(172.5)	-10.87-10.34	-10.02-10.93	-11.03-11.87	-11.97-12.14	-12.64-12.28	-12.46-11.89	-12.66-12.55	-11.89-12.11	-12.01-13.02	-12.42-11.32	-10.26-9.46	-9.78-9.93	-10.45-10.73	-12.25-12.56	-11.05-11.05	-11.25-10.64	-10.21-11.37	-11.07-10.84	-12.07-11.49	-11.68-10.93	-10.57-10.13	-10.69-10.69	-10.97-11.23		
Theta(180)	-11.01-11.02	-10.94-10.35	-9.74-10.28	-10.46-11.17	-11.09-10.61	-10.58-10.23	-9.73-10.62	-12.11-11.16	-10.51-10.11	-9.21-8.75	-8.99-10.25	-10.55-11.05	-12.24-12.25	-12.14-12.4	-12.48-12	-12.28-11.52	-11.22-11.16	-11.35-11.16	-10.81-10.59	-10.33-11.27	-11.23-11.29	-11.71-11.82	-11.19-11.17	-10.64-11.03	
Freq(Hz)	5.63GPa	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi
DG(dB)	Phi(7.5)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)	-12.03-12.15	-12.54-12.21	-10.44-8.32	-7.3-6.64	-6.31-5.39	-4.24-3.78	-3.85-4.27	-3.79-3.37	-3.77-4.26	-4.84-5.5	-6.09-6.78	-7.87-8.56	-9.78-11.29	-11.72-11.21	-10.61-9.55	-8.39-7.4	-6.64-6.1	-5.57-5.32	-4.81-5.05	-4.83-4.97	-5.72-6.63	-7.28-8.07	-9.37-10.32	-11.75-12.41	
Theta(7.5)	-9.11-9.7	-10.22-10.06	-9.99-9.1	-7.72-7.31	-6.76-6.26	-5.28-4.72	-4.93-5.51	-5.63-4.97	-4.75-5.1	-5.84-7.1	-8.22-8.9	-9.59-10.5	-10.11-10.09	-9.91-9.15	-6.28-5.23	-4.56-4.28	-4.05-3.6	-3.42-3.51	-3.14-2.75	-3-3.23	-3.45-4.06	-4.7-5.1	-5.78-6.83	-7.78-8.4	
Theta(15)	-6.76-7.34	-4.83-4.02	-10.18-10.07	-8.97-8.61	-8.44-5.74	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	-4.29-3.33	
Theta(22.5)	-4.65-7.29	-9.45-10.27	-10.49-10.74	-8.75-6.51	-5.05-3.72	-2.33-1.08	-0.17-0.05	0.18-0.41	0.34-0.38	0.33-0.25	-1.23-2.37	-3.16-4.46	-4.44-3.35	-2.72-2.6	-2.5-2.4	-2.13-1.43	-0.87-0.3	0.22-0.32	0.1-0.06	-0.08-0.29	-0.66-0.57	-0.38-0.43	-0.71-1.33	-2.39-3.9	
Theta(30)	-1.42-1.55	-1.63-1.89	-2.61-4.48	-3.64-2.98	-2.31-3.64	-0.91-0.29	1.12-1.28	1.48-1.64	1.51-1.29	0.92-0.45	-0.88-1.9	-2.28-3.55	-5.24-5.62	-4.55-3.16	-2.18-1.71	-0.77-0.01	0.13-0.39	0.55-0.69	1.04-1.55	1.45-1.18	0.89-0.66	0.85-0.92	0.11-0.56	-1.04-1.17	
Theta(37.5)	-0.21-0.64	0.57-0.49	0.16-0.42	-0.44-0.84	-0.84-0.57	0.13-0.81	1.72-2.04	2.05-2.07	1.59-1.03	1.07-0.98	-0.34-0.35	0.4-0.16	-2.06-3.44	-2.49-1.82	-1.23-0.74	-0.52-0.31	-0.38-0.58	1.68-2.11	2.21-2.42	2.21-1.9	2.38-2.21	1.42-0.98	1.33-0.59	-0.83-0.49	
Theta(45)	-0.84-0.8	-0.9-0.27	1.49-1.76	1.18-0.88	1.18-1.27	1.05-1.38	1.93-2.64	3.49-3.57	2.97-1.6	1.04-1	0.47-1.44	2.95-0.99	0.66-0.62	-0.22-0.1	0.99-0.22	-1.25-0.47	1.11-0.47	0.73-0.95	1.51-1.49	1.43-1.78	1.42-0.89	1.37-0.52	0.32-0.64		
Theta(52.5)	-0.08-0.15	-0.47-0.76	2.33-2.17	1.67-2.09	2.33-2.19	1.48-1.52	2.06-2.83	3.13-3.33	3.19-1.99	1.24-1.36	0.72-2.28	3.58-3.58	2.87-2.34	1.94-0.72	1.23-1.86	1.60-2.23	-0.								



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta	3.35/3.3	3.23/3.62	3.24/2.84	0.83/0.85	-1.07/0.15	0.22/0.32	1.47/2.69	1.33/1.14	-0.07/-0.65	-0.12/0.99	0.91/1.76	1.47/2.01	1.99/2.5	0.91/0.01	0.11/-0.74	-0.62/-2.63	-0.46/-0.93	-1.04/0.97	-0.27/-0.24	0.24/-0.99	-1.56/0.74	1.19/-0.61	-2.14/0.64	2.31/2.67
Theta(82.5°)	1.82/1.75	2.04/2.15	1.84/1.02	-0.91/-2.12	-1.69/0.03	0.12/0.05	1/1.42	0.08/0.33	-1.19/-1.81	-1.16/-0.36	-0.52/0.97	0.74/1.09	1.43/1.59	0.01/-1.01	-0.97/-1.51	-2.19/-4.48	-1.24/-0.9	-0.59/0.85	0.25/0.03	0.88/-1.31	-0.92/0.38	0.36/-1.47	-2.97/-0.13	1.24/1.52
Theta(90°)	-0.22/0.62	0.83/0.51	-0.1/-1.48	-3.27/-3.45	-2.82/-1.09	-1.04/-1.66	-0.28/-0.02	-1.6/-0.63	-2.85/-4.09	-2.33/-1.75	-2.16/-2.12	-1.64/-1.43	-0.87/-0.45	-2.52/-3.11	-2.38/-2.7	-3.56/0.4	-3.89/-2.54	-0.73/-0.75	-1.07/-1.18	-0.47/-2.82	-3.22/-1.9	-2.38/-4.49	-4.99/-1.67	0.01/-0.65
Theta(97.5°)	-2.18/0.99	-0.72/-1.36	-1.79/-3.41	-5.11/-5.78	-4.97/-3.14	-2.63/-3.08	-2/2.2	-3.54/-2.3	-4.93/-5.31	-3.27/-2.65	-3.94/-3.7	-3.09/-3.56	-1.73/-3.07	-4.13/-4.74	-5.01/-4.33	-4.93/-6.89	-6.9/-5.48	-2.67/-2.94	-3.25/-2.77	-2.58/-4.92	-5.62/-4.19	-4.41/-7.41	-7.35/-3.55	-2.73/-2.87
Theta(105°)	-5.21/-5.08	-3.67/-3	-3.61/-5.65	-7.89/-9.32	-6.61/-5.29	-4.46/-5.32	-3.89/-4.04	-4.68/-4.05	-7.14/-6.57	-4.36/-4.51	-5.95/-5.55	-4.4/-5.6	-4.41/-4.75	-6.77/-4.74	-6.07/-6.28	-5.2/-7.01	-9.17/-9.86	-6.16/-7.16	-7.23/-6.64	-8.35/-8.67	-8.22/-6.61	-5.94/-9.26	-8.4/-8.82	-6.39/-6.67
Theta(112.5°)	-6.92/-8.24	-8.79/-7.31	-8.33/-7.61	-9.03/-8.73	-6.68/-7.51	-7.73/-7.77	-5.99/-5.65	-6.31/-7.17	-7.81/-7.36	-4.95/-5.5	-7/5.7	-5.52/-6.78	-6.59/-6.53	-7.53/-8.12	-7.28/-7.42	-7.48/-7.94	-9.66/-9.34	-9.03/-8.33	-9.49/-9.97	-7.84/-9.72	-11.6/-10.38	-7.92/-9.7	-8.5/-6.92	-6.77/-6.86
Theta(120°)	-6.65/-7.85	-6.64/-6.2	-7.01/-7.59	-8.35/-7.78	-9.56/-9.96	-9.37/-9.11	-7.4/-7.4	-8.35/-8.88	-7.63/-8.81	-6.19/-6.92	-6.93/-4.75	-5.87/-7.84	-7.13/-7.95	-9.89/-8.54	-10.66/-8.18	-9.08/-11.06	-9.15/-7.11	-8.87/-9.59	-9.52/-8.66	-6.81/-7.68	-12.26/-10.92	-10.59/-11.17	-9.65/-8.99	-8.22/-6.52
Theta(127.5°)	-7.77/-9.28	-9.64/-8.19	-7.12/-9.53	-8.79/-9.74	-11.26/-9.95	-9.29/-9.45	-7.15/-7.75	-8.14/-8.02	-9.73/-10.6	-8.45/-8.41	-6.96/-6.26	-7.39/-8.18	-7.31/-9.4	-11.64/-8.64	-8.39/-10.64	-10.05/-10.94	-11.97/-10.78	-11.09/-9.47	-8.56/-6.39	-11.14/-11.95	-12.39/-11.35	-9.25/-10.35	-12.56/-11.48	-10.03/-9.34
Theta(135°)	-8.95/-9.59	-9.68/-11.06	-9.91/-10.52	-9.52/-10.26	-10.62/-11.3	-11.53/-10.42	-9.33/-8.67	-7.82/-8.91	-10.16/-9.43	-9.41/-9.18	-9.72/-8.31	-7.72/-9.46	-8.29/-7.94	-7.6/-8.46	-11.99/-9.26	-11.03/-8.45	-12.21/-12.57	-12.47/-12.66	-12.2/-10.2	-9.99/-11.4	-12.24/-12.36	-10.27/-10.72	-10.46/-9.89	-9.76/-8.14
Theta(142.5°)	-10.08/-9.33	-9.74/-9.95	-9.81/-9.61	-9.4/-9.72	-10.67/-9.75	-10.05/-10.36	-10.15/-10.24	-10.92/-11.95	-10.65/-9.05	-9.09/-9.52	-10.16/-9.94	-9.34/-8.44	-8.8/-9.57	-10.82/-10.77	-10.48/-9.44	-11.67/-12.39	-12.47/-12.7	-11.45/-10.77	-11.13/-11.76	-11.7/-11.77	-12.06/-12.3	-11.25/-11.58	-11.84/-11.86	-12.53/-12.49
Theta(150°)	-10.54/-10.69	-11.45/-9.92	-10.46/-11.83	-11.37/-9.7	-10.82/-11.15	-11.08/-11.11	-11.22/-11.87	-12.01/-11.37	-10.69/-10.93	-11.27/-10.56	-9.4/-9.15	-9.85/-10.43	-9.78/-10.18	-9.91/-10.94	-10.35/-10.81	-12.08/-11.53	-10.93/-10.72	-12.83/-11.28	-10.28/-10.34	-8.97/-9.92	-11.58/-11.7	-12.07/-12.11	-11.65/-11.32	-11.35/-11.49
Theta(157.5°)	-11.05/-9.97	-11.61/-11.63	-12.05/-11.6	-12.42/-11.44	-11.51/-12.47	-12.27/-12.31	-12.46/-12.76	-12.54/-11.77	-12.66/-12.5	-11.91/-11.04	-10.66/-10.74	-10.03/-11.4	-11.79/-10.4	-10.34/-12.18	-12.01/-12.15	-11.45/-11.5	-11.8/-12.3	-12.37/-11.35	-11.28/-11.99	-11.68/-11.84	-12.23/-11.66	-12.58/-11.72	-10.43/-9.34	-10.44/-11.05
Theta(165°)	-11.33/-11.26	-12.54/-11.1	-10.74/-11.23	-10.92/-11.9	-12.67/-12.14	-12.6/-12.27	-12.13/-12.22	-12.69/-12.6	-12.44/-11.89	-11.92/-12.02	-11.72/-10.66	-11.18/-11.37	-11.32/-11.1	-11.75/-10.24	-9.67/-9.91	-11.64/-12.19	-12.44/-11.78	-11.66/-10.46	-10.39/-10.98	-11.81/-11.99	-11.54/-10.55	-11.04/-11.01	-10.21/-10.75	-11.35/-10.63
Theta(172.5°)	-11.67/-11.49	-10.58/-10.47	-10.3/-10.74	-11.67/-11.89	-12.59/-12.74	-12.34/-12.2	-11.95/-11.9	-11.84/-12.38	-12.08/-11.85	-12.46/-11.85	-11.34/-10.65	-11.06/-11.32	-11.97/-11.15	-11.62/-12.35	-12.16/-12.3	-12.19/-12.4	-12.38/-12.15	-12.95/-11.33	-11.52/-11.71	-12.21/-11.78	-12.05/-12.27	-11.15/-10.69	-10.31/-10.66	-10.57/-11.24
Theta(180°)	-11.57/-11.35	-10.43/-9.93	-10.36/-10.68	-11.03/-11.51	-11.27/-11.65	-11.73/-10.84	-10.35/-9.98	-11.08/-10.83	-10.17/-10.46	-10.29/-10.76	-10.62/-11.16	-11.01/-10.92	-11.41/-11.27	-11.63/-12.1	-12.23/-12.43	-12.76/-12.41	-12.12/-12.48	-12.19/-11.84	-11.49/-11.43	-11.46/-11.55	-11.05/-11.46	-10.68/-10.95	-11.69/-11.28	-12.05/-11.78
Freq(Hz)	5.785GPol.	Theta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	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(7.5°)	-5.88/-6.89	-7.39/-7.44	-7.23/-6.6	-5.38/-4.16	-3.79/-3.4	-2.84/-2.11	-2.23/-2.11	-2.05/-1.98	-2.15/-2.67	-3.72/-4.69	-5.35/-5.74	-5.91/-5.82	-5.54/-4.85	-4.34/-4.06	-3.79/-3.45	-3.11/-2.85	-1.9/-1.07	-0.53/-0.24	0.03/0.34	0.51/0.46	0.01/-0.39	-0.99/-1.6	-2.59/-3.7	-4.36/-5.12
Theta(15°)	-3.29/-4.27	-4.79/-5.25	-5.42/-5.57	-4.86/-4.05	-3.4/-3.05	-2.62/-2.16	-1.91/-1.79	-1.7/-1.26	-1.35/-1.4	-1.94/-2.57	-3.37/-4.14	-4.87/-5.07	-4.51/-3.98	-2.82/-1.75	-0.97/-0.25	0.38/0.84	1.11/1.44	1.65/1.59	1.34/1.4	1.41/1.26	1.12/0.85	0.39/-0.01	-0.59/-1.49	-2.1/-2.78
Theta(22.5°)	-3.6/-5.23	-4.73/-4.13	-4.44/-4.8	-4.7/-4.69	-4.34/-3.34	-2.02/-1.29	-0.75/-0.11	0.12/0.07	-0.17/-0.42	-0.56/-1.06	-2.04/-3.89	-5.48/-6.39	-5.72/-4.16	-2.95/-2.37	-0.27/-1.48	-0.39/0.69	1.68/2.28	2.32/3.6	2.52/4.8	2.62/4.7	2.23/1.84	1.49/0.85	0.24/-0.76	-1.91/-2.81
Theta(30°)	-2.73/-3.05	-1.97/-1.93	-1.93/-2.03	-2.18/-1.67	-1.16/-0.2	0.29/0.58	1.47/2.67	2.92/2.56	2.03/1.24	0.66/-0.37	-1.53/-1.87	-1.89/-3.09	-4.24/-4.67	-4.68/-3.32	-1.76/-0.43	0.86/1.38	1.54/1.2	1.31/2.25	2.68/2.47	2.38/2.58	2.47/2.13	1.78/1.37	0.9/0.21	-1.21/-2.77
Theta(37.5°)	-1.47/0.32	1.13/1.46	1.87/1.66	1.32/0.87	0.03/-0.23	0.51/0.45	2.06/2.78	3.88/4.39	3.99/2.84	1.21/-0.57	-1.13/-0.61	-0.6/-1.18	-2.06/-2.57	-1.66/-0.64	-0.06/0.24	1.11/1.25	0.43/0.14	1.08/2.44	2.92/2.51	1.98/2.35	2.67/2.01	1.45/1.22	1.21/0.32	-1.73/-2.26
Theta(45°)	-0.43/1.37	1.95/2.62	3.34/3.57	3.68/3.22	2.07/1.08	1.94/3.41	4.36/4.27	4.74/5.29	5/4.28	3.06/0.75	0.19/0.23	0.05/-0.28	-1.28/-1.3	0.11/0.8	0.68/0.35	0.81/0.4	-0.39/-0.16	0.26/1.18	2.21/2.53	2.19/2.26	2.74/1.8	0.82/0.97	0.77/0.97	-0.95/-2.04
Theta(52.5°)	-0.34/1.28	1.62/2.84	3.53/4	4.42/4.32	3.37/2.93	3.07/3.41	3.72/4.57	4.96/4.99	4.62/4.25	3.37/1.11	0.31/1.31	1.71/1.16	-0.62/-0.65	0.31/1.48	1.41/1.14	1.09/0.71	-0.31/-0.73	-0.67/-0.26	-0.36/0.98	1.97/2.03	1.88/1.27	0.32/0.5	0.15/1.23	0.18/-1.11
Theta(60°)	0.76/2.09	2.05/2.57	2.63/2.76	3.13/3.7	3.41/3.14	1.75/1.16	2.08/3.96	4.58/4.41	3.82/3.21	3.63/2.19	0.11/1.19	1.73/1.65	1.49/0.53	0.87/2.65	2.74/1.77	1.9/0.62	-0.8/-1.41	-2.84/-2.74	-1.91/-0.67	0.83/1.4	1.28/1.02	0.39/0.98	0.52/1.65	0.38/-0.28
Theta(67.5°)	1.39/2.59	1.57/1.61	1.46/1.05	2.52/3.13	3.89/3.38	1.37/0.79	1.98/3.51	4.01/3.64	2.82/1.9	3.14/1.52	0.76/1.65	2.03/1.67	2.27/1.75	1.82/95	2.69/1.55	1.86/0.14	-1.08/-2.06	-3.02/-3.76	-2.37/-1.12	0.65/1.63	0.64/0.29	0.61/35	0.66/1.53	0.63/0.52
Theta(75°)	2.22/2.61	0.98/0.81	0.21/0.04	2.36/3.17	3.79/3.11	1.63/1.49	2.04/2.71	3.43/2.94	2.04/1	1.94/1.92	1.0/94	1.92/1.56	1.79/2.14	1.42/2.4	1.98/0.95	0.24/-0.74	-1.68/-1.34	-2.49/-3.87	-2.91/-0.56	0.69/1.45	0.6/-0.43	0.35/1.69	0.76/1.41	0.8/0.78
Theta(82.5°)	1.89/1.82	0.32/-0.34	-1.46/-0.77	1.37/1.94	2.58/2.01	0.61/0.06	1.44/1.49	2.27/2.36	0.99/0.44	1.01/1.62	0.94/0.81	1.15/0.44	1.41/1.11	1.71/1.73	0.37/-0.51	-1.58/-2.24	-1.66/-1.12	-2.1/-4.99	-3.17/-0.55	0.27/1.1	0.58/-0.69	-0.73/0.05	0.09/0.52	0.26/0.56
Theta(90°)	0.71/0.78	-0.17/-0.78	-2.71/-2.23	-0.92/0.18	1.29/0.58	-0.67/-0.72	-0.48/0.09	0.71/1.66	0.33/-0.37	0.34/0.02	0.09/-0.81	0.06/-0.28	-0.02/0.22	0.65/0.64	-1.13/-1.53	-3.22/-2.13	-2.35/-1.32	-2.23/-4.04	4.85/-2.75	-0.61/0.55	-0.04/-1.38	-3.08/-1.17	-1.39/-1.04	-2.15/-0.05
Theta(97.5°)	-1.87/-1.28	-2.06/-3.02	-4.77/-3.94	-2.88/-1.25	-0.62/-1.85	-2.58/-2.62	-2.39/-1.41	-0.6/0.52	-0.29/-1.84	-1.27/-2.08	-0.78/-1.59	-2.11/-2.07	-0.21/-1.22	-0.57/-1.37	-2.77/-3.91	-5.24/-3.53	-4.87/-3	-3.5/-5.14	-6.19/-5.46	-2.64/-0.95	-1.84/-2.92	-4.24/-3.73	-4.7/-3.24	-3.71/-2.22
Theta(105°)	-3.48/-4.18	-5.44/-6.75	-7.01/-4.77	-4.13/-2.5	-2.69/-3.96	-4.51/-3.95	-3.62/-2.09	-2.39/-1.69	-1.74/-3.32	-3.01/-4.06	-2.82/-3.52	-4.52/-3.19	-1.74/-2.24	-1.97/-2.09	-5.07/-6.27	-6.57/-5.48	-7.1/-5.06	-4.26/-6.8	-7.85/-6.67	-6.02/-4.34	-4.76/-5.82	-5.1/-5.45	-7.35/-6.1	-5.55/-3.66
Theta(112.5°)	-4.89/-4.45	-6.62/-7.55	-7.54/-6.47	-5.15/-3.25	-4.4/-6.52	-6.26/-5.25	-4.22/-3.69	-3.68/-3.63	-4.18/-4.87	-4.19/-5.74	-4.02/-6.02	-4.45/-4.24	-3.01/-4.49	-2.85/-2.85	-7.69/-8.78	-8.61/-9.54	-6.52/-6.85	-8.13/-10.28	-10.16/-8.72	-9.22/-7.11	-5.74/-6.79	-5.54/-5.26	-7.24/-8	



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta (120°)	-10.97-12.58	-12.29-12.12	-13.91-11.84	-9.54-9.48	-13.44-15.19	-12.88-12.26	-13.16-12.53	-11.76-13.86	-13.17-11.22	-9.55-11.29	-12.66-10.98	-11.83-11.64	-15.04-14.52	-14.82-14.09	-13.51-17.26	-16.07-17.8	-16.64-18.06	-13.85-14.28	-17.72-16.05	-13.39-12.43	-13.78-12.86	-12-13.12	-14.49-11.97	-12.72-13.33
Theta (127.5°)	-16.14-13.39	-15.37-14.72	-13.44-14.34	-12.95-13.82	-15.29-15.42	-14.75-14.77	-14.08-13.26	-15.17-13.67	-18.09-15	-12.47-12.73	-13.77-14.04	-13.07-15.84	-17.07-16.16	-17.85-19.07	-12.41-16.12	-19.13-14.99	-17.11-16.82	-16.16-16.28	-13.07-14.24	-12.38-13.43	-18.45-18.23	-12.91-13.48	-17.27-14.13	-15.2-17.66
Theta (135°)	-18.17-19.05	-17.32-17.78	-16.48-14.42	-15.69-13.56	-16.43-17.77	-16.43-17.77	-16.43-17.77	-15.71-18.92	-17.62-16.4	-15.42-16.79	-16.44-14.89	-12.04-15.95	-15.76-16.25	-19.32-18.28	-18.13-17.23	-19.21-17.45	-17.17-17.69	-17.63-18.25	-16.31-15.51	-19.69-18.14	-18.53-19.18	-13.84-15.23	-17.28-14.91	-14.16-18.97
Theta (142.5°)	-17.86-19.31	-14.35-14.2	-17.28-18.55	-15.78-15.93	-18.54-17.72	-18.61-18.21	-17.51-18.02	-18.09-17.96	-18.97-18.52	-18.25-18.02	-19.28-18.42	-13.38-16.51	-16.15-19.18	-17.66-18.79	-17.87-18.11	-17.53-18.8	-17.69-17.35	-18.92-18.86	-18.58-17.53	-15.44-15.52	-18.58-18.56	-18.14-18.32	-18.1-19.74	-15.53-17.43
Theta (150°)	-17.11-18.51	-18.96-17.42	-16.95-19.29	-17.65-18.15	-18.87-18.26	-17.71-18.15	-18.79-17.3	-16.93-17.88	-18.2-18.86	-17.92-18.69	-18.33-14.85	-17.64-17.49	-17.57-18.44	-18.96-18.42	-18.21-17.7	-16.34-17.01	-18.1-17.13	-19.66-17.82	-18.71-19.25	-19.05-18.51	-18.43-18.36	-17.89-18.51	-18.89-16.81	-18.89-16.81
Theta (157.5°)	-18.11-18.41	-18.26-18.81	-19.1-18.74	-19.34-18.85	-18.81-17.89	-17.94-18.3	-17.43-17.89	-18.17-18.38	-17.73-18.01	-18.48-18.13	-18.41-17.81	-19.18-17.79	-18.85-18.7	-18.43-18.03	-18.31-18.6	-18.71-18.18	-18.41-19.09	-19.1-17.98	-17.76-18.53	-18.31-19.11	-18.28-18.38	-19.31-18.24	-18.67-18.73	-18.67-18.73
Theta (165°)	-18.91-18.19	-18.28-19.79	-18.04-18.48	-17.15-18.21	-17.59-18.2	-19.04-18.49	-18.63-18.16	-18.63-18.66	-17.67-18.32	-18.43-17.79	-18.77-17.42	-18.98-18.52	-17.88-18.13	-19.18-19.04	-18.92-18.35	-19.09-17.62	-18.53-17.92	-18.57-18.34	-18.91-18.69	-18.08-18.34	-18.89-18.14	-18.11-18.51	-17.96-18.36	-17.69-19.23
Theta (172.5°)	-18.72-17.86	-18.87-18.46	-17.77-18.23	-18.91-18.92	-17.99-18.37	-18.94-19.4	-19.16-18.28	-18.38-17.71	-18.11-18.43	-17.93-19.16	-18.63-17.99	-18.86-17.82	-18.48-18.98	-17.69-18.36	-17.31-19.12	-18.61-17.65	-19.14-17.49	-18.63-17.51	-18.55-17.79	-17.84-18.03	-18.35-17.54	-18.42-18.24	-18.62-18.02	-19.22-18.79
Theta (180°)	-17.93-17.83	-18.96-18.83	-18.61-18.21	-18.95-18.71	-17.87-18.27	-19.19-18.37	-18.17-18.86	-18.17-18.86	-17.73-17.34	-18.41-19.35	-17.45-17.61	-18.84-19.32	-18.11-18.21	-18.91-17.26	-18.38-18.42	-18.57-18.88	-17.34-17.36	-18.87-17.99	-18.34-17.99	-18.98-17.29	-18.68-17.44	-17.91-18.32	-18.18-18.24	-18.18-18.24
Freq(Hz)	5.2GPol	ThetaAnt.2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	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°)	-18.59-18.74	-16.31-15.22	-15.15-14.97	-13.21-10.19	-8.69-8.93	-17.02-12.81	-10.82-10.81	-11.56-13.64	-15.78-16.38	-16.62-17.74	-19.07-19.19	-17.11-18.19	-18.61-17.57	-17.11-18.19	-18.61-17.57	-17.11-18.19	-18.61-17.57	-17.11-18.19	-18.61-17.57	-17.11-18.19	-18.61-17.57	-17.11-18.19	-18.61-17.57	-17.11-18.19
Theta(7.5°)	-17.11-17.98	-17.93-14.71	-12.17-11.48	-12.84-12.22	9.27-4.2	-7.86-10.78	-11.85-9.66	-8.96-10.14	-13.16-16.32	-18.2-17.96	-18.39-18.27	-18.21-17.79	-17.64-14.76	-12.94-11.53	-10.68-10.28	-9.45-8.74	-8.53-9.85	-10.38-12.36	-13.41-12.99	-12.81-13.43	-15.38-18.31	-17.22-17.91	-18.13-18.95	-16.56-17.64
Theta(15°)	-10.52-11.11	-13.46-13.76	-12.48-12.56	-14.4-14.78	-11.44-8.71	-8.48-10.42	-10.66-8.77	-7.81-8	-8.88-8.91	-11.1-11.94	-12.02-12.08	-12.68-14.52	-18.2-19.57	-13.76-10.61	-9.31-8.45	-7.8-7.1	-8.61-7.13	-8.81-12.36	-15.92-15.98	-15.53-16.26	-17.42-17.94	-18.52-17.8	-16.47-15.44	-13.88-13.01
Theta(22.5°)	-10.02-11.28	-14.78-17.76	-18.02-18.89	-16.97-13.46	-16.87-7.59	-7.31-8.03	-7.88-7.42	-7.72-8.31	-8.32-7.83	-7.82-8.52	-9.28-9.28	-9.91-11.82	-14.39-15.53	-15.71-10.83	-6.88-5.35	-6.84-9.02	-11.72-15.22	-18.43-19.94	-17.72-15.22	-18.31-14.49	-18.11-10.7	-9.85-9.86	-10.04-11.12	
Theta(30°)	-9.98-9.88	-11.71-14.21	-16.32-17.38	-16.3-12.31	-9.93-8.12	-6.87-6.46	-6.24-5.87	-5.71-6.34	-7.53-8.14	-7.37-7.13	-7.93-8.01	-8.39-11.36	-14.83-13.49	-10.58-9.54	-10.51-11.62	-10.43-8.6	-7.07-6.97	-8.58-11.99	-15.16-13.85	-10.81-8.82	-8.28-8.4	-8.69-9.47	-9.49-9.41	-9.14-10.33
Theta(37.5°)	-10.71-9.49	-9.72-10.98	-13.66-10.03	-19.49-17.77	-11.52-10.17	-7.9-5.81	-4.91-5.32	-6.12-6.4	-6.41-6.94	-7.44-7.77	-8.41-10.64	-11.54-14	-13.47-9.96	-8.46-9.22	-11.29-13.3	-15.69-12.7	-10.61-10.83	-13.21-18.09	-18.19-12.58	-8.04-6.01	-5.9-6.85	-8.23-9.52	-9.19-10.38	-12.29-11.41
Theta(45°)	-15.43-12.84	-11.92-12.77	-16.62-19.01	-18.17-14.11	-12.21-13.39	-11.59-7.71	-5.73-6.55	-6.52-8.08	-8.81-7.92	-9.1-12.05	-16.21-17.82	-17.87-14.62	-13.95-12.42	-11.19-10.63	-10.16-11.65	-16.37-16.17	-14.81-16.54	-17.22-19.33	-17.35-12.53	-3.86-6.02	-5.97-7.41	-9.56-11.63	-10.67-12.09	-18.23-17.41
Theta(52.5°)	-19.08-16.75	-13.65-12.84	-18.15-18.66	-17.86-14.99	-14.4-15.28	-13.86-9.61	-7.88-7.39	-9.51-15.68	-10.9-9.23	-9.42-12.42	-16.67-17.22	-12.59-10.9	-12.91-14.58	-14.45-11.38	-10.67-11.22	-16.29-18.72	-17.66-18.97	-18.79-19.02	-17.97-16.76	-10.79-7.18	-7.29-10.27	-13.46-15.71	-14.13-15.64	-17.83-16.66
Theta(60°)	-18.27-17.48	-13.25-11.84	-14.73-18.08	-17.91-17.91	-16.14-18.04	-18.25-12.17	-10.78-13.37	-14.87-16.42	-12.71-13.94	-14.82-12.27	-14.82-15.14	-13.61-13.45	-14.45-19.62	-19.11-19.62	-16.18-11.93	-12.13-13.16	-18.44-19.47	-17.48-15.58	-18.06-17.91	-15.13-11.63	-12.83-15.48	-17.77-12.93	-17.47-17.51	-17.32-18.06
Theta(67.5°)	-17.51-18	-11.35-10.43	-13.68-17.08	-17.92-18.67	-17.77-19.88	-18.12-16.54	-10.68-13.92	-16.71-19.21	-19.14-15.36	-14.11-13.27	-15.79-18.89	-17.59-11.93	-18.71-12.31	-17.69-18.74	-15.86-17.41	-17.91-12.31	-17.69-18.74	-15.86-17.41	-17.91-12.31	-17.69-18.74	-15.86-17.41	-17.91-12.31	-17.69-18.74	-15.86-17.41
Theta(75°)	-18.12-15.02	-11.31-10.19	-13.49-15.96	-18.6-17.86	-19.05-18.54	-18.48-17.94	-17.71-18.69	-18.75-13.82	-10.12-13.55	-18.27-15.47	-15.03-11.9	-12.44-13.12	-11.52-12.9	-11.24-17.95	-18.45-13.04	-11.17-11.44	-15.26-18	-14.98-13.13	-16.35-16.36	-17.66-15.4	-17.15-17.78	-18.18-17.9	-14.81-17.89	-18.19-18.24
Theta(82.5°)	-15.41-12.75	-11.64-12.04	-15.04-18.3	-17.38-18.21	-17.81-19.2	-17.83-18.55	-18.34-14.72	-18.73-15.42	-10.61-12.2	-18.74-18.39	-15.45-12.37	-13.51-11.67	-14.01-13.8	-12.23-17.59	-18.21-14.25	-12.55-11.74	-14.11-18.97	-17.43-15.31	-16.31-14.96	-18.74-16	-14.43-18.57	-18.46-12.33	-16.23-18.37	-19.1-19.01
Theta(90°)	-14.57-12.67	-12.99-13.72	-17.28-17.83	-19.14-17.65	-18.07-18.02	-19.22-18.04	-17.93-14.92	-16.14-15.12	-12.65-13.4	-17.97-18.22	-18.64-16.65	-14.61-11.98	-11.98-15.64	-14.55-17.95	-18.64-17.04	-12.55-11.67	-12.91-16.57	-19.43-17.08	-18.67-17.54	-17.57-17.04	-15.22-19.02	-18.68-17.35	-18.11-17.43	-19.12-16.75
Theta(97.5°)	-15.89-14.9	-14.58-15.21	-18.37-18.07	-18.58-18.94	-17.36-17.87	-18.92-18.41	-17.12-14.99	-17.31-16.4	-13.86-15.49	-18.28-19.31	-19.39-17.15	-16.65-13.75	-18.89-19.24	-17.83-17.91	-17.96-18.68	-18.25-15.73	-14.88-17.26	-18.2-17.95	-17.24-17.44	-18.97-16.01	-15.61-18.34	-17.75-18.62	-18.33-18.28	-18.67-18.52
Theta(105°)	-19.06-16.82	-18.05-16.68	-18.63-18.77	-18.18-18.12	-18.27-19.21	-18.79-17.86	-18.52-15.56	-18.15-17.7	-15.77-18.25	-17.59-18.89	-17.72-18.09	-17.67-15.54	-16.68-19.04	-18.08-18.42	-18.91-18.08	-18.85-18.97	-17.96-18.01	-19.05-18.5	-19.16-17.35	-17.36-15.99	-19.38-18.86	-18.37-18.94	-18.87-17.69	-18.21-18.62
Theta(112.5°)	-18.4-18.99	-19.03-18.85	-17.42-18.77	-18.67-18.76	-18.02-17.33	-19.01-19.21	-17.84-17.9	-18.17-16.71	-15.73-17.37	-18.67-18.27	-19.44-18.43	-18.81-19.13	-18.37-18.03	-19.11-18.37	-18.64-18.13	-18.93-18.36	-17.78-18.6	-18.92-17.44	-18.26-18.01	-18.04-19.27	-18.54-18.59	-19.2-17.87	-18.91-19.1	-18.91-19.1
Theta(120°)	-18.48-19.55	-18.88-18.52	-18.19-18.4	-18.11-18.49	-19.21-18.18	-18.58-18.3	-18.75-18.69	-18.99-18.09	-18.46-19.08	-18.15-17.24	-18.78-17.76	-17.25-17.89	-18.97-18.6	-17.94-18.38	-17.71-18.35	-17.59-19.15	-18.06-18.43	-19.32-19	-19.2-19.78	-17.12-18.66	-18.27-18.9	-18.82-18.75	-18.34-18.29	-17.52-17.99
Theta(127.5°)	-18.82-18.37	-18.91-17.7	-18.04-19	-17.93-18.26	-18.82-18.01	-18.57-19.5	-18.06-18.07	-19.35-17.74	-18.43-18.48	-18.58-18.87	-17.73-18.12	-18.01-18.37	-18.49-17.08	-17.67-19.11	-19.24-18.96	-18.87-18.84	-18.05-17.86	-19.03-18.77	-17.6-18.65	-18.67-17.48	-17.94-18.24	-17.48-18.17	-17.65-17.87	-19.17-18.69
Theta(135°)	-18.01-17.1	-18.58-18.35	-18.03-18.93	-18.61-18.69	-19.11-18.47	-18.49-18.46	-19.21-18.89	-19.38-19.19	-18.21-18.46	-17.08-19.42	-18.42-17.37	-18.64-18.43	-19.05-18.73	-18.97-17.89	-18.41-17.61	-17.82-18.98	-17.43-19.83	-19.29-19.58	-18.82-18.13	-18.76-18.9	-18.98-19.18	-18.01-18.09	-18.16-18.74	-18.16-18.74
Theta(142.5°)	-18.53-18.77	-18.99-18.9	-19.15-17.98	-18.5-17.62	-18.38-18.6	-18.47-17.97	-17.52-18.24	-17.81-18.94	-18.26-18.44	-18.81-18.9	-17.32-18.41	-18.28-16.98	-18.96-18.96	-18.89-19.29	-17.71-18.43	-19.15-18.57	-18.12-18.4	-18.26-17.78	-17.81-18.6	-18.99-18.5	-18.67-19.36	-18.18-18.72	-19.2-18.1	-18.34-18.67
Theta(150°)	-19.15-17.85	-17.45-19.04	-17.84-17.67	-19.3-17.98	-17.89-19.1	-17.95-18.64	-18.22-17.77																	



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta	165°	172.5°	180°	187.5°	195°	202.5°	210°	217.5°	225°	232.5°	240°	247.5°	255°	262.5°	270°	277.5°	285°	292.5°	300°	307.5°	315°	322.5°	330°	337.5°	345°
Gain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Theta	0°	7.5°	15°	22.5°	30°	37.5°	45°	52.5°	60°	67.5°	75°	82.5°	90°	97.5°	105°	112.5°	120°	127.5°	135°	142.5°	150°	157.5°	165°	172.5°	180°
Gain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Theta	0°	7.5°	15°	22.5°	30°	37.5°	45°	52.5°	60°	67.5°	75°	82.5°	90°	97.5°	105°	112.5°	120°	127.5°	135°	142.5°	150°	157.5°	165°	172.5°	180°
Gain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta (15°)	-11.18/-11.88	-12.89/-14.13	-15.62/-17.31	-18.19/15.7	-19.15/18.35	-17.31/-16.04	-14.67/-13.17	-13.07/-12.56	-12.04/-11.27	-10.85/-10.26	-9.95/-10	-10.23/-10.63	-11.04/-11.87	-13.27/-15.16	-16.25/-15.63	-14.21/-13.09	-12.52/-12.18	-11.53/-10.83	-10.34/-10.15	-10.12/-10.29	-10.48/-10.78	-11.02/-11.27	-11.31/-11.11	-11.03/-11.18
Theta (22.5°)	-9.05/-9.62	-10.51/-11.58	-13.44/-14.91	-17.07/-18.99	-17.78/-19.35	-18.17/-16.9	-15.83/-15.16	-14.47/-13.56	-13.06/-12.47	-11.28/-10.45	-10.97	-9.96/-10.16	-10.59/-11.7	-13.63/-16.27	-18.22/-17.49	-15.22/-13.68	-12.81/-12.02	-10.82/-9.88	-9.27/-9.09	-9.17/-9.5	-10.08/-10.78	-11.29/-11.37	-10.85/-10.24	-9.76/-9.55
Theta (30°)	-7.72/-8.24	-9.84/-9.9	-11.12/-12.99	-15.42/-18	-18.05/-19.92	-17.69/-19.08	-16.64/-16.71	-14.71/-16.82	-13.57/-13.98	-12.38/-11.12	-10.27/-9.91	-9.91/-10.16	-10.67/-11.4	-12.61/-14.52	-17.49/-17.29	-14.68/-13.98	-13.95/-14.12	-11.47/-10.27	-9.52/-9.13	-9.19/-9.57	-10.56/-11.25	-11.74/-11.35	-10.32/-9.28	-8.61/-8.38
Theta (37.5°)	-7.32/-8.04	-8.78/-9.6	-10.78/-12.98	-16.36/-17.98	-19.02/-17.81	-18.89/-18.81	-17.93/-18.97	-16.39/-18.13	-15.01/-14.48	-13.79/-15.03	-13.14/-11.73	-11.10/8.4	-10.89/-11.15	-11.81/-13.21	-15.77/-16.65	-18.34/-18.84	-17.84/-14.74	-12.58/-11.12	-10.24/-9.81	-9.77/-10.18	-10.95/-11.88	-12.09/-11.18	-9.64/-8.36	-7.73/-7.64
Theta (45°)	-8.21/-9.22	-10.06/-10.81	-12.08/-14.86	-17.43/-18.02	-17.77/-17.44	-19.13/-18.12	-18.07/-19.05	-17.38/-17.97	-17.81/-17.56	-18.56/-17.02	-16.92/-13.67	-11.77/-10.79	-10.38/-10.3	-10.89/-12.21	-14.73/-19.01	-17.35/-19.1	-17.71/-17.84	-15.18/-13.61	-12.41/-11.79	-11.59/-11.91	-12.67/-13.52	-13.59/-12.1	-10.29/-8.69	-7.81/-7.76
Theta (52.5°)	-9.29/-10.54	-11.24/-11.48	-12.47/-15.24	-18.72/-17	-15.19/-15.5	-17.49/-18.75	-19.08/-17.62	-19.38/-17.57	-18.23/-17.4	-17.46/-18.82	-17.42/-17.64	-13.74/-11.76	-10.88/-10.51	-10.75/-12.07	-14.88/-19.92	-18.81/-18.91	-17.39/-18.91	-17.34/-16.01	-13.95/-14.52	-15.38/-16.02	-15.12/-13.17	-10.99/-9.37	-8.26/-8.1	
Theta (60°)	-9.88/-11.24	-11.81/-11.73	-12.71/-16.06	-18.79/-15.7	-14.41/-15.1	-17.06/-17.62	-18.13/-18.62	-18.71/-18.77	-17.21/-16.05	-15.83/-18.21	-18.98/-18.01	-14.61/-11.62	-10.14/-9.74	-10.31/-11.89	-15.01/-18.02	-18.71/-17.53	-18.38/-18.22	-19.18/-18.76	-18.76/-18.32	-17.88/-18.91	-18.57/-18.59	-17.92/-15.18	-12.94/-11.02	-9.81/-9.28
Theta (67.5°)	-11.52/-12.99	-13.45/-13.43	-15.04/-18.29	-19.79/-15.16	-14.38/-15.16	-17.06/-18.3	-18.67/-19.12	-19.27/-17.04	-15.51/-14.38	-13.89/-15.18	-19.22/-19.08	-16.32/-12.47	-10.86/-10.3	-10.72/-12.47	-15.87/-18.91	-18.07/-17.56	-17.81/-17.51	-18.51/-18.35	-17.14/-17.94	-18.37/-18.66	-19.32/-18.75	-18.13/-17.33	-14.86/-13.26	-11.98/-11.82
Theta (75°)	-14.71/-16.32	-16.71/-16.89	-17.75/-19.2	-19.57/-15.26	-15.01/-16.09	-18.01/-18.56	-18.51/-18.8	-18.41/-17.76	-15.57/-14.43	-14.17/-15.56	-19.11/-18.85	-17.82/-13.07	-10.89/-10.49	-11.61/-13.94	-17.95/-18.38	-19.28/-19.14	-17.36/-18.56	-18.92/-17.68	-17.87/-19.04	-18.31/-18.97	-18.51/-17.74	-17.82/-17.44	-14.94/-13.54	-12.94/-13.34
Theta (82.5°)	-16.11/-17.69	-19.06/-18.99	-18.98/-18.52	-18.66/-15.76	-15.91/-17.45	-17.63/-18.69	-18.13/-18.58	-18.28/-17.96	-16.11/-14.66	-14.62/-16.29	-18.67/-18.35	-18.76/-13.91	-12.01/-11.79	-12.86/-14.8	-17.47/-18.05	-19.15/-17.86	-18.92/-19.15	-18.96/-18.52	-18.06/-18.87	-17.85/-18.49	-17.97/-18.94	-18.92/-18.14	-15.38/-13.82	-13.37/-13.8
Theta (90°)	-16.81/-17.55	-18.58/-18.52	-17.99/-19.07	-18.43/-16.5	-16.76/-18.41	-18.39/-19.38	-19.11/-17.97	-18.64/-18.52	-16.76/-15.11	-15.47/-17.9	-18.19/-17.81	-18.56/-14.37	-12.05/-11.51	-12.14/-13.49	-16.29/-17.85	-18.17/-17.67	-19.05/-17.57	-19.16/-18.7	-17.37/-18.59	-18.39/-18.22	-18.11/-18.12	-18.69/-18.36	-17.61/-15.95	-15.44/-15.85
Theta (97.5°)	-16.56/-17.54	-18.45/-18.56	-17.71/-17.94	-18.89/-18.72	-18.32/-19.05	-19.18/-17.82	-18.96/-19.27	-18.67/-18.37	-18.08/-16.4	-17.24/-19.07	-18.68/-18.73	-18.98/-14.67	-13.92/-13.09	-14.03/-15.46	-17.51/-18.31	-18.17/-17.85	-18.68/-18.33	-18.42/-18.44	-18.36/-19.39	-18.72/-18.29	-17.94/-18.56	-18.12/-17.35	-15.91/-17.28	-16.25/-16.34
Theta (105°)	-17.97/-17.63	-19.02/-19.22	-19.24/-18.65	-18.52/-19.23	-18.03/-18.9	-18.76/-18.9	-18.91/-18.16	-17.23/-17.88	-18.39/-16.33	-17.09/-18.4	-19.25/-17.87	-17.75/-15.75	-13.98/-13.6	-13.74/-14.81	-17.85/-19.33	-17.91/-18.66	-17.83/-18.87	-19.35/-18.73	-18.02/-18.75	-19.08/-17.36	-18.02/-18.97	-19.18/-19.05	-18.05/-18.61	-17.46/-19.05
Theta (112.5°)	-17.08/-18.55	-19.26/-18.64	-18.48/-18.68	-18.41/-18.39	-18.64/-18.07	-17.98/-17.28	-18.03/-18.43	-18.48/-18.03	-18.48/-16.43	-17.49/-18.21	-18.31/-17.23	-17.68/-16.94	-15.53/-15.89	-16.42/-18.14	-17.44/-17.86	-17.73/-18.64	-17.21/-19.11	-18.06/-17.66	-18.89/-18.87	-17.42/-17.96	-18.69/-17.27	-17.51/-17.93	-18.43/-18.62	-17.88/-17.88
Theta (120°)	-17.05/-18.19	-18.44/-18.05	-17.47/-18.63	-17.38/-17.43	-18.64/-18.36	-17.27/-17.33	-17.75/-18.97	-19.11/-18.47	-18.18/-17.72	-18.07/-17.11	-18.09/-17.09	-15.89/-16.31	-17.46/-18.17	-18.32/-18.92	-17.98/-18.1	-18.61/-17.95	-18.92/-18.46	-17.91/-18.97	-17.83/-18.64	-17.98/-18.29	-18.93/-18.7	-18.98/-18.93	-18.98/-18.93	-18.29/-17.93
Theta (127.5°)	-19.04/-18.49	-19.01/-18.18	-19.32/-18.1	-17.31/-19.09	-18.81/-19.06	-18.37/-19.34	-17.39/-17.33	-18.52/-19.11	-18.15/-17.88	-18.76/-18.69	-17.06/-18.72	-17.78/-17.55	-16.82/-18.32	-18.93/-18.56	-18.61/-18.3	-17.95/-18.01	-17.47/-18.17	-17.22/-17.06	-15.74/-17.07	-18.55/-17.84	-18.41/-18.41	-19.17/-18.16	-18.32/-18.23	-18.95/-17.53
Theta (135°)	-18.09/-17.85	-18.07/-18.22	-18.13/-18.65	-18.14/-18.48	-18.88/-17.48	-19.32/-19.01	-18.39/-18.08	-18.69/-18.17	-19.06/-17.82	-18.85/-18.76	-18.91/-18.21	-18.54/-17.89	-19.26/-17.37	-17.61/-18.66	-17.96/-17.25	-18.19/-18.12	-18.03/-17.74	-17.33/-18.81	-18.41/-18.38	-17.63/-18.1	-17.13/-18.46	-17.56/-18.32	-17.68/-19.21	-17.68/-19.21
Theta (142.5°)	-18.07/-18.67	-18.73/-18.66	-18.32/-19.14	-18.01/-18.47	-18.88/-18.04	-18.33/-17.95	-18.31/-19.18	-18.62/-18.16	-18.47/-18.31	-18.13/-18.25	-19.15/-17.59	-17.91/-19.17	-17.74/-18.24	-18.84/-19.46	-18.82/-18.86	-18.22/-17.76	-19.74/-18.12	-18.04/-18.14	-18.36/-17.74	-18.43/-17.96	-18.59/-17.83	-18.14/-18.4	-17.11/-18.82	-18.08/-17.81
Theta (150°)	-18.33/-18.15	-19.06/-19.7	-17.33/-19.13	-18.76/-18.15	-18.24/-17.93	-18.17/14.6	-18.49/-18.18	-18.43/-18.12	-17.44/-18.79	-17.26/-19.01	-18.53/-17.76	-18.81/-19.13	-18.31/-18.61	-17.28/-19.11	-18.94/-19.08	-18.67/-19.13	-17.64/-17.86	-18.75/-18.53	-18.47/-17.17	-17.36/-19.13	-17.35/-17.88	-18.47/-17.92	-18.72/-18.99	-18.67/-19.23
Theta (157.5°)	-17.16/-19.04	-18.61/-17.47	-18.55/-18.81	-18.37/-18.63	-18.71/-18.89	-17.44/-19.19	-19.11/-18.91	-18.18/-18.27	-18.07/-18.67	-18.58/-18.07	-18.75/-18.63	-18.89/-18.89	-18.65/-17.85	-18.79/-19.22	-18.18/-19.37	-17.72/-18.67	-18.75/-18.24	-19.02/-17.66	-18.32/-17.75	-18.19/-19.39	-18.47/-19.2	-18.36/-18.56	-19.03/-18.66	-19.47/-18.8
Theta (165°)	-18.51/-18.65	-17.93/-18.34	-18.39/-18.52	-18.62/-18.66	-18.87/-18.23	-18.09/-17.68	-18.11/-17.93	-17.74/-18.75	-18.32/-18.51	-17.92/-18.15	-18.13/-18.3	-17.21/-18.41	-18.68/-18.36	-18.78/-17.71	-17.31/-17.37	-17.51/-18.05	-19.63/-17.53	-17.74/-18.18	-18.33/-18.72	-17.71/-18.79	-17.72/-18.51	-19.28/-18.47	-18.58/-18.55	
Theta (172.5°)	-18.41/-18.03	-18.11/-18.04	-18.14/-18.49	-18.46/-17.54	-19.11/-19.06	-18.45/-17.18	-17.85/-18.34	-17.61/-18.67	-19.17/-18.04	-18.52/-18.8	-18.46/-18.83	-17.46/-17.95	-18.36/-17.39	-16.66/-16.34	-16.64/-17.38	-18.24/-17.41	-19.24/-17.54	-18.87/-19.03	-19.11/-18.35	-18.54/-17.94	-18.21/-17.76	-18.72/-18.17	-18.29/-19.15	-18.72/-18.78
Theta (180°)	-18.23/-18.52	-19.34/-18.03	-18.53/-19.25	-19.16/-17.4	-18.38/-19.1	-18.64/-18.74	-17.77/-17.94	-19.39/-18.27	-18.44/-18.95	-18.94/-18.12	-19.22/-18.47	-18.37/-18.77	-18.81/-18.83	-18.77/-18.17	-18.16/-18.14	-17.54/-19.2	-17.78/-18.72	-19.21/-17.51	-17.93/-19.06	-18.19/-18.81	-17.47/-18.01	-19.41/-18.34	-18.12/-17.79	-17.28/-17.26
Freq(Hz)	5.2GPol	Phi/Ant. 3	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	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°)	-15.57/-15.62	-15.56/-15.55	-15.41/-15.99	-16.13/-15.48	-14.96/-14.6	-14.45/-14.25	-14.15/-14.01	-13.83/-14.26	-14.97/-15.92	-16.62/-17.19	-16.84/-18.69	-18.28/-18.65	-18.75/-19.04	-18.17/-19.92	-19.02/-18.86	-17.13/-16.78	-17.11/-17.92	-19.04/-19.74	-19.01/-18.39	-18.58/-17.44	-18.88/-17.64	-18.31/-18.64	-18.49/-18.96	-17.51/-17.83
Theta (7.5°)	-15.75/-18.4	-18.47/-18.85	-18.24/-18.91	-17.24/-17.74	-18.49/-17.93	-18.35/-18.27	-18.14/-19.42	-18.94/-16.53	-15.39/-14.02	-13.61/-14.25	-12.48/-10.95	-10.27/-10.78	-11.63/-11.97	-11.74/-11.09	-10.81/-11.07	-11.93/-13.08	-11.74/-11.09	-10.44/-12.77	-15.04/-15.2	-14.74/-16.16	-17.48/-18.29	-17.11/-17.83	-17.88/-18.71	
Theta (15°)	-8.73/-8.41	-8.75/-9.88	-10.77/-11.86	-11.17/-9.7	-8.37/-7.13	-6.38/-5.93	-5.87/-6.08	-6.52/-6.95	-7.17/-6.87	-6.23/-5.7	-5.21/-4.76	-4.38/-4.11	-3.93/-3.71	-3.44/-3.56	-3.76/-3.78	-3.77/-3.74	-3.95/-4.47	-5.01/-5.57	-5.99/-5.93	-6.01/-6.49	-7.2/-8.19	-9.65/-11.64	-13.78/-14.33	-12.59/-10.09
Theta (22.5°)	-2.94/-2.28	-2.21/-2.3	-2.02/-1.74	-1.64/-1.94	-2.61/-3.29	-3.75/-3.9	-4.26/-4.85	-5.69/-5.34	-6.65/-6.37	-2.57/-2.53	-2.35/-2.26	-2.36/-2.41	-2.01/-1.54	-1.43/-1.54	-1.61/-1.57	-1.74/-1.29	-2.77/-3.1	-3.11/-3.85	-5.05/-6.94	-8.66/-6.88	-4.74/-3.37	-2.59/-2.38	-2.43/-2.36	-2.52/-2.26
Theta (30°)	-2.57/-2.22	-2.46/-2.61	-1.78/-1.04	-0.63/-0.51	-0.47/-1.24	-1.91/-2.51	-2.99/-3.58	-4.61/-5.34	-5.42/-4.91	-4.12/-3.54	-3.13/-2.83	-2.66/-2.65	-2.76/-2.74	-2.27/-1.78	-1.58/-1.71	-2.12/-2.64	-3.11/-3.85	-5.05/-6.94	-8.66/-6.88	-4.74/-3.37	-2.59/-2.38	-2.43/-2.36	-2.52/-2.26	-3.01/-2.79
Theta (37.5°)	-2.34/-2.14	-2.08/-5.83	-8.23/-8.09	-5.62/-2.96	-1.04/-0.79	-0.84/-1.51	-2.44/-3.44	-4.34/-5.15	-5.42/-5.43	-3.73/-5.44	-4.44/-3.17	-2.41/-2.13	-2.19/-1.95	-1.64/-1.37	-1.06/-0.65	-3.35/-0.87	-2.03/-3.13	-3.36/-2.94	-1.88/-0.58	0.05/-0.13	-0.98/-1.43	-2.43/-2.83	-2.29/-2.05	-2.25/-2.46
Theta (45°)	-1.58/-0.22	0.33/-0.63	-2.42/-5.58	-9.06/-6.72	-3.46/-1.33	-0.66/-0.85	-1.52/-2.66	-4.23/-5.58	-5.66/-4.65	-4.15/-3.97	-2.97/-1.92	-1.33/-1.42	-1.33/-0.66	0.130/0.26	0.241/1.4	1.941/9.2	1.02/0.64	-1.76/-1.14	0.120/9	1.221/4.2				



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta (°)	-11.29/-13.33	-15.42/-17.18	-15.36/-13.19	-16.63/-17.99	-17.66/-15.8	-18.67/-18.71	-18.19/-18.59	-18.68/-18.48	-18.12/-18.05	-17.23/-16.59	-18.28/-18.03	-16.61/-10.75	-8.38/-9.38	-11.87/-13.73	-19.26/-18.84	-17.94/-15.84	-16.69/-18.45	-18.22/-18.2	-17.57/-18.46	-17.91/-17.68	-14.74/-16.98	-18.97/-18.64	-18.74/-18.43	-13.54/-12.17
Theta (7.5°)	-12.65/-14.27	-15.91/-19.01	-18.65/-18.79	-18.57/-18.68	-18.76/-16.39	-16.58/-17.4	-18.56/-17.83	-18.22/-18.08	-18.54/-18.57	-16.62/-18.09	-18.97/-18.2	-13.28/-14.03	-9.38/-11.22	-13.49/-16.16	-16.67/-16.08	-18.73/-14.54	-13.99/-14.73	-17.81/-19.26	-17.32/-17.22	-17.02/-15.69	-14.39/-16.75	-16.69/-17.14	-15.61/-17.6	-15.21/-13.1
Theta (15°)	-13.74/-15.07	-16.11/-18.01	-18.13/-18.46	-18.95/-18.72	-18.87/-15.93	-13.87/-13.67	-15.59/-18.36	-17.21/-17.26	-17.47/-18.05	-16.33/-14.59	-18.62/-15.84	-15.97/-12.65	-10.80/-10.56	-11.86/-15.68	-17.29/-15.48	-16.35/-16.73	-14.57/-12.19	-14.03/-14.99	-13.94/-14.84	-14.31/-15.77	-15.94/-18.35	-18.39/-16.84	-15.27/-16.26	-16.84/-16.61
Theta (22.5°)	-15.54/-17.05	-16.12/-19.44	-18.73/-17.31	-17.53/-18.98	-18.83/-16.6	-13.93/-13.48	-15.77/-18.43	-18.57/-18.19	-18.65/-18.81	-17.59/-14.06	-18.31/-17.67	-18.64/-15.46	-12.22/-13.36	-13.29/-15.91	-16.77/-16.73	-17.72/-15.44	-14.82/-12.47	-11.88/-13.04	-12.64/-13.7	-14.49/-16.79	-15.53/-18.31	-18.23/-18.48	-16.85/-16.96	-18.31/-17.88
Theta (30°)	-18.33/-18.81	-16.72/-18.18	-18.62/-18.21	-17.53/-18.45	-18.22/-17.83	-14.73/-15.24	-17.11/-19.1	-19.22/-19.09	-18.96/-17.63	-17.42/-13.97	-16.79/-19.24	-18.71/-16.13	-14.68/-13.55	-13.76/-16.53	-16.69/-16.93	-18.47/-17.84	-15.96/-13.27	-12.72/-12.66	-12.97/-14.4	-14.18/-17.64	-17.15/-15.53	-17.81/-18.7	-19.49/-17.7	-18.18/-18.34
Theta (37.5°)	-18.67/-17.94	-18.26/-18.18	-18.13/-18.47	-18.93/-18.29	-18.31/-17.71	-18.16/-18.31	-17.38/-18.61	-18.81/-18.37	-17.53/-17.13	-16.91/-15.48	-18.46/-17.91	-16.93/-16.99	-15.84/-16.51	-15.59/-17.83	-19.01/-18.57	-18.71/-18.35	-16.54/-14.87	-13.57/-14.1	-13.86/-16.3	-15.83/-19.16	-18.73/-18.27	-17.15/-18.17	-19.14/-18.87	-18.21/-18.79
Theta (45°)	-18.69/-17.62	-17.53/-18.1	-18.64/-18.29	-18.19/-18.28	-18.09/-18.93	-17.53/-18.56	-18.54/-18.04	-17.78/-17.79	-19.04/-17.99	-16.05/-15.63	-17.89/-17.59	-18.76/-18.94	-17.75/-16.36	-16.81/-17.6	-18.67/-18.57	-18.23/-17.96	-19.16/-15.56	-16.83/-16.77	-17.01/-18.74	-15.96/-18.15	-18.96/-18.31	-19.23/-18.22	-19.31/-19.16	-17.92/-18.78
Theta (52.5°)	-17.63/-18.16	-18.08/-18.1	-19.35/-18.41	-17.99/-19.16	-18.11/-18.48	-18.16/-18.22	-18.37/-18.95	-17.92/-18.2	-18.34/-18.83	-19.03/-17.63	-17.92/-18.42	-17.98/-18.82	-19.16/-19.26	-17.24/-17.63	-17.64/-18.22	-17.76/-19.01	-18.24/-17.33	-17.83/-18.31	-17.92/-18.4	-17.53/-18.52	-18.34/-17.24	-18.18/-18.31	-18.74/-18.83	-19.16/-19.1
Theta (60°)	-18.84/-19.41	-18.46/-18.68	-18.07/-18.42	-18.72/-17.34	-18.38/-18.06	-18.03/-18.34	-18.55/-17.79	-17.92/-18.98	-18.11/-18.9	-17.91/-19.1	-17.27/-19.29	-18.42/-18.65	-18.65/-18.25	-18.95/-18.68	-18.61/-18.61	-18.82/-19.04	-17.91/-17.9	-17.45/-17.13	-18.39/-17.83	-19.34/-19.27	-19.07/-18.33	-17.15/-19.36	-19.26/-18.69	-18.11/-19.41
Theta (67.5°)	-17.96/-16.92	-17.49/-18.36	-18.87/-19.11	-18.93/-18.1	-17.12/-18.56	-18.07/-18.07	-19.35/-18.53	-18.02/-19.05	-18.18/-18.9	-18.26/-18.74	-18.38/-19.13	-18.88/-19.85	-19.06/-17.77	-18.08/-19.14	-19.23/-18.11	-18.55/-19.31	-17.04/-18.14	-19.06/-19.35	-17.53/-18.13	-17.75/-18.6	-19.56/-18.99	-19.08/-18.04	-18.43/-18.26	-18.39/-18.78
Theta (75°)	-18.51/-17.75	-18.16/-18.08	-18.53/-18.24	-18.53/-17.98	-17.87/-18.76	-18.37/-18.14	-18.86/-17.57	-17.11/-19.03	-18.75/-17.53	-19.19/-19.01	-18.26/-18.78	-17.11/-19.03	-18.65/-18.13	-17.78/-18.42	-18.59/-17.58	-18.58/-19.3	-18.52/-19.05	-18.44/-18.5	-18.53/-18.64	-18.99/-18.46	-18.76/-18.97	-18.13/-19.05	-16.37/-18.27	-18.37/-18.71
Theta (82.5°)	-19.05/-17.87	-18.26/-17.78	-18.74/-19.17	-18.76/-19.25	-19.46/-18.01	-18.03/-17.82	-18.86/-18.13	-18.16/-18.2	-17.98/-18.42	-18.63/-18.09	-18.41/-18.81	-17.87/-17.95	-18.04/-18.21	-18.07/-17.95	-18.34/-19.11	-18.63/-18.59	-18.66/-18.58	-18.82/-18.34	-18.86/-18.04	-16.22/-16.41	-18.72/-18.64	-18.86/-17.89	-16.86/-17.46	-17.48/-18.88
Theta (90°)	-17.98/-19.17	-17.98/-18.56	-18.67/-18.15	-18.42/-17.65	-18.12/-18.57	-18.04/-17.28	-17.91/-18.36	-18.45/-18.74	-17.96/-17.79	-18.12/-17.96	-17.07/-18.82	-18.39/-18.78	-18.03/-17.63	-19.03/-17.91	-18.56/-18.85	-19.08/-18.12	-17.63/-18.32	-18.31/-18.73	-18.43/-18.89	-19.21/-18.49	-17.78/-19.36	-19.17/-18.16	-18.25/-18.06	-17.57/-18.85
Theta (97.5°)	-19.04/-19.06	-16.44/-18.87	-18.26/-19.05	-17.69/-17.8	-17.95/-17.23	-18.23/-18.66	-17.93/-19.05	-17.41/-18.11	-17.62/-18.15	-18.53/-18.24	-18.26/-18.78	-17.61/-18.11	-17.62/-18.15	-18.01/-17.82	-19.34/-18.29	-19.11/-18.57	-18.45/-19.32	-18.24/-18.58	-18.27/-18	-18.61/-18.23	-18.03/-18	-18.86/-17.97	-17.42/-18.85	-18.66/-19.09
Theta (105°)	-18.69/-19.01	-18.54/-18.88	-18.33/-19.2	-18.19/-18.59	-18.95/-18.72	-17.95/-18.38	-18.04/-18.93	-17.38/-18.14	-18.21/-19.59	-18.38/-17.77	-18.96/-18.73	-18.51/-17.32	-19.11/-17.21	-17.85/-18.52	-17.61/-18.65	-17.31/-19.26	-17.96/-18.11	-17.65/-17.92	-17.78/-17.35	-17.58/-19.32	-18.82/-19.04	-17.92/-18.01	-17.93/-18.87	-17.84/-18.42
Theta (112.5°)	-18.91/-19.17	-18.43/-17.9	-18.63/-18.64	-17.19/-19.11	-17.54/-18.38	-17.72/-17.5	-18.62/-17.92	-18.58/-18.9	-18.36/-18	-19.16/-18.18	-19.02/-18.08	-17.78/-17.94	-17.84/-18.66	-19.17/-18.1	-18.51/-17.93	-17.93/-18.65	-18.51/-18.36	-17.91/-17.54	-18.51/-18.2	-17.94/-17.53	-17.59/-17.74	-18.63/-18.12	-18.31/-19.07	-18.79/-17.3
Theta (120°)	-18.24/-18.55	-17.51/-18.93	-18.51/-18.43	-17.11/-18.67	-18.58/-19.04	-18.12/-19.24	-18.25/-17.83	-17.76/-18.56	-18.69/-17.97	-17.66/-17.86	-17.81/-17.98	-17.61/-17.9	-19.11/-17.94	-17.16/-18.12	-18.81/-17.81	-17.41/-18.4	-17.54/-18.18	-17.98/-18.68	-18.27/-18.53	-17.69/-18.21	-18.08/-17.67	-16.98/-18.19	-18.05/-17.5	
Theta (127.5°)	-17.96/-16.92	-17.49/-18.36	-18.87/-19.11	-18.93/-18.1	-17.12/-18.56	-18.07/-18.07	-19.35/-18.53	-18.02/-19.05	-18.18/-18.9	-18.26/-18.74	-18.38/-19.13	-18.88/-19.85	-19.06/-17.77	-18.08/-19.14	-19.23/-18.11	-18.55/-19.31	-17.04/-18.14	-19.06/-19.35	-17.53/-18.13	-17.75/-18.6	-19.56/-18.99	-19.08/-18.04	-18.43/-18.26	-18.39/-18.78
Theta (135°)	-18.51/-17.75	-18.16/-18.08	-18.53/-18.24	-18.53/-17.98	-17.87/-18.76	-18.37/-18.14	-18.86/-17.57	-17.11/-19.03	-18.75/-17.53	-19.19/-19.01	-18.26/-18.78	-17.11/-19.03	-18.65/-18.13	-17.78/-18.42	-18.59/-17.58	-18.58/-19.3	-18.52/-19.05	-18.44/-18.5	-18.53/-18.64	-18.99/-18.46	-18.76/-18.97	-18.13/-19.05	-16.37/-18.27	-18.37/-18.71
Theta (142.5°)	-19.05/-17.87	-18.26/-17.78	-18.74/-19.17	-18.76/-19.25	-19.46/-18.01	-18.03/-17.82	-18.86/-18.13	-18.16/-18.2	-17.98/-18.42	-18.63/-18.09	-18.41/-18.81	-17.87/-17.95	-18.04/-18.21	-18.07/-17.95	-18.34/-19.11	-18.63/-18.59	-18.66/-18.58	-18.82/-18.34	-18.86/-18.04	-16.22/-16.41	-18.72/-18.64	-18.86/-17.89	-16.86/-17.46	-17.48/-18.88
Theta (150°)	-17.98/-19.17	-17.98/-18.56	-18.67/-18.15	-18.42/-17.65	-18.12/-18.57	-18.04/-17.28	-17.91/-18.36	-18.45/-18.74	-17.96/-17.79	-18.12/-17.96	-17.07/-18.82	-18.39/-18.78	-18.03/-17.63	-19.03/-17.91	-18.56/-18.85	-19.08/-18.12	-17.63/-18.32	-18.31/-18.73	-18.43/-18.89	-19.21/-18.49	-17.78/-19.36	-19.17/-18.16	-18.25/-18.06	-17.57/-18.85
Theta (157.5°)	-19.04/-19.06	-16.44/-18.87	-18.26/-19.05	-17.69/-17.8	-17.95/-17.23	-18.23/-18.66	-17.93/-19.05	-17.41/-18.11	-17.62/-18.15	-18.53/-18.24	-18.26/-18.78	-17.61/-18.11	-17.62/-18.15	-18.01/-17.82	-19.34/-18.29	-19.11/-18.57	-18.45/-19.32	-18.24/-18.58	-18.27/-18	-18.61/-18.23	-18.03/-18	-18.86/-17.97	-17.42/-18.85	-18.66/-19.09
Theta (165°)	-18.69/-19.01	-18.54/-18.88	-18.33/-19.2	-18.19/-18.59	-18.95/-18.72	-17.95/-18.38	-18.04/-18.93	-17.38/-18.14	-18.21/-19.59	-18.38/-17.77	-18.96/-18.73	-18.51/-17.32	-19.11/-17.21	-17.85/-18.52	-17.61/-18.65	-17.31/-19.26	-17.96/-18.11	-17.65/-17.92	-17.78/-17.35	-17.58/-19.32	-18.82/-19.04	-17.92/-18.01	-17.93/-18.87	-17.84/-18.42
Theta (172.5°)	-18.91/-19.17	-18.43/-17.9	-18.63/-18.64	-17.19/-19.11	-17.54/-18.38	-17.72/-17.5	-18.62/-17.92	-18.58/-18.9	-18.36/-18	-19.16/-18.18	-19.02/-18.08	-17.78/-17.94	-17.84/-18.66	-19.17/-18.1	-18.51/-17.93	-17.93/-18.65	-18.51/-18.36	-17.91/-17.54	-18.51/-18.2	-17.94/-17.53	-17.59/-17.74	-18.63/-18.12	-18.31/-19.07	-18.79/-17.3
Theta (180°)	-18.24/-18.55	-17.51/-18.93	-18.51/-18.43	-17.11/-18.67	-18.58/-19.04	-18.12/-19.24	-18.25/-17.83	-17.76/-18.56	-18.69/-17.97	-17.66/-17.86	-17.81/-17.98	-17.61/-17.9	-19.11/-17.94	-17.16/-18.12	-18.81/-17.81	-17.41/-18.4	-17.54/-18.18	-17.98/-18.68	-18.27/-18.53	-17.69/-18.21	-18.08/-17.67	-16.98/-18.19	-18.05/-17.5	
Theta (187.5°)	-17.96/-16.92	-17.49/-18.36	-18.87/-19.11	-18.93/-18.1	-17.12/-18.56	-18.07/-18.07	-19.35/-18.53	-18.02/-19.05	-18.18/-18.9	-18.26/-18.74	-18.38/-19.13	-18.88/-19.85	-19.06/-17.77	-18.08/-19.14	-19.23/-18.11	-18.55/-19.31	-17.04/-18.14	-19.06/-19.35	-17.53/-18.13	-17.75/-18.6	-19.56/-18.99	-19.08/-18.04	-18.43/-18.26	-18.39/-18.78
Theta (195°)	-18.51/-17.75	-18.16/-18.08	-18.53/-18.24	-18.53/-17.98	-17.87/-18.76	-18.37/-18.14	-18.86/-17.57	-17.11/-19.03	-18.75/-17.53	-19.19/-19.01	-18.26/-18.78	-17.11/-19.03	-18.65/-18.13	-17.78/-18.42	-18.59/-17.58	-18.58/-19.3	-18.52/-19.05	-18.44/-18.5	-18.53/-18.64	-18.99/-18.46	-18.76/-18.97	-18.13/-19.05	-16.37/-18.27	-18.37/-18.71
Theta (202.5°)	-19.05/-17.87	-18.26/-17.78	-18.74/-19.17	-18.76/-19.25	-19.46/-18.01	-18.03/-17.82	-18.86/-18.13	-18.16/-18.2	-17.98/-18.42	-18.63/-18.09	-18.41/-18.81	-17.87/-17.95	-18.04/-18.21	-18.07/-17.95	-18.34/-19.11	-18.63/-18.59	-18.66/-18.58	-18.82/-18.34	-18.86/-18.04	-16.22/-16.41	-18.72/-18.64	-18.86/-17.89	-16.86/-17.46	-17.48/-18.88
Theta (210°)	-17.98/-19.17	-17.98/-18.56	-18.67/-18.15	-18.42/-17.65	-18.12/-18.57	-18.04/-17.28	-17.91/-18.36	-18.45/-18.74	-17.96/-17.79	-18.12/-17.96	-17.07/-18.82	-18.39/-18.78	-18.03/-17.63	-19.03/-17.91	-18.56/-18.85	-19.08/-18.12	-17.63/-18.32	-18.31/-18.73	-18.43/-18.89	-19				



Radiated Composite Gain Data_Radio 1_2.4GHz, Radio 2_5GHz UNII 1~3_4TX

Appendix B

Theta	Phi	Gain	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(15°)	Phi(0°)	-15.99/-17.41	-17.25/-13.45	-14.19/-18.93	-18.39/-11.24	-8.52/-8.57	-10.89/-14.1	-14.25/-14.01	-15.2/-14.62	-18.44/-19.81	-14.37/-17.16	-18.18/-18.58	-15.25/-9.9	-10.32/-13.16	-16.51/-18.88	-18.42/-17.18	-18.54/-13.33	-9.79/-11.33	-16.34/-15.65	-12.75/-11.08	-10.81/-8.95	-10.06/-16.36	-18.84/-17.92	-17.95/-18.01	-18.42/-19.23	Theta(157.5°)	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(165°)	Phi(7.5°)	-18.45/-19.14	-17.26/-15.09	-10.55/-8.96	-8.89/-9.75	-10.88/-11.59	-12.99/-15.22	-16.54/-18.22	-17.78/-17.62	-18.51/-18.58	-18.68/-19.25	-17.97/-18.03	-17.34/-15.03	-15.11/-16.52	-18.22/-18.22	-18.32/-17.16	-14.52/-12.33	-11.82/-12.37	-14.4/-14.96	-15.18/-13.77	-12.68/-13.45	-12.99/-12.76	-12.12/-11.9	-12.86/-15.81	-12.99/-18.59	Theta(172.5°)	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(180°)	Phi(15°)	-17.37/-18.16	-18.26/-18.85	-16.69/-14.46	-13.12/-8.7	-12.51/-13	-13.68/-13.51	-14.02/-15.15	-16.24/-17.6	-17.98/-17.9	-17.02/-15.91	-14.92/-14.44	-14.15/-13.95	-14.35/-13.5	-12.49/-12.07	-12.75/-12.69	-11.79/-11.34	-10.06/-9.18	-9.46/-9.63	-9.58/-10.43	-10.78/-11.55	-11.69/-11.93	-13.92/-16.86	-18.06/-17.91	-17.66/-17.91	Theta(187.5°)	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(187.5°)	Phi(22.5°)	-14.94/-15.57	-14.94/-14.75	-13.61/-11.22	-10.1/-9.68	-9.59/-10.25	-10.61/-11.32	-11.26/-11.77	-12.43/-13.09	-14.67/-16.97	-18.82/-18.08	-17.79/-18.87	-18.22/-18.36	-15.49/-14.25	-14.03/-14.21	-13.67/-13.14	-13.1/-13.54	-13.43/-14.26	-15.45/-18.25	-17.28/-17.21	-18.99/-18.52	-16.21/-16.26	-15.88/-15.95	-16.03/-15.52	-14.77/-14.26	Theta(195°)	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(195°)	Phi(30°)	-10.51/-10.17	-9.68/-8.79	-9.23/-10.02	-10.9/-11.9	-14.18/-15.73	-17.17/-18.95	-18.55/-18.53	-19.2/-19.02	-15.57/-13.85	-12.48/-11.96	-11.85/-11.24	-11.06/-10.95	-10.83/-11.04	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	-10.83/-11.28	Theta(202.5°)	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(202.5°)	Phi(37.5°)	-13.29/-10.82	-8.4/-6.68	-6.06/-6.17	-6.71/-7.58	-9.47/-11.53	-14.3/-19.07	-18.93/-17.7	-18.59/-19.11	-15.48/-12.09	-9.3/-7.55	-6.45/-5.79	-5.74/-6.28	-6.94/-7.19	-6.95/-7.02	-7.99/-10.39	-15.31/-16.07	-12.97/-11.46	-10.99/-11.59	-12.23/-13.75	-14.68/-15.45	-14.29/-14.08	-14.57/-16.59	-17.09/-16.4	-13.91/-12.19	Theta(210°)	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(210°)	Phi(45°)	-16.71/-15.43	-13.25/-11.4	-10.13/-9.71	-9.56/-9.6	-9.92/-10.46	-12.01/-13.36	-17.45/-18.88	-18.5/-17.78	-16.14/-13.5	-11.01/-7.88	-5.26/-4.05	-4.34/-5.44	-7.09/-7.77	-7.76/-8.32	-9.96/-13.55	-19.2/-18.95	-14.23/-11.01	-9.36/-8.63	-9.83/-12.63	-17.41/-16.34	-14.73/-14.86	-15.85/-17.15	-18.48/-17.79	-19.22/-17.24	Theta(217.5°)	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(217.5°)	Phi(52.5°)	-16.44/-15.25	-14.9/-12.07	-10.77/-10.52	-11.24/-10.94	-10.67/-9.54	-9.17/-10.16	-12.88/-15.66	-18.44/-18.84	-14.13/-8.27	-7.67/-7.18	-5.27/-4.26	-4.66/-6.87	-10.05/-11.08	-11.61/-14.57	-17.84/-19.1	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	-17.84/-19.15	Theta(225°)	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(225°)	Phi(60°)	-8.98/-12.45	-17.81/-17.67	-13.9/-12.34	-14.59/-18.19	-18.86/-12.62	-10.22/-13.5	-18.88/-17.15	-18.78/-18.53	-13.24/-7.84	-6.39/-6.01	-6.82/-6.27	-8.05/-7.66	-8.04/-9.64	-12.01/-15.38	-17.73/-18.52	-13.16/-10.05	-10.5/-11.79	-13.34/-15.6	-19.37/-14.36	-9.33/-7.08	-6.5/-8.33	-14.47/-15.11	-10.19/-10.1	-11.12/-10.72	Theta(232.5°)	Phi(292.5°)	Phi(300°)	Phi(307.5°)	Phi(315°)	Phi(322.5°)	Phi(330°)	Phi(337.5°)	Phi(345°)	Phi(352.5°)																
Theta(232.5°)	Phi(67.5°)	-6.11/-36	-13.05/-14.75	-17.36/-13.51	-11.48/-8.85	-10.49/-15.3	-10.29/-12.67	-13.6/-13.6	-11.85/-12.45	-18.79/-11.74	-9.53/-7.93	-11.48/-7.77	-6.93/-9.45	-12.18/-12.68	-16.96/-18.43	-8.24/-6.16	-6.14/-6.8	-8.08/-9.97	-13.02/-11.76	-8.25/-6.57	-7.01/-9.04	-18.14/-10.8	-6.09/-4.09	-8.83/-4.72	Theta(240°)	Phi(307.5°)	Phi(315°)	Phi(322.5°)	Phi(330°)	Phi(337.5°)	Phi(345°)	Phi(352.5°)																			
Theta(240°)	Phi(75°)	-2.12/-5.03	-6.28/-9.27	-19.63/-18.07	-16.49/-7.47	-8/-11.89	-8.93/-15.1	-11.71/-11.05	-16.59/-14.29	-17.79/-9.16	-9.02/-12.15	-18.55/-14.21	-12.36/-11.45	-11.51/-18.56	-18.48/-16.24	-9.81/-7.09	-6.88/-7.8	-8.83/-10.39	-14.49/-15.07	-10.16/-8.79	-9.52/-10.45	-14.29/-11.45	-5.22/-3.24	-2.42/-2.56	Theta(247.5°)	Phi(315°)	Phi(322.5°)	Phi(330°)	Phi(337.5°)	Phi(345°)	Phi(352.5°)																				
Theta(247.5°)	Phi(82.5°)	-2.56/-3.41	-3.87/-6.91	-10.17/-11.21	-17.87/-15.92	-15.11/-13.96	-9.81/-19.21	-13.16/-10.5	-18/-14.43	-13.99/-7.73	-8.36/-9.82	-14.52/-17.89	-16.92/-17.86	-19.19/-14.42	-18.11/-13.23	-12.42/-12.46	-11.11/8.33	-6.69/-6.12	-7.07/-9.04	-12.9/-18.62	-11.96/-9.83	-10.63/-9.75	-11.38/-11.4	-5.05/-2.35	-1.03/-1.55	Theta(255°)	Phi(322.5°)	Phi(330°)	Phi(337.5°)	Phi(345°)	Phi(352.5°)																				
Theta(255°)	Phi(90°)	-2.52/-4.16	-3.27/-7.59	-7.18/-3.33	-10.11/-16.65	-18.81/-10.77	-10.47/-14.72	-16.48/-14.19	-18.11/-14.25	-9.95/-7.05	-11.44/-13.57	-15.46/-15.63	-18.47/-13.24	-16.78/-13.22	-16.92/-10.58	-10.6/-9.59	-10.94/-8.55	-7.07/-7.72	-8.89/-8.64	-10.87/-18.53	-15.22/-11.37	-10.74/-8.83	-9.49/-9.57	-7.16/-5.59	-4.15/-2.55	Theta(262.5°)	Phi(337.5°)	Phi(345°)	Phi(352.5°)																						
Theta(262.5°)	Phi(97.5°)	-3.94/-5.98	-5.76/-9.13	-7.9/-9.51	-8.96/-13.28	-15.48/-9.11	-11.63/-18.19	-18.88/-16.92	-16.88/-18.96	-9.19/-7.13	-12.91/-15.64	-19.18/-15.16	-14.72/-18.25	-16.93/-15.85	-18.16/-17.34	-10.44/-9.62	-6.98/-7.96	-10.19/-11.2	-13.47/-17.85	-18.15/-14.54	-11.75/-12.4	-9.07/-9.53	-7.14/-5.58	-5.47/-3.98	Theta(270°)	Phi(345°)	Phi(352.5°)																								
Theta(270°)	Phi(105°)	-5.45/-6.67	-8.12/-11.79	-7.97/-10.94	-10.25/-14.98	-14.16/-8.77	-10.66/-19.57	-19.32/-17.96	-16.6/-9.88	-11.78/-12.1	-18.61/-18.83	-18.51/-15.62	-12.66/-11.42	-18.67/-13.92	-19.15/-11.82	-12.66/-8.85	-14.75/-13.19	-8.83/-9.86	-11.22/-11.71	-14.71/-18.28	-18.58/-16.12	-10.79/-7.21	-7.62/-9.49	-11.23/-10	-11.37/-6.31	Theta(277.5°)	Phi(352.5°)																								
Theta(277.5°)	Phi(112.5°)	-8.22/-7.26	-10.34/-15.14	-11.35/-17.66	-13.75/-12.82	-18.71/-11.74	-9.9/-13.57	-19.84/-17.07	-18.31/-14.44	-12.58/-13.42	-17.97/-13.72	-18.51/-18.23	-9.58/-10.88	-13.24/-13.51	-15.56/-14.81	-13.18/-10.13	-12.72/-10.96	-11.18/-11.35	-14.39/-15.39	-17.96/-17.24	-18.83/-17.51	-13.45/-8.28	-9.08/-10.35	-14.54/-13.86	-18.22/-10.27	Theta(285°)	Phi(352.5°)																								
Theta(285°)	Phi(120°)	-11.98/-9.89	-10.37/-14.43	-13.86/-19.01	-15.54/-19.1	-18.06/-15.03	-11.12/-14.31	-18.46/-19.18	-19.16/-9.47	-14.82/-17.63	-16.57/-15.86	-15.41/-16.68	-10.45/-14.16	-16.92/-12.07	-17.76/-18.17	-16.42/-13.02	-16.77/-17.14	-16.28/-15.27	-14.44/-18.23	-19.13/-18.01	-17.64/-18.71	-16.67/-10.49	-12.42/-15.23	-18.22/-15.02	-16.21/-10.16	Theta(292.5°)	Phi(352.5°)																								
Theta(292.5°)	Phi(127.5°)	-16.13/-13.36	-18.35/-10.73	-15.3/-17.51	-17.81/-18.49	-15.55/-17.3	-15.09/-16.19	-18.78/-18.41	-18.51/-12.93	-18.29/-19.25	-15.88/-17.83	-17.16/-13.84	-10.59/-18.53	-12.57/-18.56	-14.92/-18.83	-17.66/-17.14	-16.36/-17.92	-18.37/-17.29	-17.3/-19.01	-18.63/-18.54	-17.96/-18.09	-18.4/-11.99	-14.07/-12.63	-18.88/-19.05	-19.12/-9.81	Theta(300°)	Phi(352.5°)																								
Theta(297.5°)	Phi(135°)	-19.05/-11.97	-18.83/-14.63	-17.34/-17.81	-15.65/-18.72	-17.72/-17.48	-16.73/-22.48	-18.48/-18.39	-17.91/-15.02	-18.48/-18.94	-18.81/-19.08	-16.58/-17.79	-10.02/-17.66	-11.71/-16.36	-17.82/-18.57	-15.03/-15.55	-17.82/-17.37	-17.75/-19.25	-19.08/-18.11	-18.66/-19.11	-18.53/-18.91	-18.51/-15.2	-14.31/-13	-14.38/-13.77	-16.19/-18.41	Theta(307.5°)	Phi(352.5°)																								
Theta(300°)	Phi(142.5°)	-15.65/-13.47	-16.57/-16.83	-18.98/-18.14	-13.32/-16.77	-15.79/-17.66	-15.14/-14.4	-18.61/-18.69	-17.91/-15.99	-18.16/-18.24	-15.25/-18.21	-19.29/-14.57	-16.23/-15.12	-17.79/-18.72	-18.82/-18.37	-13.77/-17.94	-18.66/-18.87	-17.86/-19.07	-18.72/-18.65	-18.55/-19.63	-13.03/-18.81	-19.54/-14.91	-16.22/-15.02	-18.24/-18.99	-11.31/-10.16	Theta(315°)	Phi(352.5°)																								
Theta(307.5°)	Phi(150°)	-13.58/-12.62	-16.58/-18.81	-18.5/-17.96	-13.93/-19.01	-18.66/-17.78	-14.67/-19.41	-19.08/-17.85	-17.4/-17.5	-17.12/-17.6	-18.18/-13.93	-10.97/-12.64	-15.6/-13.2	-15.37/-18.09	-15.74/-12.66	-15.66/-16.34	-18.8/-17.35	-18.34/-18.52	-18.98/-18.6	-17.91/-18.18	-13.17/-13.9	-19.14/-13.06	-9.41/-13.15	-12.11/-17.96	-18.17/-13.59	Theta(322.5°)	Phi(352.5°)																								



Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.19	2.63	3.54	3.53
Ant. 2 Max Gain (dBi)	4.83	3.89	4.03	3.86
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/75/135	Theta/67.5/150	Theta/60/307.5	Theta/52.5/307.5
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/60/30	Phi/60/30	Phi/60/37.5	Phi/60/37.5
Max Gain (dBi)	4.83	3.89	4.03	3.86
DG [1SS] (dBi)	4.27	3.85	3.88	3.53
DG [1SS] (dBi) Revised	4.83	3.89	4.03	3.86
DG [2SS] (dBi)	4.83	3.89	4.03	3.86



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_2TX

Appendix C

Theta (deg)	0.56/0.77	0.37/0.4	0.71/0.42	-0.46/-1.01	-1.41/-1.78	-2.16/-3.45	-4.91/5.34	-4.91/4.64	-4.39/-3.93	-3.49/-3.03	-2.62/-1.52	-0.09/1.12	1.10/88	0.74/0.3	-0.21/-0.57	-1.02/-1.43	-1.87/-3.22	-4.63/-6.33	-6.45/-5.37	-3.47/-2.05	-1.09/-0.77	-0.89/-1.26	-1.09/-0.88	-0.32/-0.07
Theta (30°)	0.16/0.34	0.06/0.39	1.53/1.77	1.29/1.13	0.61/0.09	-0.54/-1.84	-2.44/-3.08	-4.86/-5.54	-4.36/-2.65	-1.24/-0.81	-0.17/1.01	1.45/0.2	1.57/2.01	1.92/0.97	0.37/0.62	-0.94/-0.81	-1.14/-3.04	-5.47/-7.09	-6.91/-4.76	-2.91/-2.42	-2.71/-3.32	-3.44/-3.01	-2.05/-1.52	-1.24/-1.15
Theta (45°)	0.23/0.8	0.49/0.78	2.06/2.59	2.42/3.1	1.24/0.26	-0.43/-0.96	-1.54/-3.28	-2.79/-1.03	-0.56/-0.94	-1.14/-0.75	0.11/2.57	3.86/3.11	2.66/3.03	1.90/4.06	0.50/-0.48	-0.34/-0.12	-0.43/-1.27	-2.87/-3.24	-2.27/-1.03	-0.99/-0.34	-1.69/-1.5	-0.67/-0.25	0.04/0.31	0.21/0.04
Theta (60°)	1.38/2.1	2.48/2.33	2.82/2.26	2.99/2.46	0.83/0.32	1.11/3.38	0.32/-1.88	-0.61/1.1	0.35/0.95	2.24/2.87	2.82/7.6	3.79/3.76	2.78/2.66	1.92/0.3	-0.49/-0.89	-0.41/-0.39	-0.25/-1.03	-2.55/-1.47	-0.47/-0.4	0.02/1.11	-2.36/-1.08	-0.22/0.2	0.51/0.66	1.19/0.92
Theta (75°)	1.99/2.33	3.17/3.49	3.84/3.67	2.76/2.16	1.01/0.6	0.31/-0.39	-1.48/-1.16	-0.22/1.1	1.22/2.18	2.25/2.85	2.74/2.24	1.35/1.49	1.12/0.7	0.02/-1.27	-1.51/-2.66	-2.23/-2.52	-2.48/-1.56	-1.24/-0.76	-0.37/-1.51	-2.53/-1.58	-1.47/-0.34	1.47/1.9	1.82/0.6	1.62/0.6
Theta (90°)	2.33/2.78	3.61/3.88	3.12/3.45	3.15/1.76	0.34/0.76	1.21/-0.21	-2.09/-4.18	-3.21	0.09/0.3	-1.41/-1.51	-0.92/-0.65	-1.11/0.45	0.06/1.28	1.66/1.74	1.25/-0.38	-1.82/-3.44	-2.84/-2.96	-2.32/-1.9	-1.81/-1.01	-0.21/-1.2	-1.69/-0.56	-0.53/0.23	1.93/2.22	2.15/1.98
Theta (105°)	2.25/2.23	2.81/3.34	2.89/2.57	0.88/0.09	0.81/1.92	1.17/0.22	-0.81/-1.48	-0.14/0.12	-0.51/-1.68	-3.18/-0.93	-0.76/-1.3	-0.99/-0.4	0.99/1.67	0.96/1.66	1.18/0.54	-0.87/-2.38	-2.87/-2.81	-1.62/-1.55	-1.41/0.1	0.21/0.83	-1.58/-0.75	-0.76/-0.19	1.42/1.65	2.14/2.2
Theta (120°)	0.78/1.17	1.65/2.02	1.38/1.34	-0.17/-1.42	-1.01/0.97	1.31/-0.43	-1.08/-0.92	0.44/0.06	-0.05/-1.93	-1.18/0.03	0.45/-0.52	-0.68/-1.52	0.65/-0.01	0.61/0.78	-0.36/-0.42	-0.88/-1.7	-2.58/-2.97	-1.21/-1.58	-1.72/-0.41	-0.03/-1.51	-2.31/-2.22	-1.68/-0.63	0.64/0.23	0.24/0.76
Theta (135°)	-1.33/-0.12	0.53/0.63	-0.71/-1.28	-2.08/-2.37	-1.35/-0.41	-0.22/-2.06	-1.10/0.4	-0.09/-0.84	-0.13/-2.58	-2/0.75	0.18/-0.89	-0.31/-2.49	-1.81/-1.34	-1.63/-1.41	-2.94/-2.23	-0.89/-1.96	-2.89/-3.29	-1.57/-1.4	-2.13/-0.64	-0.78/-1.86	-2.45/-2.79	-3.28/-2.69	-0.93/-0.04	-0.46/-0.19
Theta (150°)	-2.94/-2.86	-1.36/-0.71	-2.25/-2.61	-3.95/-2.78	-3.16/-2.55	-1.44/-4.42	-3.01/-1.34	-1.23/-2.99	-2.28/-4.42	-3.13/-3.2	-1.97/-0.62	-3.71/-3.48	-3.34/-4.3	-3.63/-3.15	-4.99/-3.05	-1.62/-2.21	-3.44/-5.01	-2.94/-3.58	-3.98/-1.96	-2.43/-3.17	-4.07/-4.19	4.97/4.44	-3.51/-1.9	-2.65/-1.82
Theta (165°)	-5.33/-4.04	-3.87/-3.59	-5.61/-4.69	-5.33/-5.06	-3.93/-3.57	-3.63/-6.77	-4.02/-3.14	-2.51/-4.8	-4.34/-6.04	-4.71/-4.66	-3.55/-2.47	-5.71/-6.11	-5.88/-4.54	-6.61/-7.3	-7.41/-6.27	-3.27/-3.86	-6.71/7.3	-5.51/-6.01	-7.12/-4.46	-4.48/-5.09	-7.15/-6.24	-8.77/-6.28	-6.24/-5.09	-4.34/-3.34
Theta (180°)	-8.04/-5.95	-5.95/-4.54	-6.24/7.7	-4.97/-5.69	-6.07/-4.51	-4.61/-9.02	-5.64/-4.19	-5.18/-7.6	-8.2/-9.86	-7.72/-6.86	-3.93/-3.95	-7.72/-6.86	-6.59/-9.25	-7/7.1	-7.72/-6.86	-5.43/-5.67	-9.85/-11.9	-9.71/-9.69	-12.86/-8.36	-8.39/-7.21	-8.21/-9.7	-10.69/-8.2	-11.74/-10.7	-6.68/-5.84
Theta (210°)	-8.61/-7.59	-7.12/-6.96	-6.61/-8.26	-6.12/-6.88	-7.5/-6.62	-5.3/-8.5	-8.77/-6.94	-6.11/-8.52	-9.6/-9.89	-9.2/-7.11	-7.79/-7.47	-10.69/-9.19	-6.14/-6.71	-7.09/-7.39	-7.51/-8.7	-5.78/-8.15	-13.73/-12.05	-9.41/-10.55	-13.15/-10.27	-9.08/-8.55	-9.79/-10.83	-11.84/-9.38	-8.77/-7.81	-8.02/-8.41
Theta (225°)	-9.56/-9.59	-8.64/-8.72	-10.17/-9.57	-8.68/-8.61	-7.64/-9.49	-6.41/-6.05	-8.64/-9.66	-7.75/-11.04	-13.41/-9.92	-10.78/-9.82	-9.09/-11.26	-12.98/-10.12	-7.49/-5.38	-9/-11.21	-7.79/-6.63	-13.97/-12.52	-9.94/-10.94	-12.04/8.87	-8.47/-8.41	-9.61/-12.05	-13.82/-11.51	-11.74/-10.75	-9.92/-8.66	-9.22/8.66
Theta (240°)	-11.13/-12.75	-10.57/-8.6	-11.10/-43	-8.91/-2.96	-10.22/8.8	-10.18/-12.16	-10.71/11.98	-11.52/-13.32	-15.28/-13.33	-9.96/-11.78	-13.15/-12.51	-14.88/-14.56	-6.74/7.85	-12.56/-8.75	-10.62/13.9	-6.33/-9.14	-13.97/-12.68	-12.34/-14.17	-12.87/11.21	-10.01/9.74	-12.05/-15.72	-14.02/-10.98	-12.11/-13.47	-13.22/-11.65
Theta (255°)	-12.12/-11.47	-11.34/-11.08	-13.09/-9.25	-10.78/-15.4	-15.68/-10.15	-9.46/-10.12	-12.26/-13.41	-12.08/-14.53	-11.42/-14.77	-11.15/-10.62	-15.55/-14.58	-12.78/-9.85	-9.62/-9.56	-10.66/-15.62	-15.15/-7.84	-7.61/-15.15	-12.36/-12.16	-15.47/-15.05	-13.93/-12.02	-11.03/-10.66	-13.97/-15.56	-13.53/-11.83	-10.33/-10.51	-12.33/-9.69
Theta (270°)	-11.67/-13.57	-11.10/-10.44	-11.51/-12.21	-11.14/-11.02	-12.03/-12.49	-13.33/-11.78	-13.38/-12.43	-10.51/-15.24	-14.44/-12.12	-14.29/-14.61	-12.29/-11.89	-7.86/-11.33	-11.74/-14.38	-10.54/-9.51	-15.36/-13.23	-14.96/-12.7	-14.28/-14.98	-11.28/-9.33	-8.99/-9.86	-12.16/-10.51	-15.61/-13.21	-13.18/-13.63	-13.67/-13.93	
Theta (285°)	-12.43/-11.32	-10.91/9.98	-10.53/-11.74	-13.71/-14.85	-14.83/-15	-15.02/8.4	-9.49/-14.52	-11.86/-11.54	-13.98/-15.25	-15.61/-11.26	-9.94/-11.1	-13.59/-13.13	-14.47/-13.63	-14.91/-13.97	-12.71/-15.62	-12.15/-12.22	-13.61/-11.23	-12.93/-15.43	-13.71/14.87	-15.32/15.17	-16.15/14.71	-16.15/14.71	-16.15/14.71	-16.15/14.71
Theta (300°)	-10.55/-13.32	-14.96/-13.6	-14.11/-15.11	-14.56/-11.68	-9.8/-9.54	-12.06/-15.48	-15.91/-16.03	-15.22/-15.34	-15.14/-13.99	-15.18/-14.53	-14.88/-15.66	-14.98/-13.64	-14.77/-14.81	-11.35/-10.08	-10.09/-9.85	-11.33/-13.42	-13.15/-12.84	-14.67/-15.79	-15.79/14.36	-15.12/-15.65	-15.18/14.79	-14.87/-13.55	-12.34/-12.65	-13.43/-14.05
Theta (315°)	-14.72/-13.21	-11.41/-10.89	-10.63/-10.55	-10.76/-10.61	-10.97/-11.25	-13.12/-15.4	-15.48/-16.76	-15.43/-15.73	-14.61/-15.04	-14.61/-15	-15.48/-15.67	-15.29/-12.33	-10.29/9	-9.85/-9.94	-9.29/-9.87	-10.98/-11.89	-11.89/-11.44	-11.49/-11.94	-12.99/-13.5	-13.12/-12.01	-13.64/-14.04	-14.21/-14.92	-15.01/-12.67	-12.66/-13.99
Theta (330°)	-12.13/-12	-10.78/-10.49	-12.26/-13.7	-13.85/-12.98	-14.26/-15.43	-14.52/-15.64	-15.23/-15.05	-15.41/-15.74	-15.99/-14.16	-13.95/-16.44	-15.43/-15.63	-16.06/-13.97	-12.24/-10.29	-9.61/-8.86	-9.28/-9.9	-11.47/-13.12	-13.68/-14.02	-13.88/-15.77	-15.29/15.46	-14.62/-13.71	-12.97/-13.77	-13.88/-13.05	-12.21/-11.39	-11.92/-11.62
Theta (345°)	-11.08/-11.83	-12.93/-12.8	-12.71/-13.85	-15.34/-15.79	-14.06/-13.12	-14.31/-14.9	-15.51/-14.36	-14.07/-14.73	-15.04/-15.93	-14.82/-14.44	-14.15/-15.14	-15.85/-14.59	-15.01/-15.42	-14.48/-13.57	-12.61/-12.44	-12.78/-12.95	-12.32/-12.5	-12.31/-12.7	-13.31/-14.14	-14.03/-13.53	-13.12/12.97	-13.86/-13.79	-14.72/-15.67	
Phi (deg)	5.66/Pol.	Theta	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
DG (dB)	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°)	-6.51/0.7	-7.72/0.99	-9.22/8.89	-7.69/6.44	-5.34/4.56	-3.58/2.9	-2.46/2.16	-1.94/1.89	-1.84/1.78	-1.65/2.19	-3.16/3.96	-4.63/4.79	-5.46/6.93	-8.45/9.02	-8.92/8.55	-7.66/7.33	-6.62/5.66	-4.49/3.96	-3.24/3.01	-2/2.1	-2.47/3.38	-4.17/4.61	-5.23/6.41	
Theta (7.5°)	-5.96/6.26	-7.72/9.57	-11.11/11.51	-10.42/9.03	-7.61/6.17	-5.07/4.31	-3.91/2.87	-2.33/1.75	-1.41/1.51	-1.59/2.09	-3.37/4.33	-4.34/5.51	-7.34/8.61	-9.09/9.1	-8.17/7.1	-6.29/6.41	-4.42/3.51	-2.95/2.26	-1.72/1.86	-2.29/2.61	-2.32/2.79	-2.82/3.48	-4.57/5.08	-5.32/5.43
Theta (15°)	-7.33/8.51	-9.13/9.94	-11.21/10.53	-10.47/10.28	-9.61/7.95	-5.89/4.4	-3.22/2.48	-1.79/1.37	-0.86/1.04	-1.54/-1.92	-2.12/2.63	-3.25/4.14	-4.71/4.82	-5.24/5.81	-5.79/5.78	-5.34/6.68	-3.73/2.8	-2.16/1.65	-1.26/1.26	-1.58/2.09	-2.69/3.23	-3.59/4.31	-5.26/5.97	-6.01/6.37
Theta (22.5°)	-3.43/4.39	-5.08/6.02	-6.68/6.6	-6.93/6.98	-7.53/6.78	-5.15/3.52	-2.61/2.14	-1.96/1.87	-1.73/2.38	-4.31/6.04	-6.04/5.96	-5.81/6.6	-6.68/6.24	-5.86/5.54	-5.58/4.4	-4.74/4.04	-3.21/2.67	-2.09/1.87	-1.73/2.01	-2.68/3.43	-3.64/2.99	-2.51/2.61	-3.11/3.72	-4.09/3.6
Theta (30°)	-2.12/2.17	-3.67/6.12	-6.38/6.71	-6.67/5.24	-4.34/4.87	-5.19/4.48	-3.41/2.39	-2.72/3.6	-2.46/1.69	-2.05/2.32	-3.63/4.22	-6.67/5.92	-4.04/3.36	-3.62/3.44	-2.07/1.59	-1.69/2.21	-1.03/2.97	-2.64/2.12	-1.89/1.49	-0.87/0.79	-0.52/0.52	-0.96/1.46		
Theta (37.5°)	-0.32/0.45	-2.59/4.42	-4.76/5.63	-5.81/3.39	-2.69/3.76	-3.73/3.8	-3.15/-1.8	-1.83/2.21	-2.03/1.6	-0.79/0.64	-1.61/1.32	-1.14/1.74	-2.71/3.8	-5.17/4.7	-2.55/1.65	-1.34/1.42	-2.09/1.93	-1.95/3.25	-3.86/2.17	-0.67/0.65	-1.15/0.91	-0.11/0.13	0.09/0.03	0.09/0.07
Theta (45°)	-0.95/-1.54	-1.06/-1.13	-2.44/2.88	-2.53/2.44	-2.94/3.33	-3.79/3.15	-1.99/0.2	-0.91/1.28	-1.92/1.15	-1.99/2.06	-1.85/3.26	-1.82/1.11	-2.4/1.08	-3.71/3.44	-2.43/1.08	-0.18/1.47	-3.23/1.81	-2.15/3.83	-2.37/1.45	-2.04/2.38	-2.07/0.92	0.29/0.63	1.09/0.15	-1.49/0.88
Theta (52.5°)	-2.18/-1.9	-1.13/0.68	-0.91/1.42	-1.34/2.66	-3.58/4.23	-4.85/2.95	-1.01/0.66	-1.11/1.2	-0.91/1.02	0.17/1.6	-1.11/2.28	-2.94/2.57	-4.39/3.83	-3.74/2.79	-2.41/2.01	-3.81/1.69	-2.91/1.86	-3.62/2.45	-1.94/2.36	-0.65/0.33	0.62/0.79	-0.31/0.99	-1.56/1.85</	

Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.19	2.63	3.54	3.53
Ant. 2 Max Gain (dBi)	4.83	3.89	4.03	3.86
Ant. 3 Max Gain (dBi)	4.73	3.86	4.54	3.48
Ant. 4 Max Gain (dBi)	3.64	2.51	3.91	3.45
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/75/135	Theta/67.5/150	Theta/60/307.5	Theta/52.5/307.5
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/60/30	Phi/60/30	Phi/60/37.5	Phi/60/37.5
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/67.5/195	Phi/60/330	Phi/60/322.5	Phi/60/322.5
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/225	Theta/60/232.5	Theta/60/232.5	Theta/75/292.5
Max Gain (dBi)	4.83	3.89	4.54	3.86
DG [1SS] (dBi)	6.96	5.69	6.34	5.28
DG [2SS] (dBi)	4.83	3.89	4.54	3.86
DG [4SS] (dBi)	4.83	3.89	4.54	3.86



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_4TX

Appendix D

Theta	3.35/3.28	2.89/2.82	2.91/2.67	1.95/1.31	0.80/56	0.25/0.46	-0.61/0.24	1.1/1.3	1.43/1.62	1.78/1.86	1.78/1.89	2.25/2.95	2.86/2.29	1.88/1.13	-0.15/-1.06	-1.29/-1.33	-1.29/-1.55	-1.71/-1.78	-1.07/-0.07	0.96/1.67	2.24/2.25	2.29/2.3	2.76/2.92	3.12/3.05																								
Theta(30°)	3.14/3.17	2.63/2.27	2.75/3.54	3.6/3.19	2.09/1.16	1.18/0.68	0.73/1.68	2.42/2.77	3.01/3.05	3.12/86	2.71/2.89	2.97/2.94	3.17/3.1	2.43/1.18	0.4/4.04	-0.24/0.52	1.1/0.38	-0.11/0.38	1.11/2.04	2.51/2.62	2.35/1.96	1.82/1.93	2.49/2.72	2.52/2.3	3.06/2.98	2.01/1.39	2.64/3.33	3.6/3.79	3.12/2.14	1.92/2.4	2.46/2.28	3.26/3.31	4.51/4.08	3.62/3.75	4.01/4.64	4.84/4.46	4.67/4.67	3.33/1.9	1.41/1.19	1.99/2.86	3.16/3.1	2.4/2.18	2.88/3.61	4.07/3.75	3.63/3.1	4.03/3.89	3.28/3.02	
Theta(45°)	3.69/3.57	3.17/2.67	3.12/3.64	3.42/3.35	3.15/3.2	3.72/4.06	4.08/3.59	4.43/4.97	4.98/4.98	5.25/62	5.71/5.23	4.94/4.75	4.87/5.1	4.33/3.15	2.7/2.15	2.65/3.54	3.92/3.2	2.46/2.15	2.81/3.24	3.25/3.33	1.97/3.46	4.79/5.28	5.28/4.82	4.39/3.65	5.53/5.42	5.66/5.65	4.96/4.4	3.11/2.92	2.87/3.73	3.16/2.44	2.38/2.18	2.91/2.9	2.34/1.23	-0.33/1.53	2.43/2.56	2.01/2.53	4.42/5.21	3.93/98	4.48/3.31	2.36/1.92	1.56/1.57	2.24/1.89	1.11/1.5	1.51/1.25	1.98/3.61	4.34/4.84	5.85/5.69	5.68/5.5
Theta(52.5°)	4.71/4.82	4.84/4.49	4.03/3.94	3.36/3.07	2.71/2.91	2.99/2.97	2.94/3.64	4.62/5.2	5.4/5.3	4.67/4.68	4.15/3.77	3.32/3.31	4.22/4.66	4.25/3.7	3.48/2.47	2.11/2.47	2.81/2.07	1.97/2.33	2.04/2.25	2.22/1.49	1.58/2.84	3.86/4.52	5.84/6.59	5.64/97	5.65/6.7	5.65/6.7	5.86/5.6	4.51/4.18	4.09/3.77	2.58/2.57	2.81/2.36	1.57/1.44	2.27/2.95	3.01/2.72	1.61/1.63	1.61/1.3	3.99/4.97	4.86/4.24	4.33/3.12	1.99/1.73	2.29/1.99	1.81/1.74	1.17/1.25	1.31/1.29	1.98/3.67	4.78/5.22	6.19/6.34	6.21/6.49
Theta(60°)	5.53/5.42	5.66/5.65	4.96/4.4	3.11/2.92	2.87/3.73	3.16/2.44	2.38/2.18	2.91/2.9	2.34/1.23	-0.33/1.53	2.43/2.56	2.01/2.53	4.42/5.21	3.93/98	4.48/3.31	2.36/1.92	1.56/1.57	2.24/1.89	1.11/1.5	1.51/1.25	1.98/3.61	4.34/4.84	5.85/5.69	5.68/5.5	5.53/5.42	5.66/5.65	4.96/4.4	3.11/2.92	2.87/3.73	3.16/2.44	2.38/2.18	2.91/2.9	2.34/1.23	-0.33/1.53	2.43/2.56	2.01/2.53	4.42/5.21	3.93/98	4.48/3.31	2.36/1.92	1.56/1.57	2.24/1.89	1.11/1.5	1.51/1.25	1.98/3.61	4.34/4.84	5.85/5.69	5.68/5.5
Theta(75°)	4.18/4.58	4.6/4.47	3.54/3.46	2.47/1.86	1.69/3.38	3.4/2.82	2.86/2.81	3.67/3.03	2.56/1.27	0.72/1.71	2.77/3.65	2.73/1.91	3.04/4.07	3.64/2.68	2.64/2.89	2.45/1.6	1.04/1.15	2/1.46	0.55/0.64	0.89/1.01	1.85/2.84	3.48/3.84	4.47/4.26	4.24/1.3	4.18/4.58	4.6/4.47	3.54/3.46	2.47/1.86	1.69/3.38	3.4/2.82	2.86/2.81	3.67/3.03	2.56/1.27	0.72/1.71	2.77/3.65	2.73/1.91	3.04/4.07	3.64/2.68	2.64/2.89	2.45/1.6	1.04/1.15	2/1.46	0.55/0.64	0.89/1.01	1.85/2.84	3.48/3.84	4.47/4.26	4.24/1.3
Theta(82.5°)	2.08/3.13	3.02/2.91	1.57/1.47	0.99/1.2	1.5/1.89	1.74/1.21	2.35/2.93	2.98/1.64	1.58/0.0	-0.15/1.18	2.53/38	2.44/0.84	1.23/2.16	1.12/0.78	0.39/1.24	1.82/0.96	0.68/1.26	2/1.46	-0.05/0.11	0.74/1.27	2.01/1.97	1.93/1.62	2.29/2.59	2.31/2.41	2.08/3.13	3.02/2.91	1.57/1.47	0.99/1.2	1.5/1.89	1.74/1.21	2.35/2.93	2.98/1.64	1.58/0.0	-0.15/1.18	2.53/38	2.44/0.84	1.23/2.16	1.12/0.78	0.39/1.24	1.82/0.96	0.68/1.26	2/1.46	-0.05/0.11	0.74/1.27	2.01/1.97	1.93/1.62	2.29/2.59	2.31/2.41
Theta(90°)	0.07/1.2	1.37/1.45	0.24/0.33	-1.03/0.08	-0.09/0.09	-0.21/0.92	0.38/1.2	1/0.38	-0.33/1.76	-1.28/-0.85	0.61/2.32	0.09/0.35	-0.66/0.61	-0.61/1.24	-2.14/0.09	0.62/0.16	-0.35/0.59	0.83/0.52	-1.97/0.64	-0.73/0.21	1.54/1.29	-0.06/0.98	-0.96/0.22	-0.53/0.16	0.07/1.2	1.37/1.45	0.24/0.33	-1.03/0.08	-0.09/0.09	-0.21/0.92	0.38/1.2	1/0.38	-0.33/1.76	-1.28/-0.85	0.61/2.32	0.09/0.35	-0.66/0.61	-0.61/1.24	-2.14/0.09	0.62/0.16	-0.35/0.59	0.83/0.52	-1.97/0.64	-0.73/0.21	1.54/1.29	-0.06/0.98	-0.96/0.22	-0.53/0.16
Theta(97.5°)	-2.17/0.63	-0.76/0.9	-1.86/2.17	-2.82/2.01	-0.97/1.75	-2.68/-3.59	-1.67/1.1	-0.83/-1.77	-2.14/3.91	-2.56/1.66	-0.64/0.64	-1.72/-2.87	-2.94/2.19	-4.22/2.8	-1.59/1.95	-2.65/2.8	-1.52/2.93	-4.21/3.65	-2.96/1.01	-0.79/1.03	-2.18/2.55	-4.45/5.09	-6.89/5.93	-5.82/3.97	-2.17/0.63	-0.76/0.9	-1.86/2.17	-2.82/2.01	-0.97/1.75	-2.68/-3.59	-1.67/1.1	-0.83/-1.77	-2.14/3.91	-2.56/1.66	-0.64/0.64	-1.72/-2.87	-2.94/2.19	-4.22/2.8	-1.59/1.95	-2.65/2.8	-1.52/2.93	-4.21/3.65	-2.96/1.01	-0.79/1.03	-2.18/2.55	-4.45/5.09	-6.89/5.93	-5.82/3.97
Theta(105°)	-4.25/3.27	-3.2/2.69	-2.9/4.21	-3.6/3.17	-2.8/-2.98	-3.97/6.56	-3.89/2.55	-3.29/3.76	-4.21/6.19	-4.62/3.74	-1.27/1.39	-4.25/4.5	-3.75/4.85	-4.07/5.06	-5.1/3.99	-4.01/4.4	-6.1/6.83	-6.01/6.76	-8.72/6.65	-6.33/3.46	-2.42/3.97	-4.24/4.49	-4.13/4.21	-4.13/4.21	-4.25/3.27	-3.2/2.69	-2.9/4.21	-3.6/3.17	-2.8/-2.98	-3.97/6.56	-3.89/2.55	-3.29/3.76	-4.21/6.19	-4.62/3.74	-1.27/1.39	-4.25/4.5	-3.75/4.85	-4.07/5.06	-5.1/3.99	-4.01/4.4	-6.1/6.83	-6.01/6.76	-8.72/6.65	-6.33/3.46	-2.42/3.97	-4.24/4.49	-4.13/4.21	-4.13/4.21
Theta(112.5°)	-4.55/5.62	-5.69/5.05	-4.28/5.44	-4.4/5.36	-4.95/5.71	-5.02/7.07	-6.84/4.49	-3.52/4.53	-5.1/6.18	-4.9/4.03	-4.02/4.32	-5.83/6.46	-4.16/5.06	-5.3/5.47	-5.99/5.54	-4.64/5.89	-7.82/7.17	-6.43/7.58	-8.74/8.04	-7.45/5.64	-4.69/4.95	-4.87/4.34	-4.91/4.43	-4.85/4.78	-4.55/5.62	-5.69/5.05	-4.28/5.44	-4.4/5.36	-4.95/5.71	-5.02/7.07	-6.84/4.49	-3.52/4.53	-5.1/6.18	-4.9/4.03	-4.02/4.32	-5.83/6.46	-4.16/5.06	-5.3/5.47	-5.99/5.54	-4.64/5.89	-7.82/7.17	-6.43/7.58	-8.74/8.04	-7.45/5.64	-4.69/4.95	-4.87/4.34	-4.91/4.43	-4.85/4.78
Theta(120°)	-5.54/7.25	-7.24/7.06	-7.39/7.17	-5.79/6.19	-6.57/7.65	-6.57/9.51	-6.67/5.19	-4.19/6.93	-7.94/5.32	-5.63/5.14	-5.34/6.58	-8.51/7.02	-6.72/6.15	-6.22/7.92	-7.79/5.56	-4.29/5.47	-7.47/6.15	-5.93/8.3	-7.86/7.46	-5.45/5.52	-4.45/5.09	-6.89/5.93	-5.82/3.97	-5.82/3.97	-5.54/7.25	-7.24/7.06	-7.39/7.17	-5.79/6.19	-6.57/7.65	-6.57/9.51	-6.67/5.19	-4.19/6.93	-7.94/5.32	-5.63/5.14	-5.34/6.58	-8.51/7.02	-6.72/6.15	-6.22/7.92	-7.79/5.56	-4.29/5.47	-7.47/6.15	-5.93/8.3	-7.86/7.46	-5.45/5.52	-4.45/5.09	-6.89/5.93	-5.82/3.97	
Theta(127.5°)	-6.68/7.56	-8.65/7.94	-8.94/8.31	-6.41/8.05	-8.09/7.36	-7.79/8.35	-7.93/7.41	-7.53/8.34	-8.84/6.65	-6.27/8.71	-8.54/7.71	-8.47/7.41	-6.43/5.97	-8.08/7.83	-9.67/10.25	-6.17/8.46	-9.51/9.81	-8.95/9.25	-10.04/8.51	-8.65/7.51	-8.29/11.66	-9.67/6.7	-5.67/6.36	-9.63/10.8	-6.68/7.56	-8.65/7.94	-8.94/8.31	-6.41/8.05	-8.09/7.36	-7.79/8.35	-7.93/7.41	-7.53/8.34	-8.84/6.65	-6.27/8.71	-8.54/7.71	-8.47/7.41	-6.43/5.97	-8.08/7.83	-9.67/10.25	-6.17/8.46	-9.51/9.81	-8.95/9.25	-10.04/8.51	-8.65/7.51	-8.29/11.66	-9.67/6.7	-5.67/6.36	-9.63/10.8
Theta(135°)	-6.92/5.47	-7.54/10.09	-8.91/7.94	-9.53/10.96	-11.85/7.96	-7.44/8.2	-9.65/9.69	-7.97/8.35	-7.24/9.23	-8.2/7.17	-8.39/9.12	-8.54/8.29	-8.88/8.6	-8.38/11.09	-10.15/6.49	-6.92/11.22	-7.95/9.15	-11.4/9.15	-9.75/10.27	-10.05/8.89	-8.52/8.91	-7.82/7.29	-7.33/7.31	-8.24/7.56	-6.92/5.47	-7.54/10.09	-8.91/7.94	-9.53/10.96	-11.85/7.96	-7.44/8.2	-9.65/9.69	-7.97/8.35	-7.24/9.23	-8.2/7.17	-8.39/9.12	-8.54/8.29	-8.88/8.6	-8.38/11.09	-10.15/6.49	-6.92/11.22	-7.95/9.15	-11.4/9.15	-9.75/10.27	-10.05/8.89	-8.52/8.91	-7.82/7.29	-7.33/7.31	-8.24/7.56
Theta(142.5°)	-7.79/9.38	-8.01/8.55	-9.19/9.35	-9.62/10.44	-9.53/10.31	-10.74/9.47	-11.04/9.98	-7.79/8.75	-9.11/8.52	-11.1/1.1	-9.76/9.41	-9.72/9.72	-7.39/9.56	-8.82/11.95	-10.72/9.04	-11.94/9.85	-8.97/9.86	-11.01/11.62	-8.41/7.29	-8.71/7.57	-7.95/8.59	-9.03/8.52	-8.55/11.64	-10.88/9.87	-7.79/9.38	-8.01/8.55	-9.19/9.35	-9.62/10.44	-9.53/10.31	-10.74/9.47	-11.04/9.98	-7.79/8.75	-9.11/8.52	-11.1/1.1	-9.76/9.41	-9.72/9.72	-7.39/9.56	-8.82/11.95	-10.72/9.04	-11.94/9.85	-8.97/9.86	-11.01/11.62	-8.41/7.29	-8.71/7.57	-7.95/8.59	-9.03/8.52	-8.55/11.64	-10.88/9.87
Theta(150°)	-8.3/9	-8.58/7.02	-8.08/10.15	-11.14/10.97	-11.62/12.39	-11.74/10.97	-8.66/11.77	-9.26/10.06	-10.95/10.45	-11.84/10	-8.49/9.43	-11.65/10.12	-11.28/10.19	-9.61/10.37	-12.11/11.81	-10.93/12.38	-10.49/9.42	-10.93/8.12	-8.28/10.57	-11.38/11.44	-11.09/11.01	-11.12/10.14	-9.63/10.8	-10.88/9.87	-8.3/9	-8.58/7.02	-8.08/10.15	-11.14/10.97	-11.62/12.39	-11.74/10.97	-8.66/11.77	-9.26/10.06	-10.95/10.45	-11.84/10	-8.49/9.43	-11.65/10.12	-11.28/10.19	-9.61/10.37	-12.11/11.81	-10.93/12.38	-10.49/9.42	-10.93/8.12	-8.28/10.57	-11.38/11.44	-11.09/11.01	-11.12/10.14	-9.63/10.8	-10.88/9.87
Theta(157.5°)	-9.94/11	-11.95/11.6	-11.74/11.93	-11.3/10.09	-8.91/9.06	-9.88/12.38	-12.6/10.8	-8.86/10.19	-12.41/11.72	-12.34/11.81	-12.03/11.9	-11.06/10.72	-11.7/11.97	-10.09/9.31	-8.99/8.94	-10.02/11.46	-10.91/10.19	-10.66/11.71	-10.24/8.87	-9.27/10.03	-9.97/9.68	-10.5/10.57	-9.33/9.29	-10.24/11.72	-9.94/11	-11.95/11.6	-11.74/11.93	-11.3/10.09	-8.91/9.06	-9.88/12.38	-12.6/10.8	-8.86/10.19	-12.41/11.72	-12.34/11.81	-12.03/11.9	-11.06/10.72	-11.7/11.97	-10.09/9.31	-8.99/8.94	-10.02/11.46	-10.91/10.19	-10.66/11.71	-10.24/8.87	-9.27/10.03	-9.97/9.68	-10.5/10.57	-9.33/9.29	-10.24/11.72
Theta(165°)	-11.69/11.26																																															



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_4TX

Appendix D

Theta	Phi	Gain	Phi(15°)	Phi(22.5°)	Phi(30°)	Phi(45°)	Phi(60°)	Phi(75°)	Phi(90°)	Phi(105°)	Phi(120°)	Phi(135°)	Phi(150°)	Phi(165°)	Phi(180°)	Phi(195°)	Phi(210°)	Phi(225°)	Phi(240°)	Phi(255°)	Phi(270°)	Phi(285°)	Phi(300°)	Phi(315°)	Phi(330°)	Phi(345°)		
Theta(22.5°)	-1.15/-0.81	-1.32/-1.83	-2.25/-3	-4.02/-3.8	-3.69/-4.04	-4.8/-7.59	-12.22/-14.86	-14.37/-13.08	-11.77/-10.28	-8.42/-6.51	-5.65/-4.4	-3.05/-1.15	-0.23/0.17	0.15/0.07	-1.86/-2.73	-3.54/-4.41	-5.51/-8.37	-11.72/-18.12	-18.54/-14.08	-9.43/-7.16	-6.14/-6.42	-6.91/-7.1	-5.74/-4.48	-2.71/-1.93				
Theta(30°)	-2.17/-2.09	-2.95/-2.97	-2.05/-2.65	-4.22/-3.93	-3.85/-3.8	-5.1/-8.66	-11.15/-12.89	-18.83/-17.7	-11.3/-7.9	-6.66/-6.64	-5.23/-2.86	-2.41/-2.99	-1.42/-0.61	-0.29/-1.04	-1.54/-3.02	-3.62/-4.06	-5.52/-10.07	-15.78/-18.17	-18.14/-13.24	-9.75/-9.21	-10.58/-14.09	-14.47/-11.76	-7.98/-5.8	-4.77/-4.69				
Theta(45°)	-3.77/-2.69	-2.46/-3.88	-3.55/-3.12	-3.82/-3.6	-5.55/-7.35	-6.03/-5.56	-7.63/-13.11	-13.21/-10.75	-14.59/-14.91	-8.37/-5.52	-5.33/-4.9	-2.32/-2.29	-1.44/-1.68	0.02/-1.38	-2.51/-5.79	-6.91/-10.13	-12.29/-12.5	-18.76/-18.12	-17.79/-17.59	-11.81/-14.82	-17.46/-9.3	-6.35/-6.55	-7.49/-7.59	-5.21/-4.3				
Theta(60°)	-4.79/-3.73	-2.66/-4.01	-3.65/-4.12	-4.67/-6.16	-6.85/-6.19	-7.6/-8.96	-11.18/-11.16	-8.65/-10.92	-12.39/-11.17	-11.54/-7.7	-7.64/-6.18	-3.05/-1.96	-2.99/-1.36	-1.25/-2.52	-4.04/-7.38	-8.27/-16.33	-17.81/-17.4	-18.98/-17.65	-18.61/-15.95	-11.64/-13.98	-15.9/-9.83	-8.85/-10.42	-7.3/-6.29	-6.51/-4.81				
Theta(75°)	-5.56/-5.85	-3.29/-3.07	-7.05/-5.8	-6.28/-7.05	-9.95/-9.48	-7.16/-9.95	-11.95/-12.25	-12.15/-11.4	-10.77/-8.33	-15.66/-19.22	-11.68/-5.96	-4.18/-1.83	-1.45/-0.99	-1.52/-2.15	-3.55/-5.58	-10.71/-18.31	-17.71/-17.5	-18.94/-17.47	-18.46/-18.75	-15.8/-16.86	-12.44/-9.45	-8.86/-10.2	-6.9/-7.25	-7.93/-6.8				
Theta(90°)	-5.09/-7.34	-6.22/-4.69	-6.33/-7.67	-14.44/-13.4	-8.5/-7.46	-11.69/-10.61	-6.68/-9.84	-10.29/-14.01	-13.21/-11.55	-18.91/-10.44	-8.28/-4.85	-3.14/-2.27	-2.38/-2.62	-5.69/-4.05	-8.94/-11.28	-11.75/-18.07	-18.29/-19.03	-19.07/-18.54	-18.21/-18.69	-16.53/-14.01	-11.15/-11.47	-11.98/-10.15	-7.3/-8.2	-7.02/-5.25				
Theta(105°)	-7.55/-7.93	-8.74/-7.48	-8.16/-8.36	-14.74/-19.07	-17.79/-11.53	-10.84/-12.12	-8.49/-11.48	-12.21/-16.81	-10.72/-17.51	-15.15/-10.73	-9.77/-6.63	-3.84/-5.69	-3.6/-1.3	-7.12/-18.6	-7.17/-11.32	-14.88/-18.27	-17.81/-18.66	-17.92/-18.66	-18.02/-18.66	-16.25/-15.15	-12.28/-16.54	-13.3/-8.18	-6.61/-10.39	-13.33/-8.28				
Theta(120°)	-11.34/-8.83	-9.84/-8.31	-11.04/-13.6	-17.83/-18.72	-15.63/-14.57	-11.95/-12.75	-8.43/-10.48	-16.16/-14.17	-7.47/-17.63	-16.64/-10.78	-9.98/-7.87	-4.41/-10.28	-7.12/-8.7	-11.37/-8.7	-12.24/-19.31	-14.64/-16.21	-19.44/-18.71	-18.58/-14.73	-19.28/-18.15	-18.83/-12.25	-12.77/-16.59	-11.81/-11.69	-9.12/-8.56	-11.12/-8.77				
Theta(135°)	-11.86/-13.31	-12.72/-8.26	-11.61/-11.57	-18.29/-11.6	-14.98/-16.15	-10.54/-14.93	-11.53/-10.56	-12.04/-16.39	-7.99/-17.87	-18.57/-16.86	-15.51/-6.11	-9.89/-8.9	-8.88/-12.74	-11.74/-9.9	-13.36/-14.36	-13.06/-13.28	-16.87/-17.41	-17.92/-17.88	-18.11/-17.91	-18.91/-12.71	-14.67/-18.89	-17.37/-11.76	-11.78/-9.98	-12.81/-11.3				
Theta(150°)	-13.38/-11.51	-18.66/-12.28	-16.23/-12.68	-17.09/-13.81	-11.36/-12.32	-12.05/-15.87	-11.29/-12.48	-11.57/-16.13	-9.41/-13.26	-17.48/-13.05	-11.76/-8.7	-10.4/-15.73	-10.06/-9.59	-15.78/-12.2	-13.28/-13.58	-9.91/-12.66	-18.2/-18.15	-18.66/-17.98	-18.15/-18.66	-18.83/-13.45	-18.89/-17.31	-18.61/-12.71	-16.15/-17.86	-15.13/-12.99				
Theta(165°)	-19.24/-12.95	-18.83/-12.12	-15.42/-13.76	-10.66/-11.16	-12.28/-8.86	-9.31/-18.41	-11.02/-9.78	-13.14/-17.63	-12.96/-14.78	-18.43/-14.04	-6.88/-7.76	-18.23/-13.73	-9.61/-13.51	-13.57/-12.08	-10.69/-10.1	-9.55/-10.36	-18.24/-18.73	-18.37/-18.24	-18.68/-17.58	-18.24/-13.14	-13.64/-18.65	-17.41/-17.37	-16.69/-18.7	-18.84/-15.54				
Theta(180°)	-18.21/-15.07	-13.75/-16.66	-13.23/-14.95	-10.56/-10.74	-13.97/-10.86	-7.01/-12.16	-14.51/-11.61	-11.53/-18.11	-14.84/-14.81	-19.27/-13.55	-10.73/-11.31	-17.71/-13.37	-6.1/-7.41	-10.46/-9.59	-10.26/-12.06	-6.82/-10.47	-18.88/-18.91	-15.57/-18.41	-18.88/-17.49	-19.14/-14.76	-18.28/-18.84	-19.29/-18.31	-17.77/-16.42	-18.08/-19.04				
Theta(195°)	-17.99/-14.24	-16.63/-19.12	-18.45/-14.24	-13.27/-11.25	-10.45/-15.71	-8.91/-7.68	-12.28/-18.71	-18.23/-13.81	-18.13/-13.81	-15.81/-15.36	-13.1/-15.1	-18.76/-11.34	-6.14/-7.16	-13.49/-12.77	-8.88/-9.38	-8.14/-11.2	-18.01/-18.77	-17.76/-17.94	-17.66/-16.1	-16.93/-18.77	-17.61/-16.1	-19.34/-18.82	-18.43/-13.77	-18.43/-13.77				
Theta(210°)	-18.44/-18.63	-18.66/-13.72	-13.9/-15.53	-12.54/-14.85	-10.24/-11.32	-16.21/-16.28	-12.64/-18.84	-15.99/-18.24	-18.53/-18.94	-12.48/-15.85	-18.88/-13.08	-15.24/-10.87	-6.09/-9.14	-10.59/-16.03	-6.27/-9.72	-17.43/-17.69	-18.54/-19.7	-18.22/-14.73	-16.07/-12.8	-16.92/-18.32	-19.44/-14.96	-19.23/-19.35	-17.83/-18.91					
Theta(225°)	-18.57/-14.97	-18.93/-17.59	-17.41/-11.34	-13.26/-17.77	-19.23/-15.28	-11.63/-11.95	-17.17/-18.25	-17.61/-18.49	-12.19/-17	-14.54/-10.71	-18.12/-17.23	-14.96/-9.42	-9.44/-10.89	-14.47/-18.95	-17.58/-7.53	-6.87/-17.37	-13.26/-12.78	-18.72/-18.82	-15.29/-12.48	-13.71/-12.88	-16.86/-18.69	-19.15/-18.12	-15.74/-13.97	-17.92/-13.38				
Theta(240°)	-11.73/-11.51	-13.11/-13.08	-17.9/-17.7	-12.57/-11.07	-12.56/-15.01	-11.78/-18.13	-19.11/-17.69	-14.35/-18.61	-17.29/-13.52	-19.1/-8.81	-16.06/-12.49	-11.98/-12.72	-12.22/-10.3	-17.59/-14.4	-17.09/-13.36	-17.04/-19.03	-14.39/-13.29	-15.18/-14.17	-18.45/-17.78	-18.18/-13.71	-18.74/-18.31	-19.34/-18.82	-17.86/-12.71	-18.16/-16.69				
Theta(255°)	-18.44/-18.63	-18.66/-13.72	-13.9/-15.53	-12.54/-14.85	-10.24/-11.32	-16.21/-16.28	-12.64/-18.84	-15.99/-18.24	-18.53/-18.94	-12.48/-15.85	-18.88/-13.08	-15.24/-10.87	-6.09/-9.14	-10.59/-16.03	-6.27/-9.72	-17.43/-17.69	-18.54/-19.7	-18.22/-14.73	-16.07/-12.8	-16.92/-18.32	-19.44/-14.96	-19.23/-19.35	-17.83/-18.91					
Theta(270°)	-18.57/-14.97	-18.93/-17.59	-17.41/-11.34	-13.26/-17.77	-19.23/-15.28	-11.63/-11.95	-17.17/-18.25	-17.61/-18.49	-12.19/-17	-14.54/-10.71	-18.12/-17.23	-14.96/-9.42	-9.44/-10.89	-14.47/-18.95	-17.58/-7.53	-6.87/-17.37	-13.26/-12.78	-18.72/-18.82	-15.29/-12.48	-13.71/-12.88	-16.86/-18.69	-19.15/-18.12	-15.74/-13.97	-17.92/-13.38				
Theta(285°)	-11.73/-11.51	-13.11/-13.08	-17.9/-17.7	-12.57/-11.07	-12.56/-15.01	-11.78/-18.13	-19.11/-17.69	-14.35/-18.61	-17.29/-13.52	-19.1/-8.81	-16.06/-12.49	-11.98/-12.72	-12.22/-10.3	-17.59/-14.4	-17.09/-13.36	-17.04/-19.03	-14.39/-13.29	-15.18/-14.17	-18.45/-17.78	-18.18/-13.71	-18.74/-18.31	-19.34/-18.82	-17.86/-12.71	-18.16/-16.69				
Theta(300°)	-18.44/-18.63	-18.66/-13.72	-13.9/-15.53	-12.54/-14.85	-10.24/-11.32	-16.21/-16.28	-12.64/-18.84	-15.99/-18.24	-18.53/-18.94	-12.48/-15.85	-18.88/-13.08	-15.24/-10.87	-6.09/-9.14	-10.59/-16.03	-6.27/-9.72	-17.43/-17.69	-18.54/-19.7	-18.22/-14.73	-16.07/-12.8	-16.92/-18.32	-19.44/-14.96	-19.23/-19.35	-17.83/-18.91					
Theta(315°)	-18.57/-14.97	-18.93/-17.59	-17.41/-11.34	-13.26/-17.77	-19.23/-15.28	-11.63/-11.95	-17.17/-18.25	-17.61/-18.49	-12.19/-17	-14.54/-10.71	-18.12/-17.23	-14.96/-9.42	-9.44/-10.89	-14.47/-18.95	-17.58/-7.53	-6.87/-17.37	-13.26/-12.78	-18.72/-18.82	-15.29/-12.48	-13.71/-12.88	-16.86/-18.69	-19.15/-18.12	-15.74/-13.97	-17.92/-13.38				
Theta(330°)	-11.73/-11.51	-13.11/-13.08	-17.9/-17.7	-12.57/-11.07	-12.56/-15.01	-11.78/-18.13	-19.11/-17.69	-14.35/-18.61	-17.29/-13.52	-19.1/-8.81	-16.06/-12.49	-11.98/-12.72	-12.22/-10.3	-17.59/-14.4	-17.09/-13.36	-17.04/-19.03	-14.39/-13.29	-15.18/-14.17	-18.45/-17.78	-18.18/-13.71	-18.74/-18.31	-19.34/-18.82	-17.86/-12.71	-18.16/-16.69				
Theta(345°)	-18.44/-18.63	-18.66/-13.72	-13.9/-15.53	-12.54/-14.85	-10.24/-11.32	-16.21/-16.28	-12.64/-18.84	-15.99/-18.24	-18.53/-18.94	-12.48/-15.85	-18.88/-13.08	-15.24/-10.87	-6.09/-9.14	-10.59/-16.03	-6.27/-9.72	-17.43/-17.69	-18.54/-19.7	-18.22/-14.73	-16.07/-12.8	-16.92/-18.32	-19.44/-14.96	-19.23/-19.35	-17.83/-18.91					
Theta(360°)	-18.57/-14.97	-18.93/-17.59	-17.41/-11.34	-13.26/-17.77	-19.23/-15.28	-11.63/-11.95	-17.17/-18.25	-17.61/-18.49	-12.19/-17	-14.54/-10.71	-18.12/-17.23	-14.96/-9.42	-9.44/-10.89	-14.47/-18.95	-17.58/-7.53	-6.87/-17.37	-13.26/-12.78	-18.72/-18.82	-15.29/-12.48	-13.71/-12.88	-16.86/-18.69	-19.15/-18.12	-15.74/-13.97	-17.92/-13.38				



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_4TX

Appendix D

Theta	0.35/2.71	4.01/4.59	4.83/4.74	3.41/0.58	0.14/1.3	1.22/0.12	-1.92/1.37	0.65/1.76	1.43/0.12	-0.91/0.01	0.59/0.32	-2.26/1.68	-0.79/0.27	1.34/1.92	1.14/0.01	-1.46/2.92	-1.63/1.36	-1.83/0.98	0.79/2.45	3.18/2.95	2.15/1.6	1.68/1.17	0.47/0.79	-1.51/0.64																							
Theta(60°)	0.35/2.71	4.01/4.59	4.83/4.74	3.41/0.58	0.14/1.3	1.22/0.12	-1.92/1.37	0.65/1.76	1.43/0.12	-0.91/0.01	0.59/0.32	-2.26/1.68	-0.79/0.27	1.34/1.92	1.14/0.01	-1.46/2.92	-1.63/1.36	-1.83/0.98	0.79/2.45	3.18/2.95	2.15/1.6	1.68/1.17	0.47/0.79	-1.51/0.64																							
Theta(67.5°)	0.26/2.2	3.01/3.71	4.32/4.19	2.37/0.4	1.09/2.16	1.05/1.27	-1.19/1.11	2.31/1.76	0.53/0.15	-0.86/0.95	-0.94/1.65	-2.84/0.8	0.36/1.2	2.29/1.95	0.74/0.38	-0.8/2.29	-1.48/1.44	-1.46/0.27	0.71/2.18	2.86/2.2	0.79/0.14	0.50/36	0.18/0.51	-1.66/1.15																							
Theta(75°)	-0.46/1.44	2.05/2.5	3.02/2.59	0.93/0.5	0.73/1.34	-0.2/2.63	-1.6/1.24	2.15/0.86	-0.32/0.6	-1.89/0.66	-0.28/0.54	-1.89/0.66	0.27/0.26	1.55/0.85	-0.03/1.01	-1.39/1.33	-1.49/0.7	-0.05/1.53	2.47/1.5	-0.58/2.86	2.35/2.03	-0.1/1.41	-2.73/2.34																								
Theta(82.5°)	-0.99/0.31	-0.01/0.65	1.34/0.83	-0.8/1.97	-0.98/0.85	-2.43/4.42	-2.32/0.54	0.89/1.07	-1.86/0.04	0.84/0.09	-2.01/2.36	-2.89/0.88	-1.56/1.49	-0.99/2.26	-2.49/0.78	0.14/0.34	-0.83/1.75	-2.62/1.51	-1.23/0.58	1.25/0.11	-2.49/1.51	-4.54/4.36	-2.75/2.35	-3.82/3.03																							
Theta(90°)	-2.16/0.9	-1.33/1.12	-0.8/1.35	-2.55/3.83	-3.34/3.08	-4.99/6.45	-4.15/1.54	-1.43/3.84	-1.22/2.93	-1.23/2.03	-4.7/4.8	-5.28/3.72	-3.59/3.29	-2.94/5.15	-5.77/3.39	-1.81/1.97	-2.49/3.32	-3.96/3.37	-2.97/1.01	-0.45/2.26	-5.45/6.47	-6.77/6.06	-4.43/4.01	-5.45/3.33																							
Theta(97.5°)	-4.19/3.05	-2.65/3.27	-4.33/3.84	-3.29/5.55	-4.26/5.7	-4.56/7.4	-5.08/4.88	-3.24/3.87	-7/6.77	-7.18/5.94	-7.24/5.56	-5.45/8.08	-4.41/6.76	-4.89/6.37	-6.54/5.59	-5.91/4.08	-3.2/4.89	-8.41/8.21	-8.41/7.55	-5.46/5.08	-5.66/6.63																										
Theta(105°)	-5.31/4.3	-4.6/5.87	-6.56/4.95	-6.13/9.05	-8.06/7.51	-10.27/12.23	-10.53/7.16	-7.13/9.54	-10.58/7.37	-6.54/6.95	-10.95/10.26	-10.18/8.65	-8.6/9.22	-8.28/10.02	-13.69/10.23	-8.25/7.73	-11.59/15.81	-12.02/9.38	-10.51/7.11	-6.71/7.69	-10.86/9.95	-10.8/7.78	-6.23/6.92	-6.41/6.2																							
Theta(112.5°)	-7.18/5.66	-5.75/7.98	-8.01/6.34	-8.87/12.88	-9.45/9.1	-13.31/16.72	-11.51/8.56	-9.01/11.41	-10.11/7.96	-8.81/11.13	-14.06/13.95	-13.46/10.67	-14.61/11.5	-9.36/10.27	-11.6/10.6	-10.73/11.31	-15.08/18.92	-15.28/11.5	-12.7/8.74	-7.59/8.17	-8.31/9.76	-11.77/8.45	-7/4.95	-9.56/9.08																							
Theta(120°)	-9.91/7.04	-8.07/11.33	-10.86/8.64	-11.25/13.83	-10.41/10.12	-13.22/16.07	-17.9/16.88	-15.47/15.4	-14.67/9.73	-12.3/16.33	-14.73/14.55	-15.77/13.07	-14.2/10.72	-13.09/18.22	-16.64/11.59	-11.12/17.85	-16.17/13.95	-13.25/11.53	-13.15/13.08	-9.34/9.34	-11.03/14.76	-16.02/12.36	-12.05/13.21	-12.62/12.9																							
Theta(127.5°)	-12.43/9.23	-10.43/12.68	-12.07/11.46	-14.27/14.69	-12.54/12.18	-14.12/14.85	-15.4/17.62	-19.02/18.79	-16.01/14.25	-12.68/13.75	-14.34/18.56	-14.48/15.4	-13.47/12.41	-14.62/16.73	-19.09/13.31	-9.1/12.59	-17.75/17.18	-16.13/16.86	-14.52/11.92	-10.38/11	-12.54/13.87	-19.01/14.78	-15.75/18.07	-19.29/17.22																							
Theta(135°)	-13.4/10.33	-11.5/12.51	-11.05/11.76	-17.56/14.77	-14.44/13.07	-15.21/17.5	-17.68/19.05	-18.68/19.4	-17.69/18.39	-15.35/14.22	-17.52/18.29	-16.78/15.83	-13.63/13.72	-18.32/16.65	-19.72/17.31	-16.54/18.23	-18.67/16.9	-18.19/18.5	-18.1/17.64	-16.57/14.66	-16.62/14.88	-16.34/11.78	-13.1/15.49	-18.71/16.68																							
Theta(142.5°)	-17.09/13.91	-14.74/14.91	-13.06/13.23	-17.94/17.31	-15.63/14.44	-17.56/17.47	-15.89/17.54	-18.07/18.67	-18.58/18.71	-17.13/17.22	-18.17/18.24	-14.51/13.86	-16.86/18.1	-17.81/18.82	-17.82/17.2	-16.83/18.97	-18.94/18.68	-16.89/18.74	-15.85/17.83	-15.16/13.34	-15.82/18.47	-16.59/17.83	-15.14/15.72	-17.67/14.58																							
Theta(150°)	-18.99/19.3	-17.36/18.95	-18.17/18.6	-19.35/18.09	-18.4/17.04	-16.21/15.08	-17.52/18.61	-17.43/18.29	-17.23/17.45	-17.71/18.02	-17.93/18.16	-18.09/19.17	-18.14/18.33	-18.89/18.72	-18.67/18.61	-19.12/19.22	-18.23/18.87	-17.9/19.07	-18.63/15.08	-12.46/12.29	-13.66/15.97	-18.02/17.4	-17.89/19.23	-19.12/17.9																							
Theta(157.5°)	-17.46/18.81	-16.76/15.89	-14.95/14.73	-16.39/14.34	-18.88/18.32	-16.56/16.92	-18.46/18.86	-17.96/17.87	-17.74/18.12	-18.17/18.38	-16.81/18.81	-18.75/17.84	-17.59/19.63	-18.79/18.63	-18.07/18.68	-17.47/17.84	-15.73/16.12	-17.38/19.1	-17.91/18.28	-16.82/17.07	-17.42/16.98	-18.18/19.12	-18.14/15.49	-19.16/18.68																							
Theta(165°)	-18.36/16.04	-14.74/15.31	-16.97/18.83	-17.69/19.01	-17.29/18.28	-17.38/18.11	-18.98/18.91	-18.96/18.54	-19/19.81	-18.34/18.33	-18.58/17.64	-17.67/17.07	-17.84/17.51	-17.58/18.12	-18.97/19.01	-18.26/18.43	-17.89/16.79	-15.73/15.99	-17.42/17.76	-18.72/17.75	-17.33/17.4	-19.46/17.78	-17.24/17.75	-17.17/19.33																							
Theta(172.5°)	-18.08/16.56	-18.89/18.73	-19.39/17.97	-17.83/17.7	-18.56/18.47	-18.53/19.08	-19.17/18.4	-18.24/17.18	-17.33/19.01	-18.46/17.4	-18.78/18.07	-18.75/18.16	-18.71/18.34	-18.18/18.87	-18.48/18.6	-18.05/19.01	-17.8/19.22	-17.52/18.16	-18.41/17.92	-18.19/18.05	-17.59/19.11	-19.12/18.12	-18.46/18.96	-19.39/18.54																							
Theta(180°)	-18.07/19.63	-18.51/18.01	-17.57/17.18	-18.82/18.83	-17.66/18.3	-17.92/18.09	-17.72/19.11	-18.04/17.4	-18.21/18.58	-17.99/19.17	-19.16/18.83	-19.33/18.15	-19.16/18.93	-19.97/18.99	-18.83/17.81	-19.42/18.53	-18.74/18.87	-17.37/17.54	-18.68/17.94	-18.3/18.71	-18.78/18.33	-17.9/18.3	-18.81/18.98	-18.45/17.67																							
Freq(Hz)	5.2GPa	ThetaAnt. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+																							
Gain	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°)	-16.94/18.64	-19.63/17.31	-17.76/19.34	-18.88/18.73	-19.1/18.17	-18.78/19.38	-17.44/18.84	-16.75/15.56	-15.01/14.86	-13.79/11.91	-10.94/10.8	-11.02/11.53	-11.72/11.43	-11.29/10.92	-10.72/10.82	-11.34/12.35	-14.1/15.93	-16.91/15.81	-14.68/13.1	-13.19/11.9	-10.96/10.24	-9.71/6.65	-9.98/11.29	-12.83/15.25																							
Theta(7.5°)	-6.79/7.93	-10.74/12.78	-11.57/10.92	-11.47/12.17	-15.91/17.44	-17.42/16.03	-14.83/13.06	-12.76/12.8	-13.71/14.4	-15.71/11.28	-9.94/10.45	-11.47/11.68	-18.72/18.85	-18.13/17.97	-17.12/18.15	-16.56/19.3	-18.72/19.1	-17.92/17.05	-15.63/13.61	-12.92/10.98	-9.73/8.58	-7.88/7.63	-7.47/7.38																								
Theta(15°)	-7/7.07	-8.12/9.69	-11.18/11.89	-12.16/12.99	-13.12/12.01	-10.82/9.75	-8.6/7.92	-7.78/8.82	-10.76/12.18	-12.3/10.84	-9.06/8.14	-7.98/8.35	-9.72/10.92	-12.07/12.92	-12.81/12.92	-13.42/14.54	-16.26/17.14	-16.5/16.3	-15.99/14.5	-12.3/10.84	-9.49/8.59	-7.96/8.09	-8.87/10.37	-10.92/9.22																							
Theta(22.5°)	-11.5/9.33	-9.95/10.65	-11.14/10.47	-10.03/10.29	-10.91/11.1	-10.47/9.5	-8.25/7.28	-6.77/7.27	-9.03/11.4	-11.57/9	-6.92/11.1	-6.26/7.76	-9.35/9.93	-10.84/12.5	-14.89/18.49	-17.99/19.2	-17.56/18.84	-18.86/19.89	-17.91/17.43	-10.74/9.59	-9.66/10.41	-12.22/14.68	-17.17/19.33																								
Theta(30°)	-11.36/9.75	-10.34/10.5	-9.87/9.34	-9.59/9.91	-9.67/10.21	-10.74/10.9	-9.99/9.51	-10.37/13.4	-10.37/13.4	-9.94/10.7	-6.91/5.5	-4.77/5.84	-7/7.74	-10.68/15.5	-15.69/19.29	-17.77/18.81	-19.82/17.58	-19.19/17.62	-19.17/17.11	-12.48/10.23	-9.98/10.48	-11.22/12.12	-12.69/12.18	-12.35/12.1																							
Theta(37.5°)	-14.74/16.7	-18.94/11.97	-8.86/8.64	-9.07/9.02	-8.82/9.58	-11.35/13.44	-11.85/10.5	-13.11/18.52	-19.31/11.79	-8.78/8.48	-10.46/9.63	-8.28/8.8	-8.62/8.92	-11.55/14.31	-14.99/15.61	-19.53/19.44	-17.1/18.18	-19.31/14.85	-11.65/10.64	-9.81/8.19	-7.77/8.29	-10.66/13.66	-12.08/10.64	-10.14/10.43																							
Theta(45°)	-14.95/16.59	-17.55/12.71	-8.82/7.15	-7.91/10.19	-10.49/11.12	-13.86/19.38	-13.42/9.31	-10.92/19.06	-15.38/10.79	-11.89/12.71	-17.87/13.16	-12.27/14.44	-10.96/9.24	-11.3/13.7	-12.52/12.47	-11.89/9.28	-9.35/12.16	-15.04/12.85	-9.63/7.53	-7.03/7.76	-8.78/11.5	-9.43/8.87	-10.53/11.31																								
Theta(52.5°)	-11.2/10.29	-11.13/10.81	-8.3/7.49	-9.58/10.05	-9.27/10.92	-15.56/18.06	-11.63/11.11	-6.45/10.32	-17.85/14.18	-17.86/17.56	-18.62/14.39	-10.77/9.26	-13.27/11.16	-8.8/10.15	-11.88/9.53	-10.24/14.24	-17.37/14.11	-10.51/9.08	-9.91/10.29	-9.61/9.85	-9.03/9.63	-7.67/8.01	-11.12/10.99																								
Theta(60°)	-9.6/7.75	-8.27/9.45	-7.79/7.54	-10.78/10.85	-10.51/12.71	-15.09/18.26	-17.4/13.5	-8.28/9.63	-19.03/17.53	-18.95/14.08	-12.08/11.59	-17.31/18.59	-17.51/16.95	-18.01/14.88	-10.92/10.08	-9.97/8.09	-7.81/11.69	-17.8/17.06	-12.71/10.44	-10.6/12.25	-11.78/11.75	-9.38/9.12	-7.35/7.56	-10.85/10.96																							
Theta(67.5°)	-11.93/8.57	-8.35/9.24	-10.83/11.71	-12.11/10.15	-12.39/17.37	-17.65/18.73	-19.09/16.14	-9.85/11.2	-19.16/84	-16.75/9.89	-9.62/10.65	-14.63/13.73	-16.4/17.95	-13.19/49	-9.4/9.68	-10.27/7.3	-7.98/10.28	-14.21/16.84	-13.95/11.61	-10.9/11.64	-11.83/14.73	-11.81/10.5	-8.29/8.56	-11.86/11.36																							
Theta(75°)	-11.66/10.48	-10.35/10.52	-15.04/16.88	-11.89/11.02	-14.49/19.82	-17.78/18.61	-18.57/18.47	-13.06/11.86	-17.58/18.29	-15.29/9.91	-9.08/10.36	-12.98/14.25	-16.41/18.4	-14.88/10.51	-11.62/10.42	-11.47/10.49	-8.39																														



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_4TX

Appendix D

Theta (°)	7.92/7.66	7.58/6.24	7.08/8.69	7.9/9.12	8.04/8.55	9.84/10.9	9.7/8.55	7.22/8.33	10.97/11.33	8.37/6.77	10.88/9.73	10.97/11.17	13.89/12.87	9.76/11.29	10.76/9.85	11.33/11.92	15.03/12.4	10.12/10.46	14.1/10.46	8.25/9.22	9.46/10.69	11.93/8.9	8.27/7.45	7.19/7.42	
Theta (120°)	-8.92/9.35	-8.5/7.79	-9.92/11.19	-10.35/12.12	-10.85/10.16	-9.95/10.71	-11.06/9.14	-9.07/11.24	-14.92/12.14	-12.16/10.87	-11.29/13.5	-13.89/15.39	-19.65/9.82	-10.74/15.97	-13.26/9.9	-8.29/10.9	-16.06/13.18	-9.87/11.22	-12.58/9.58	-7.9/9.39	-9.76/12.47	-15.27/11.89	-11.77/10.58	-9.59/9.98	
Theta (125°)	-11.76/13.61	-10.92/9.91	-14.12/11.76	-13.31/14.04	-17.83/12.33	-14.96/14.19	-14.95/12.33	-13.28/14.9	-14.32/14.34	-13.45/13.84	-14.09/18.94	-17.36/14.31	-16.32/18.15	-13.52/18.15	-16.77/18.89	-14.12/15.53	-16.06/14.06	-13.02/15.23	-15.56/13.74	-10.77/12.71	-13.86/19.16	-15.15/13.11	-12.34/14.32	-14.88/11.82	
Theta (135°)	-12.67/14.01	-11.37/11.61	-14.97/13.29	-14.35/19.1	-18.18/11.46	-13.4/14.5	-13.71/14.91	-13.15/16.69	-17.47/18.63	-13.79/10.47	-19.02/17.97	-16.71/18.66	-17.73/14.65	-12.94/18.32	-18.78/16.31	-17.38/19.04	-18.15/18.48	-18.25/17.36	-18.99/18.67	-14.4/14.55	-17.11/14.85	-14.53/12.47	-11.46/13.1	-13.96/12.07	
Theta (142.5°)	-19.18/15.36	-15.25/13.82	-12.1/13.3	-16.18/17.33	-18.53/16.03	-15.22/12.39	-13.33/13.65	-12.77/17.91	-17.62/17.12	-16.91/16.49	-17.12/16.38	-14.6/18.24	-18.83/18.11	-16.75/15.52	-19.23/18.57	-18.94/18.95	-17.55/17.06	-14.2/11.48	-9.68/9.66	-12.79/18.26	-19.07/13.85	-14.79/15.31	-15.41/15.49	-15.41/15.49	
Theta (150°)	-17.38/18.53	-18.05/18.82	-17.26/18.97	-15.46/17.08	-18.55/17.56	-18.35/15.3	-14.56/18.01	-17.65/17.47	-18.1/15.87	-14.58/18.8	-17.09/15.29	-16.86/17.88	-18.34/18.73	-17.17/18.91	-19.14/18.57	-16.66/18.29	-18.19/19.53	-17.39/19.93	-18.57/13.93	-19.81/19.53	-17.31/17.78	-19.84/17.44	-18.71/18.15	-18.71/18.15	
Theta (157.5°)	-18.71/17.97	-18.3/18.63	-18.51/18.28	-16.38/19.96	-18.82/18.73	-19.02/18.69	-18.11/19.06	-17.94/18.6	-18.95/18.07	-17.78/16.54	-17.49/18.23	-18.93/17.46	-18.37/17.98	-18.46/18.6	-18.72/18.39	-17.24/19.11	-18.89/18.81	-18.17/19.36	-19/19.11	-18.17/18.88	-18.73/17.89	-17.06/14.81	-16.78/17.5	-18.14/17.54	
Theta (165°)	-18.11/18.76	-17.99/17.94	-18.85/18.51	-17.86/18.35	-19.09/18.51	-18.61/17.84	-18.4/18.04	-19.35/19.09	-17.75/18.92	-18.35/18.05	-18.21/18.89	-17.61/19.02	-19.27/17.3	-18.05/18.06	-18.15/19.13	-19.18/18.44	-18.02/18.53	-18.73/17.48	-18.41/18.38	-19.2/19.71	-15.68/15.93	-17.17/17.78	-17.96/18.24	-18.39/18.82	
Theta (172.5°)	-18.72/19.4	-18.9/18.05	-18.05/18.26	-18.98/16.9	-17.05/18.24	-17.36/18.53	-18.01/17.64	-17.89/18.55	-18.25/18.06	-18.88/19.37	-17.95/18.68	-18.76/18.6	-18.77/18.32	-18.63/18.41	-18.38/18.12	-17.96/18.24	-17.61/18.23	-18.76/18.93	-17.37/14.74	-14.38/15.48	-16.02/17.55	-19.59/18.14	-17.28/17.47	-17.28/17.47	
Theta (180°)	-17.62/18.1	-17.88/18.17	-19/18.58	-18.63/18.61	-17.21/17.16	-17.69/17.57	-18.64/17.4	-16.09/16.94	-17.68/19.3	-18.1/18.16	-19.1/18.6	-18.45/19.2	-18.75/17.67	-17.9/18.89	-18.17/17.72	-17.98/17.13	-17.43/17.32	-17.43/17.38	-17.51/16.68	-15.95/15.91	-15.75/16.08	-16.08/15.42	-16.06/16.17	-16.58/18.66	
Gain	Phi(7.5°)	Phi(15°)	Phi(30°)	Phi(45°)	Phi(60°)	Phi(75°)	Phi(90°)	Phi(105°)	Phi(120°)	Phi(135°)	Phi(150°)	Phi(165°)	Phi(180°)	Phi(195°)	Phi(210°)	Phi(225°)	Phi(240°)	Phi(255°)	Phi(270°)	Phi(285°)	Phi(300°)	Phi(315°)	Phi(330°)	Phi(345°)	
Theta (0°)	-8.85/9.34	-10.93/14.03	-17.95/18.52	-18.74/17.54	-18.12/18.25	-15.83/14.12	-13.09/12.77	-12.61/12.42	-11.75/10.81	-9.92/10.06	-11.05/12.28	-11.09/9.41	-8.93/9.59	-10.27/10.48	-11.21/12.56	-14.32/17.97	-19.02/18.33	-17.39/18.88	-16.21/13.64	-12.26/11.27	-10.75/10.55	-10.04/9.81	-9.56/9.07	-8.32/8.73	
Theta (7.5°)	-9.86/9.44	-8.7/9.21	-11.59/14.8	-15.83/17.63	-18.45/18.48	-17.91/17.76	-12.01/10.17	-8.62/7.56	-7.18/5.78	-8.38/8.64	-8.56/8.92	-11.24/14.34	-16.96/18.05	-18.61/18.38	-18.97/18.79	-18.52/16.89	-15.19/13.83	-12.91/12.4	-12.69/13.01	-14.33/15.38	-15.41/14.97	-14.24/12.52	-11.28/10.16	-11.28/10.16	
Theta (15°)	-11.18/10.81	-10.76/10.54	-12.11/12.69	-14.61/16.81	-18.1/18.57	-17.16/14.74	-12.57/11.1	-9.13/8.09	-7.35/7.47	-8.13/9.14	-10.13/11.23	-11.85/12.95	-14.11/15.25	-15.49/15.62	-15.9/17.75	-17.3/18.77	-18.25/17.36	-18.28/15.87	-12.38/12.61	-12.76/12.99	-13.86/14.27	-18.77/17.62	-13.44/11.32	-13.44/11.32	
Theta (22.5°)	-8.4/9.08	-9.8/10.47	-10.64/10.39	-11.21/12.51	-15.56/18.91	-16.47/13.6	-11.92/9.63	-7.62/6.1	-5.09/5.34	-7.25/10.37	-11.3/10.37	-10.65/12.97	-17.32/17.47	-15.1/14.64	-17.61/18.78	-19.16/18.02	-17.56/18.57	-17.67/18.72	-16.68/15.82	-16.35/17.59	-17.13/14.09	-11.6/10.69	-9.84/10.22	-9.67/9.01	
Theta (30°)	-8.28/7.69	-9.15/12.17	-14.22/16.46	-16.04/12.85	-11.61/12.84	-16.12/16.73	-12.69/8.83	-7.54/8.29	-10.02/10.85	-10.65/11.62	-12.69/9.1	-7.63/9.28	-11.75/12.57	-17.9/18.61	-18.69/18.98	-17.48/18.62	-17.15/17.85	-17.62/18.05	-18.57/18.48	-17.67/15.31	-15.3/15.15	-12.79/13.07	-7.31/6.28	-6.4/4.79	
Theta (37.5°)	-10.14/10.26	-14.96/18.23	-18.34/19.21	-17.51/14.11	-16.16/12.23	-11.22/12.36	-12.16/11.91	-11.22/12.36	-12.9/12.5	-11.47/10.21	-13.78/12.24	-9.63/9.84	-19.35/18.91	-17.36/17.55	-18.45/17.2	-19.1/16.82	-19.16/16.62	-18.25/17.36	-18.47/18.19	-17.83/18.66	-11.69/9.97	-7.71/7.98	-8.24/9.2	-8.24/9.2	
Theta (45°)	-13.35/11.86	-10.1/12.19	-18.71/19.24	-18.43/14.74	-12.13/12.76	-16.05/17.55	-14.87/10.06	-9.09/13.29	-17.69/11.02	-12.86/16.22	-17.83/17.66	-11.56/10.39	-11.14/13.02	-16.5/17.58	-18.92/18.61	-19.65/18.07	-19.13/15.75	-15.25/15.83	-15.3/15.61	-15.96/18.65	-18.89/18.01	-13.78/12.87	-10.33/12.1	-12.24/11.07	
Theta (52.5°)	-16.3/12.09	-9.79/10.53	-13.53/18.96	-18.62/18.67	-14.98/19.11	-18.19/18.1	-14.63/10.79	-9.99/14.52	-18.94/11.05	-12.87/15.65	-17.59/17.92	-18.55/11.52	-13.06/17.31	-14.03/18.02	-17.81/18.36	-15.45/15.35	-18.2/18.88	-16.69/16.62	-18.06/18.67	-18.5/19.07	-18/18.15	-15.21/18.46	-13.81/15.74	-15.24/15.53	
Theta (60°)	-18.06/15.08	-12.30/10.3	-11.32/15.94	-16.05/17.93	-19.72/17.51	-18.89/18.78	-15.97/17.02	-15.88/11.17	-14.12/15.85	-19.08/18.14	-14.67/14.76	-15.41/17.86	-14.71/19.24	-14.19/15.97	-14.91/17.21	-17.43/19.12	-17.96/18.38	-17.96/18.38	-17.96/18.38	-17.96/18.38	-17.96/18.38	-17.96/18.38	-17.96/18.38	-17.96/18.38	-17.96/18.38
Theta (67.5°)	-17.55/17.57	-13.27/13.86	-13.54/13.52	-17.03/18.47	-18.53/17.69	-15.22/16.87	-18.57/18.92	-15.29/18.4	-15.78/11.79	-17.72/17.03	-18.42/18.09	-18.11/13.41	-13.76/17.89	-19.15/18.96	-17.55/19.22	-14.75/12.36	-13.36/14.58	-15.75/16.15	-18.52/18.25	-18.27/18.21	-18.39/17.9	-18.59/18.58	-18.91/18.22	-16.53/17.98	
Theta (75°)	-18.55/18.01	-18.14/19.11	-14.25/13.98	-17.46/18.62	-18.95/18.15	-18.35/17.54	-18.84/18.58	-19.14/17.68	-18.09/13.06	-18.92/18.68	-17.69/19.21	-18.48/11.19	-15.33/18.61	-17.57/18.49	-18.4/18.14	-17.71/18.38	-13.27/15.11	-17.1/16.66	-16.58/17.72	-17.19/17.92	-17.37/18.39	-18.11/18.47	-18.73/16.42	-18.73/16.42	
Theta (82.5°)	-16.73/17.84	-17.57/18.02	-16.84/17.76	-17.18/18.09	-18.16/18.38	-17.32/17.54	-17.82/19.34	-18.67/18.1	-18.47/17.77	-17.7/18.83	-17.75/19.13	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	-18.11/12.35	
Theta (90°)	-15.44/18.9	-17.97/18.25	-19/17.97	-17.81/17.91	-17.93/19.76	-17.54/18.82	-18.83/17.91	-17.5/18.53	-17.83/18.06	-18.29/19.13	-17.53/17.78	-18.35/19.27	-18.95/17.53	-18.44/19.01	-17.94/19.33	-17.5/16.38	-14.57/15.12	-19.14/18.51	-18.53/18.58	-15.99/17.22	-15.45/17.65	-19.02/18.57	-18.79/19.51	-17.68/15.57	
Theta (97.5°)	-18.91/18.38	-17.67/18.47	-19.19/18.86	-17.94/18.51	-18.29/19.1	-18.83/18.59	-18.93/17.11	-18.59/19.66	-18.46/18.19	-18.92/19.1	-17.7/18.34	-17.9/17.94	-18.34/19.99	-18.5/19.17	-19.27/18.58	-17.39/17.9	-15.61/18.05	-18.89/18.06	-17.23/19.35	-17.63/17.5	-17.63/19.45	-17.91/18.24	-18.72/18.26	-17.84/17.5	
Theta (105°)	-19.19/17.9	-17.52/18.18	-18.28/18.3	-18.43/18.64	-18.86/18.94	-19.12/17.98	-18.58/19.11	-18.09/19.69	-17.37/18.07	-18.66/18.57	-18.13/18.4	-18.65/18.54	-18.84/19.24	-18.99/18.62	-17.17/21.21	-16.55/17.98	-15.81/18.63	-18.21/17.88	-18.11/18.63	-18.11/18.63	-18.11/18.63	-18.11/18.63	-18.11/18.63	-18.11/18.63	
Theta (112.5°)	-18.98/18.1	-17.82/18.73	-18.98/18.31	-18.83/17.97	-18.03/18.62	-17.67/17.95	-18.5/18.8	-18.19/17.19	-17.96/17.78	-17.48/17.32	-18.28/19.27	-18.12/19.19	-18.45/17.51	-19.25/18.64	-18.33/18.77	-18.82/17.74	-17.31/18.9	-17.65/19.71	-17.74/18.2	-18.98/18.31	-19.18/19.01	-18.05/19.43	-18.24/19.06	-17.58/18.58	
Theta (120°)	-18.76/16.9	-17.71/18.14	-18.89/19.15	-19.08/18.55	-19.22/18.38	-18.24/18.47	-16.85/16.84	-18.74/19.97	-17.87/14.44	-19.26/18.15	-17.68/16.05	-18.66/18.86	-19.01/16.02	-18.09/19.01	-17.61/18.62	-18.88/19.13	-18.32/17.6	-17.43/18.48	-18.23/17.52	-18.31/18.47	-18.76/18.03	-18.68/17.93	-19.57/18.54	-17.52/17.7	
Theta (127.5°)	-17.7/17.89	-18.7/17.46	-17.87/17.18	-17.92/17.98	-17.84/18.19	-17.58/17.14	-17.38/18.88	-19.03/18.7	-19.11/18.28	-17.65/17.6	-18.62/18.73	-18.27/19.96	-18.71/16.23	-17.49/17.31	-17.97/18.88	-18.64/18.67	-17.97/18.87	-18.57/18.68	-18.11/18.18	-18.51/18.44	-18.18/18.32	-18.41/18.43	-19.06/19.29	-18.23/19.1	
Theta (135°)	-18.12/19.31	-17.55/19.06	-19.16/17.68	-18.97/17.85	-19.01/18.28	-18.28/18.93	-17.96/18.45	-18.34/18.95	-19.11/18.19	-1															



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_4TX

Appendix D

Theta (°)	8-18/6.98	6-8/7.61	-9.4/12.47	-16.76/19.31	-17.76/18.58	-19.85/17.55	-16.22/17.35	-19.14/16.28	-13.64/11.24	-10.42/10.38	-11.61/13.3	-17.77/18.18	-17.69/18.35	-17.54/15.68	-14.04/13.57	-14.67/16.35	-18.98/18.84	-17.49/15.21	-14.38/14.16	-14.16/14.82	-14.62/16.08	-17.79/18.19	-16.9/14.53	-11.85/9.9																							
Theta (22.5°)	-8.07/-6.82	-6.12/-7.27	-9.85/-12.82	-13.65/-14.84	-17.44/-18.06	-18.82/-14.76	-11.05/-9.37	-10.99/-15.86	-17.97/-17.37	-12.84/-10.84	-9.84/-10.16	-13.43/-14.73	-19.23/-17.82	-16.01/-19.7	-11.11/-13.7	-18.52/-17.71	-17.31/17.98	-16.51/15.15	-14.12/-14.57	-14.8/15.32	-17.21/19.53	-18.69/19.2	-14.29/11.56	-10.41/-8.76																							
Theta (30°)	-12.69/-10.67	-9.78/-11.12	-14.8/-15.57	-18.48/-15.12	-17.51/-17.32	-18.74/-11.36	-7.04/-6.58	-9.56/-18	-16.21/13.7	-10.32/-9.78	-8.28/-8.22	-9.77/-13.54	-18.4/-19.2	-15.83/-11.6	-11.27/-16.44	-18.92/-16.07	-16.66/16.43	-14.61/-16.61	-13.85/16.36	-13/15.57	-11.71/11.77	-11.57/11.25	-11.58/12.06	-13.02/13.5																							
Theta (37.5°)	-18.31/-17.75	-18.86/15.65	-16.23/15.66	-16.97/18.25	-16.9/16.59	-18.08/-12.84	-7.77/16.32	-9.57/19.18	-14.64/-9.72	-9.22/9.77	-8.16/18.6	-7.38/-11.91	-18.61/15.86	-10.39/-10.9	-15/16.91	-17.33/16.83	-18.42/-17.31	-18.32/17.31	-19.33/18.15	-13.56/11.36	-11.63/12.38	-13.04/13.59	-13.67/14.66	-18.83/17.32																							
Theta (45°)	-10.63/-17.08	-18.74/19.16	-18.28/18.58	-17.73/18.87	-18.14/17.62	-18.77/14.56	-10.33/10.16	-14.58/17.9	-10.42/6.86	-7.78/9.94	-8.93/-6.85	-6.92/-11.24	-18.07/17.55	-9.4/-9.45	-13.02/13.96	-16.15/18.9	-17.53/19.18	-17.71/18.94	-18.51/19.48	-18.37/18.48	-18.88/18.22	-18.53/17.86	-17.79/13.26	-16.45/12.68																							
Theta (52.5°)	-11.26/14.94	-16.63/18.93	-18.48/15.11	-14.23/13.87	-14.92/18.76	-17.94/18.28	-17.65/15.94	-18.75/16.72	7.34/4.99	-6.38/-11.19	-9.68/17.41	-8.28/16.73	-18.02/11.85	-13.42/13.58	-16.45/14.41	-11.47/13.98	-17.29/19.29	-18.02/17.86	-17.71/19.14	-18.63/18.93	-19.16/14.85	-14.46/17.96	-18.49/17.9	-19.06/17.75																							
Theta (60°)	-17.08/14.58	-18/18.76	-18/18.97	-13.05/13.57	-13.3/14.11	-18.14/17.82	-18.42/18.79	-17.83/14.66	-9.28/5.14	-6.74/11.72	-13.48/13.53	-17.58/17.81	-12.42/9.81	-13.5/18.24	-17.73/18.61	-12.44/14.94	-16.25/18.98	-18.81/19.05	-17.78/18.89	-18.78/17.96	-17.46/14.96	-15.97/14.07	-18.08/19.4	-17.72/19.27																							
Theta (67.5°)	-17.93/18.41	-17.35/18.87	-18.1/16.71	-13.5/14.4	-12.21/13.28	-16.61/18.06	-17.88/18.32	-18.96/13.73	-13.4/9.9	-10.45/16.73	-16.17/14.73	-18.09/14.76	-9.25/10.75	-11.45/18.32	-17.83/18.78	-14.24/17.42	-14.5/18.53	-18.29/17.82	-18.71/17.58	-17.76/17.82	-16.82/16.37	-16.8/17.35	-19.04/17.82	-17.85/18.54																							
Theta (75°)	-19.23/18.9	-18.99/17.96	-16.69/17.39	-15.82/12.85	-12.65/14.27	-18.31/18.12	-17.54/17.53	-17.57/15.05	-14.3/12.9	-13.06/19.14	-18.78/16.58	-19.25/13.66	-18.73/10.95	-13.83/18.78	-17.83/18.52	-18.22/17.32	-14.68/17.3	-19/18.48	-16.89/18.31	-19.21/17.49	-17.14/16.91	-14.46/17.96	-18.49/17.9	-19.06/17.75																							
Theta (82.5°)	-18.65/18.43	-18.14/18.14	-18.15/16.35	-14.18/12.65	-13.65/15.53	-18.78/18.83	-18.81/18.22	-18.41/18.29	-18.88/17.58	-16.27/17.56	-18.21/18.66	-19.42/11.39	-15.19/12.77	-14.09/13.26	-19.03/17.57	-19.25/18.01	-13.96/16.91	-18.93/18.22	-14.72/17.53	-19.04/18.29	-18.8/18.5	-17.66/18.42	-18.25/18.6	-18.46/19.23																							
Theta (90°)	-18.5/17.28	-18.77/17.89	-19.04/18.57	-16.5/13.66	-14.16/15.88	-17.61/19.56	-17.42/18.98	-17.92/19.27	-18.17/17.18	-17.16/17.76	-18.45/18.9	-18.28/14.65	-16.62/16.67	-17.07/14.19	-16.91/18.01	-18.64/18.32	-16.27/18.49	-17.87/15.14	-13.32/18.71	-19.2/18.19	-18.8/19.91	-18.29/17.35	-18.29/17.9	-17.18/18.01																							
Theta (97.5°)	-17.63/19.24	-19.03/17.55	-18.1/19.12	-16.89/18.95	-17.8/19.14	-18.51/19.02	-18.72/19.06	-19.07/17.76	-19.37/18.5	-17.92/18.7	-18.63/19.14	-18.72/18.6	-14.71/17.31	-19.18/17.26	-18.7/18.96	-19.41/17.45	-18.5/18.56	-16.71/17.52	-16.31/19.22	-18.2/17.77	-17.97/18.2	-16.7/19.93	-18.16/18.38	-18.56/18.75																							
Theta (105°)	-18.97/18.11	-19.02/18.52	-18.23/18.98	-18.78/17.61	-17.29/18.03	-18.01/18.63	-18.3/18.3	-18.58/18.28	-18.55/19.29	-18.73/18.4	-18.91/17.91	-17.68/19.14	-16.58/17.75	-16.88/17.8	-18.65/18.47	-18.38/19.11	-18.85/19.03	-17.97/17.82	-19.11/18.81	-17.68/19.18	-18.16/17.64	-18.15/17.7	-17.66/17.97	-18.52/19.05																							
Theta (112.5°)	-19.03/18.2	-18.58/19.16	-18.79/18.05	-17.89/15.69	-17.82/16.67	-18.35/18.41	-18.17/18.07	-18.41/17.18	-17.87/18.93	-18.86/19.35	-18.33/17.77	-17.45/18.54	-16.33/17.77	-17.45/18.86	-18.19/18.64	-18.91/18.99	-18.99/17.99	-18.65/18.44	-19.27/18.88	-15.38/17.69	-18.89/18.97	-18.48/18.29	-19.36/18.46	-18.6/18.71																							
Theta (120°)	-18.22/18.13	-18.41/19	-18.16/19.01	-17.82/16.87	-17.89/16.83	-18.44/17.69	-18.31/18.55	-18.61/19.92	-18.26/17.97	-17.9/17.88	-17.8/19.59	-17.53/17.75	-18.89/18.08	-19.55/19.24	-19.76/17.22	-18.38/12.99	-14.27/19.24	-17.71/18.5	-18.92/19.17	-19.12/19.27	-17.47/18.81	-17.47/18.81	-18.17/18.67																								
Theta (127.5°)	-19.08/18.04	-18.47/17.55	-17.96/17.89	-19.32/18.43	-17.61/19.4	-18.95/18.81	-17.62/19.15	-18.86/19.12	-17.05/18.89	-19.25/18.28	-19.12/18.97	-18.73/17.91	-18.5/18.82	-19.22/17.81	-17.54/18.3	-18.59/17.58	-18.5/18.23	-18.95/15.56	-16.98/18.6	-18.66/18.5	-17.38/17.33	-18.02/17.85	-18.99/19	-18.31/18.37																							
Theta (135°)	-17.9/17.52	-18.06/18.69	-17.59/18.25	-17.85/18.04	-18.98/19.01	-18.77/18.32	-18.51/18.38	-17.57/17.72	-18.96/18.65	-19.43/17.83	-18.68/18.73	-18.78/19.12	-19.11/9.99	-15.77/18.85	-18.01/18.4	-18.73/18.67	-18.01/18.4	-19.07/18.71	-18.24/16.55	-18.28/17.25	-18.62/16.37	-13.71/18.11	-18.18/18.7	-18.18/18.7																							
Theta (142.5°)	-17.72/18.69	-18.06/18.66	-18.84/19.01	-15.47/15.23	-17.4/18.39	-18.36/17.63	-18.03/19.38	-18.95/18.56	-12.72/17.96	-12.71/17.52	-18.15/18.96	-18.16/16.16	-18.86/19.18	-17.74/18.1	-18.98/18.76	-17.14/18.1	-12.41/16.02	-11.74/10.14	-11.94/13.45	-14.06/14.73	-18.66/14.4	-13.11/15.43	-14.15/15.11	-13.93/15.9																							
Theta (150°)	-17.54/19.25	-15.02/17.4	-14.38/14.51	-18.38/18.06	-18.35/18.03	-18.45/16.46	-16.56/19.15	-18.62/18.71	-18.26/18.23	-18.2/19.01	-17.38/18.74	-18.78/18.72	-15.68/18.74	-17.38/19.04	-18.05/18.03	-19.06/17.35	-18.73/19.2	-16.17/15.38	-18.23/17.7	-18.34/18.05	-18.56/16.36	-18.79/19.07	-18.33/19.45	-17.43/17.18																							
Theta (157.5°)	-19.15/17.6	-18.36/18.13	-18.55/16.88	-17.18/18.2	-19.31/18.84	-17.96/19.41	-17.51/19.42	-19.06/18.99	-17.94/17.44	-18.76/18.2	-17.41/17.83	-18.72/16.31	-15.29/19.37	-18.14/19.28	-18.88/18.18	-17.92/17.88	-18.95/18.7	-17.66/18.7	-18.17/16.63	-17.85/18.34	-18.36/15.59	-16.48/17.12	-17.58/18.85	-18.71/18.19																							
Theta (165°)	-16.14/16.87	-17.57/18.3	-18.07/17.07	-17.91/18.59	-19.07/18.77	-18.78/18.33	-18.01/19.69	-18.33/18.1	-19.23/18.41	-18.9/16.72	-13.35/14.58	-17.38/18.56	-19.12/18.7	-17.92/17.88	-18.99/18.54	-17.73/17.88	-17.28/19.09	-18.08/18.95	-18.43/17.64	-18.09/18.61	-14.2/13.42	-14.22/17.7	-17.99/16.47	-18.32/19.26																							
Theta (172.5°)	-18.19/19.43	-18.6/18.07	-18.04/17.45	-18.55/17.96	-18.09/19.2	-19.12/17.9	-18.94/18.25	-17.88/19.07	-18.29/17.64	-18.77/18.42	-19/18.66	-18.47/15.29	-14.34/16.65	-18.72/17.96	-18.14/18.21	-17.67/17.86	-18.41/19.41	-17.67/17.63	-18.46/18.08	-18.95/19.12	-18.68/17.96	-17.61/17.94	-17.53/17.37	-18.51/16.91																							
Theta (180°)	-19.34/17.6	-18.99/18.23	-18.57/17.33	-18.54/16.31	-15.55/16.26	-17.58/18.08	-19.12/18.13	-18.05/17.87	-18.82/18.56	-18.36/19.03	-18.56/17.8	-18.57/17.66	-18.78/17.52	-17.59/19.19	-18.4/17.71	-18.22/19.01	-18.4/17.62	-18.81/19.68	-18.38/17.86	-18.87/17.96	-18.29/17.31	-16.24/16.06	-17.61/17.66	-18.29/17.44																							
Gain	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°)	-15.64/15.69	-15.82/15.45	-14.88/14.27	-13.59/13.43	-13.4/13.11	-13.29/13.28	-12.9/13.28	-13.65/13.13	-16.33/16.89	-16.74/16.59	-17.89/18.52	-16.65/18.1	-17.17/17.11	-18.9/19.1	-16.43/15.13	-11.14/13.63	-13.46/12.39	-11.54/11.2	-11.32/11.17	-11.75/12.03	-11.99/12.78	-13.38/13.64	-13.92/13.74	-13.64/13.47																							
Theta (7.5°)	-18.34/17.19	-16.85/15.17	-13.24/11.92	-10.4/9.84	-9.59/9.75	-9.78/10.49	-10.13/10.31	-12.16/13.09	-13.74/13.45	-13.02/14.13	-13.08/12.71	-11.61/13.32	-11.05/11.04	-11.09/11.11	-11.14/11.11	-11.27/11.04	-10.64/10.77	-10.22/11.26	-12.16/12.84	-13.16/14.52	-15.78/16.68	-17.81/17.57	-17.47/18.98																								
Theta (15°)	-6.38/6.4	-6.45/6.61	-6.42/5.98	-5.74/5.52	-5.39/5.32	-5.44/5.64	-6.22/7.23	-8.38/9.76	-10.66/10.84	-10.19/9.22	-7.97/7	-6.15/5.52	-5.56/6.38	-6.93/7.12	-6.71/6.27	-5.85/5.59	-5.52/5.91	-6.82/8.09	-9.36/10.56	-11.17/11.21	-10.78/10.63	-10.24/9.61	-8.82/7.84	-7.34/7.17																							
Theta (22.5°)	-2.39/2.1	-2.75/3.36	-3.86/3.97	-3.51/2.88	-2.7/2.78	-3.05/3.69	-4.75/5.77	-6.96/7.34	-7.2/7.08	-7.2/6.67	-5.63/4.42	-3.83/3.87	-4.26/3.46	-4.78/5.56	-5.97/5.37	-4.3/3.46	-3.21/3.56	-4.76/5.66	-6.14/5.99	-8.95/8.53	-8.95/8.27	-7.33/6.28	-5.05/3.69	-2.94/2.53																							
Theta (30°)	-1.13/1.65	-2.15/2.48	-2.99/2.5	-1.9/1.49	-1.71/2.59	-3.18/4.05	-4.71/4.42	-3.57/3.13	-2.88/2.66	-2.88/3.36	-3.08/2.67	-2.33/1.88	-1.42/1.53	-2.35/3.9	-5.13/4.8	-2.82/0.57	0.50/6	0.27/0.32	-1.02/1.72	-2.28/2.4	-2.34/2.25	-2.66/2.92	-2.7/2.08	-1.35/1.1																							
Theta (37.5°)																																															



Radiated Composite Gain Data_Radio 3_5GHz UNII 1~3_4TX

Appendix D

Theta	Phi	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(7.5)	Phi(7.5)	-11.31/-5.16	-2.46/0.34	10.37	2.32/1.47	-0.52/-2.69	-5.66/-7.82	-8.48/-6.22	-4.37/-1.77	-0.62/-0.81	-0.92/0.36	-0.11/-1.1	-0.94/-0.36	-0.66/-1.25	-2.86/-1.61	0.54/2.41	3.12/2.65	0.98/0.93	0.91/67	2.31/2.32	1.05/0.35	-0.13/-0.11	-0.71/-0.16	-0.67/-5.03	-6.16/-8.96	Theta(7.5)	Phi(7.5)	-8.58/-7.74	-3.99/0.05	1.10/24	2.04/0.78	-0.27/-2.5	-7.29/-9.59	-11.36/-7.74	-3.36/-1.45	-0.96/-3.46	-3.17/-1.07	-1.61/-1.92	-1.01/-1.75	-0.94/-0.36	-0.66/-1.25	-2.86/-1.61	0.54/2.41	3.12/2.65	0.98/0.93	0.91/67	2.31/2.32	1.05/0.35	-0.13/-0.11	-0.71/-0.16	-0.67/-5.03	-6.16/-8.96	Theta(7.5)	Phi(7.5)	-6.13/-15.84	-6.52/-2.68	-0.92/-1.15	0.51/-1.79	-1.56/-5.01	-10.92/-10.66	-10.46/-7.08	-3.08/-1.55	-1.92/-5.09	-4.57/-1.97	-4.54/-3.6	-1.73/-1.74	-3.87/-3.13	-2.15/-4.26	-1.45/0.86	0.24/0.52	0.82/0.03	0.02/2.29	2.41/54	0.45/-1.09	-1.6/-2.55	-1.70/-3.6	-3.04/-6.32	-7.75/-1.7	Theta(7.5)	Phi(7.5)	-6.83/-11.27	-8.37/-7.24	-5.31/-4.1	-0.25/-3.16	-3.71/-9.79	-13.33/-9.8	-8.89/-9.41	-4.79/-3.24	-1.88/-5.7	-6.45/-3.75	-5.97/-6	-2.29/-4.82	-3.02/-3.97	-3.09/-3.76	-1.48/-0.38	-0.96/-1.24	-1.16/-0.75	-1.27/0.39	0.80/45	-1.14/-3.14	-3.52/-3.49	-2.30/-0.67	-2.49/-5.07	-7.44/-4.44	Theta(7.5)	Phi(7.5)	-9.45/-8.55	-7.2/-12.17	-7.96/-6.44	-1.46/-3.66	-4.61/-11.35	-15.29/-8.29	-7.9/-8.25	-6.03/-3.31	-3.49/-7.9	-8.47/-5.15	-6.46/-7.73	-4.36/-3.09	-5.4/-5.57	-2.81/-6.4	-1.99/-3.02	-0.77/-1.98	-3.69/-2.53	-2.01/-1.21	-2.17/-1.92	-3.82/-6.1	-7.94/-5.97	-4.04/-2.07	-4.79/-6.93	-7.89/-0.7	Theta(7.5)	Phi(7.5)	-10.71/-11.1	-10.66/-11.85	-9.41/-9.67	-3.14/-5.28	-7.02/-13.75	-16.01/-10.16	-10.39/-10.58	-10.27/-5.29	-4.65/-8.97	-9.52/-10.9	-6.67/-7.78	-5.13/-9.41	-8.51/-10.3	-5.55/-4.07	-3.25/-2.71	-1.05/-2.01	-3.28/-4.14	-2.52/-3.06	-4.18/-5.16	-6.93/-8.21	-10.99/-11.77	-8.86/-5.98	-7.37/-18.33	-15/-7.89	Theta(7.5)	Phi(7.5)	-16.66/-17.72	-11.48/-10.25	-9.59/-10.27	-12.96/-15.95	-15.05/-16.15	-16.04/-12.12	-12.25/-10.91	-12.62/-6.82	-8.13/-13.58	-9.73/-9.16	-8.44/-7.9	-6.56/-8.24	-4.93/-8.5	-8.86/-5.14	-4.14/-2.96	-1.75/-3.4	-4.33/-3.93	-3.27/-4.33	-3.78/-6.92	-8.42/-9.42	-10.66/-10.35	-11.36/-12.15	-10.11/-18.93	-18.99/-18.6	Theta(7.5)	Phi(7.5)	-12.16/-13.37	-18.57/-16.36	-11.66/-6.66	-9.01/-10.89	-13.97/-19.16	-18.4/-18.6	-18.49/-16.88	-13.92/-13.39	-15.05/-14.9	-10.89/-12.77	-9.72/-9.7	-8.68/-7	-7.48/-9.02	-7.8/-7.32	-5.92/-3.82	-3.5/-3.6	-4.55/-6.7	-4.43/-5.57	-3.03/-4.79	-5.68/-12.52	-18.64/-11.2	-11.6/-18.21	-18.69/-12.22	-11.43/-14.89	Theta(7.5)	Phi(7.5)	-12.34/-14.49	-18.27/-18.13	-17.97/-10.48	-8.34/-11.25	-14.3/-15.03	-13.96/-18.8	-14.66/-15.13	-18.34/-14.5	-14.4/-11.79	-9.38/-11.24	-8.74/-9.88	-6.5/-10	-6.4/-7.98	-9.9/-5.33	-1.84/-6.72	-5.08/-10.22	-8.86/-5.54	-5.01/-7.84	-8.69/-18.76	-15.52/-13.43	-14.93/-11.44	-10.88/-19.12	-14.64/-15.6	Theta(7.5)	Phi(7.5)	-18.66/-17.71	-14.51/-13.79	-17.17/-18.03	-18.98/-18.83	-17.31/-18.04	-18.47/-19.2	-15.76/-15.24	-18.17/-17.09	-17.95/-16.61	-14.09/-11.25	-8.56/-6.3	-7.73/-10.5	-9.02/-8.74	-8.82/-9.77	-6.6/-3.14	-2.95/-6.3	-10.41/-8.89	-7.28/-5.96	-6.96/-10.18	-11.04/-18.48	-11.97/-12.39	-11.99/-11.33	-15.12/-11.98	-13.41/-17.37	Theta(7.5)	Phi(7.5)	-14.7/-17.83	-18.84/-17.91	-14.64/-10.89	-8.82/-8.45	-12.04/-18.37	-18.72/-17.25	-18.88/-18.1	-17.89/-18.28	-18.12/-12.57	-11.88/-14.85	-9.74/-7.66	-10.21/-8.78	-7.35/-7.03	-7.96/-8.01	-6.1/-3.97	-4.16/-8.12	-11.19/-11	-9.12/-6.53	-6.86/-6.9	-8.09/-18.69	-17.39/-11.44	-8.53/-12.7	-18.83/-16.02	-16.77/-18.75	Theta(7.5)	Phi(7.5)	-16.89/-18.13	-18.75/-17.9	-19.64/-16.63	-17.87/-18.17	-19.3/-18.43	-17.66/-14.73	-15.95/-18.07	-17.03/-13.98	-13.06/-12.89	-10.43/-12.89	-12.97/-10.77	-10.55/-10.38	-13.44/-14.92	-10.63/-9.25	-10.41/-6.17	-11.83/-14.2	-10.75/-8.27	-7.01/-8.2	-14.05/-17.7	-17.72/-17.31	-18.84/-18.44	-18.49/-18.48	-17.37/-17.48	Theta(7.5)	Phi(7.5)	-15.29/-18.74	-17.85/-15.47	-12.89/-11.78	-12.48/-14.68	-17.55/-17.93	-18.35/-17.83	-15.73/-15.25	-15.59/-15.43	-15.16/-14.2	-13.27/-12.4	-13/-13.27	-11.38/-10.14	-10.82/-11.22	-12.11/-13.44	-12.6/-10.35	-10.33/-10.68	-10.89/-9.25	-7.9/-8.21	-11.22/-19.62	-18.43/-19.05	-16.3/-15.55	-13.67/-12.83	-14.43/-15.59	-14.07/-14.64	Theta(7.5)	Phi(7.5)	-17.21/-17.24	-17.58/-18.22	-17.92/-18.91	-17.67/-18.49	-14.91/-12.92	-12.61/-14.03	-12.97/-11.7	-10.68/-10.06	-10.94/-12.69	-14.58/-14.4	-12.91/-11.36	-11.45/-13.42	-13.6/-11.53	-10.29/-10.1	-8.73/-10.67	-8.94/-9.95	-10.61/-12.97	-12.13/-10.18	-9.84/-11.34	-14.14/-16.56	-17.48/-14.14	-19.01/-17.39	-15.34/-15.44	-15.34/-15.13	Theta(7.5)	Phi(7.5)	-14.21/-14.36	-15.66/-16.67	-19.18/-18.7	-18.35/-18.25	-18.53/-17.98	-18.45/-17.52	-18.99/-16.58	-16.72/-17.73	-16.84/-15.88	-15.29/-13.14	-11.51/-9.76	-8.85/-8.93	-9.64/-9.22	-9.6/-10.3	-10.04/-8.6	-7.68/-6.73	-5.97/-6.92	-9.11/-12.27	-15.9/-18.41	-18.24/-17.24	-17.44/-18.49	-17.86/-16.71	-15.97/-15.92	Theta(7.5)	Phi(7.5)	-18.21/-15.59	-13.91/-12.28	-11.63/-9.92	-9.29/-9.94	-10.56/-11.98	-14.41/-15.52	-15.95/-15.73	-17.32/-18.78	-18.1/-18.1	-18.03/-17.68	-17.14/-15.99	-14.85/-14.11	-12.46/-10.45	-9.66/-10.15	-8.74/-8.94	-8.75/-9.34	-9.67/-10.44	-11.78/-14.6	-17.02/-18.09	-18.58/-18.74	-18.16/-18.93	-18.75/-17.41	-18.64/-18.53	-18.73/-15.07	Theta(7.5)	Phi(7.5)	5.3G/Pol	PhiAnt.4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Theta(7.5)	Phi(7.5)	-1.89/-2.66	-4.11/-6.7	-9.86/-12.26	-16.16/-17.88	-15.68/-13.33	-10.57/-9.18	-6.28/-4.97	-3.9/-3.05	-2.2/-1.71	-1.43/-1.46	-1.75/-2.18	-2.61/-2.99	-3.45/-4.2	-4.91/-6.69	-10.08/-13.98	-18.77/-17.46	-19.08/-12.96	-8.78/-8.69	-5.6/-4.31	-3.13/-2.67	-2.31/-6.2	-1.13/-0.73	-1.11/-1.88	-2.21/-2.1	Theta(7.5)	Phi(7.5)	-3.37/-3.78	-4.46/-6.14	-8.69/-12.06	-14.87/-17.76	-18.31/-17.16	-12.84/-9.61	-6.93/-4.86	-3.38/-2.29	-1.13/-0.75	-0.46/-0.36	-0.44/-0.97	-1.61/-2.44	-3.67/-3.87	-4.58/-6.8	-10.91/-12.98	-14.15/-15.59	-13.67/-11.18	-8.31/-6.54	-5.18/-3.79	-2.85/-2.73	-2.5/-1.9	-1.77/-1.87	-2.11/-2.26	-2.52/-2.83	Theta(7.5)	Phi(7.5)	-4.17/-5.02	-5.66/-6.74	-7.57/-11.19	-13.26/-14.71	-15.11/-15.04	-12.66/-9.34	-6.38/-4.36	-2.97/-1.71	-0.69/-0.38	-0.18/0	-0.22/-0.67	-1.37/-2.59	-4.01/-4.62	-5.44/-6.9	-9.31/-13.12	-17.01/-18.93	-17.37/-13.95	-10.63/-9.99	-6.69/-5.33	-4.22/-3.96	-3.47/-3.01	-2.97/-3.2	-3.69/-3.65	-3.09/-4.1	Theta(7.5)	Phi(7.5)	-5.96/-5.47	-5.26/-6.11	-7.83/-10.15	-11.18/-13.9	-10.94/-11.93	-11.24/-10.25	-7.71/-5.54	-3.12/-1.22	-0.6/-0.32	-0.39/-0.63	-1.07/-1.57	-2.91/-4.97	-6.2/-6.35	-6.45/-8	-10.93/-15.76	-17.97/-19.21	-18.54/-13.57	-10.61/-7.44	-6.36/-5.97	-5.46/-4.53	-4.46/-3.59	-3.26/-3.13	-3.15/-3.91	-4.37/-4.6	Theta(7.5)	Phi(7.5)	-4.29/-3.65	-4.72/-6.64	-15.09/-17.1	-12.97/-11.01	-10.97/-11.75	-11.09/-8.67	-8.83/-8.25	-4.65/-2.12	-1.37/-1.64	-2.46/-3.7	-4.91/-5.18	-5.88/-6.27	-6.03/-6.8	-6.64/-8.75	-11.94/-12.49	-18.52/-17.55	-18.42/-12.49	-4.23/-3.69	-3.34/-3.64	-4.22/-4.01	-4.84/-5.22	-4.57/-4.36	-4.91/-4.64	Theta(7.5)	Phi(7.5)	-4.02/-4.89	-6.96/-9.65	-12.12/-18.84	-18.5/-14	-10.22/-7.98	-7.48/-6.12	-5.29/-6.23	-4.69/-2.07	-1.95/-3.2	-5.8/-9.41	-9.68/-8.59	-7.34/-6.72	-7.22/-8.83	-9.51/-11.71	-17.46/-18.42	-18.89/-13.56	-12.16/-13.03	-7.85/-6	-4.87/-4.36	-4.81/-5.59	-5.19/-3.23	-4.01/-1.9	-4.63/-4.57	-6.02/-4.4	Theta(7.5)	Phi(7.5)	-4.17/-7.39	-6.45/-8.49	-13.14/-9.5	-18.99/-17.81	-13.45/-9.2	-6.61/-5.63	-5.62/-5.31	-4.86/-3.36	-3.35/-4.1	-8.07/-11.37	-9.85/-8.62	-7.48/-6.4	-7.41/-7.49	-8.88/-10.09	-11.64/-17.23	-18.36/-14.76	-10.28/-11.82	-10.68/-8.47	-7.77/-7.21	-6.69/-6.63	-8.48/-7.81	-9.18/-9.21	-5.57/-4.34	-4.55/-3.92	Theta(7.5)	Phi(7.5)	-4.26/-5.59	-5.27/-8.74	-18.44/-18.52	-18.15/-10.7	-16.47/-12.93	-9.26/-5.42	-4.26/-5.35	-4.29/-4.32	-5.49/-8.42	-9.46/-9.72	-7.4/-6.21	-6.56/-6.21	-6.74/-9.65	-11.73/-9.65	-11.64/-18.86	-18.36/-12.11	-12.26/-11.97	-16.33/-12.42	-7.77/-7.11	-11.24/-14.55	-11.77/-8.5	-7.2/-6.61	-6.63/-6.09	-5.08/-4.6	Theta(7.5)	Phi(7.5)	-2.98/-3.76	-5.37/-1.5	-10.93/-14.2	-17.98/-11.24	-11.27/-4.83	-8.62/-4.13	-5.15/-6.01	-5.41/-6.65	-7.52/-10.03	-10.77/-12.4	-9.64/-8.8	-7.54/-8.47	-7.56/-7.57	-7.32/-11.05	-13.87/-16.78	-18.53/-11.22	-14.12/-17.1	-12.03/-14.63	-11.12/-8.69	-8.05/-9.93	-13.26/-18.15	-14.35/-8.83	-5.2/-4.59	-3.77/-6.26	Theta(7.5)	Phi(7.5)	-3.25/-4.92	-6.18/-7	-10.45/-10.12	-18.05/-12.1	-11.94/-4.85	-6.49/-4.58	-6.34/-6.82	-5.84/-8.05	-10.17/-13.46	-13.04/-15.1	-11.41/-9.57	-10.28/-8.66	-9.86/-14.3	-13.29/-17.56	-16.94/-12.29	-13.81/-15.21	-12.32/-14.82	-8.04/-8.07	-12.15/-15.41	-17.5/-16.87	-13.28/-7.5	-5.5/-7.9	-4.66/-2.74	Theta(7.5)	Phi(7.5)	-3.93/-6.65	-6.18/-7.62	-13.32/-10.75	-18.15/-12.84	-17.07/-9.54	-6.48/-6.59	-5.79/-9.11	-8.75/-11.43	-15.12/-13.35	-19.89/-15.72	-12.72/-14.57	-11.95/-11.67	-9.65/-13.85	-12.82/-15.38	-16.28/-13.33	-14.72/-18.18	-13.16/-14.85	-9.36/-9.76	-10.57/-14.42	-17.12/-17.84	-18.83/-8.98	-6.17/-7.37	-6.39/-5.75	Theta(7.5)	Phi(7.5)	-6.95/-9.59	-6.99/-11.78	-18.1/-14.43	-19.28/-16.91	-13.98/-7.72	-8.47/-7.8	-10.54/-11.98	-13.95/-18.62	-17.9/-17.94	-14.05/-12.52	-10.57/-11.84	-12.07/-12.6	-13.86/-11.95	-15.07/-18.98	-17.96/-18.72	-17.29/-17.61	-16.48/-18.14	-15.5/-14.95	-10.12/-11.01	-9.04/-13.66	-12.9/-18.04	-15.64/-10.7	-7.44/-9.95	-7.97/-5.54	Theta(7.5)	Phi(7.5)	-6.47/-8.77	-6.98/-13.69	-12.99/-18.04	-17.21/-16.18	-9.78/-10.79	-9.33/-11.17	-17.11/-14.7	-18.03/-17.62	-14.33/-15.01	-13.7/-9.7	-10.34/-14.1	-11.9/-15.35	-15.87/-17.96	-17.7/-17.63	-17.99/-17.82	-18.4/-18.62	-18.88/-17.66	-18.48/-18.94	-12.21/-13.71	-9.8/-8.62	-8.72/-18.42	-18.69/-11.94	-7.73/-10.58	-14.81/-10.77	Theta(7.5)



Radiated Composite Gain Data_Radio 4_6GHz_2TX

Appendix E

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 3 Max Gain (dBi)	4.77	4.82	4.67	4.42
Ant. 4 Max Gain (dBi)	4.7	2.33	3.23	3.98
Ant. 3 Polarization/ Θ (°)/ Φ (°)	Phi/45/270	Phi/52.5/270	Phi/75/135	Phi/75/165
Ant. 4 Polarization/ Θ (°)/ Φ (°)	Theta/60/7.5	Theta/75/0	Theta/67.5/0	Theta/60/277.5
Max Gain (dBi)	4.77	4.82	4.67	4.42
DG [1SS] (dBi)	4.97	4.75	3.79	4.24
DG [1SS] (dBi) Revised	4.97	4.82	4.67	4.42
DG [2SS] (dBi)	4.77	4.82	4.67	4.42



Radiated Composite Gain Data_Radio 4_6GHz_2TX

Appendix E

Theta	0.99/0.46	-3.35/-5.48	-3.92/-3.58	-3.98/-4.41	-5.71/6.45	-8.51/9.79	-13.25/14.09	-9.29/5.72	-5.02/-1.97	-0.07/0.66	1.24/1.19	1.82/2.06	0.77/-0.1	-1.22/-1.77	-1.84/-1.16	-1.68/-1.4	-1.92/-2.88	-3.11/-2.37	-0.61/0.6	1.02/1.43	0.84/0.52	-1.22/-1.05	-0.82/0.15	1.32/0.88	
Theta(30°)	1.3/-0.17	-2.28/-2.48	-1.51/-2.45	-5.15/-4.77	-9.51/-8.93	-10.09/-11.21	-15.26/-10.28	-5.55/-1.58	-0.12/0.02	1.09/1.26	1.68/2.72	1.86/1.68	0.89/-0.66	-1.05/0.14	0.48/0.48	-0.4/-0.88	-2.3/-2.71	-0.94/0.76	1.31/1.17	0.05/-3.47	-5.07/-4.65	-1.62/0.34	2.66/2.29		
Theta(37.5°)	0.83/-1.73	-3.08/-1.45	0.4/-0.92	-5.46/-9.76	-8.87/-11.2	-9.98/-8.44	-8.04/-7.37	-3.87/-4.3	-21/07	1.15/1.48	0.85/1	0.79/0.87	0.4/-1.62	-1.64/-1.89	-1.7/0.61	-0.5/0.98	-3.27/-2.7	-0.81/1.85	3.27/3.12	2.39/1.62	-0.27/-1.84	-11/31	2.42/1.93		
Theta(45°)	1.34/-1.37	-2.44/-2.44	0.13/0.75	-4.62/-6.82	-4.76/-5.33	-4.49/-3.79	-4.04/-2.83	-1.14/-1.59	-2.68/-1.9	-1.80/2.27	0.57/1.9	-1.66/0.86	0.55/0.16	-0.7/2.32	-0.72/0.57	-0.81/-4.9	-1.73/-2.13	-2.61/1	1.72/2.13	2.61/2.9	2.03/1.6	0.37/0.22	-0.36/2.33	3.49/3.08	
Theta(52.5°)	0.51/-1.78	-1.5/-0.39	0.61/-0.51	-3.3/-2.52	-1.19/-1.03	-1.36/-2.77	-2.07/-0.76	-0.16/0.51	0.19/-1.08	-0.37/-0.14	-0.38/0.17	0.18/-0.08	0.65/-0.23	-0.76/0.31	0.86/-0.48	-3.3/-4.06	-3.25/-2.68	-2.13/1.06	1.57/0.47	0.42/0.83	0.42/1.95	2.34/2.81	1.5/2.13	3.79/2.64	
Theta(60°)	-0.37/-3.17	-1.38/1	1.46/0.8	-1.28/0.76	0.35/0.17	-1.05/-0.77	-1.19/-1.93	-1.71/-1.49	-0.45/0.53	1.16/1.38	0.95/1.56	1.43/1.05	2.27/0.13	-0.75/0.38	0.33/-2.09	-4.93/-5.62	-2.95/-3.96	-4.85/-1.27	0.79/0.61	0.68/0.62	0.92/1.61	2.16/2.01	0.32/-0.66	0.54/0.45	
Theta(67.5°)	0.91/-2.15	0.91/0.87	0.99/0.94	0.31/1.49	1.28/0.14	-1.46/-1.03	-0.83/-0.87	-2.79/-3.17	-1.45/0.06	2.68/1.62	1.42/3.03	1.52/1.13	2.91/1.71	0.74/0.68	-0.81/-3.33	-2.12/-2.76	-1.72/-3.06	-8.47/-8.34	-4.65/-1.96	-1.12/-4.14	-1.87/-0.73	0.41/0.36	-3.32/-3.47	-2.9/0.62	
Theta(75°)	0.79/-1.19	2.19/0.54	-0.53/0.55	0.39/0.58	0.93/-0.52	-2.37/0.3	0.06/2	-5.12/-2.18	-0.72/-0.36	2.89/2.54	0.37/2.93	1.8/0.21	3.05/0.95	1.75/0.49	-0.94/-2.09	0.04/0.37	-0.89/-2.32	-3.61/-3.4	-4.91/-7.18	-5.74/-5.29	-3.43/-1.86	-0.05/0.83	0.51/-0.68	-2.83/1.78	
Theta(82.5°)	-0.2/2	1.12/-0.32	-1.64/0.56	0.21/0	-0.79/-1.31	-1.96/0.09	-0.65/-2.76	-4.51/-0.95	-2.16/-0.04	2.45/1.67	0.3/2.12	1.16/-0.98	2.21/1.21	1.46/1	-1.39/-2.02	-0.26/1.2	-1.85/-3.45	-1.82/-1.13	-0.81/-4.76	-6.64/-3.37	-1.62/-2.56	-1.01/0.1	1.41/-1.16	-3.52/3.32	
Theta(90°)	-1.68/-3.99	-0.54/-0.84	-1.2/0.25	-0.14/-1.25	-1.37/-2.42	-2.1/4.2	-3.52/5.04	4.66/-1.18	-1.78/-0.44	1.39/1.8	-0.62/0.34	1.1/2.11	-0.46/0.95	0.83/1.03	-1.88/-0.81	-1.77/1.01	-3.76/-3.38	-1.12/0.01	-0.51/6.27	-3.27/2.07	-0.86/-3.05	-4.9/0.27	0.25/-3.59	-4.51/-1.21	
Theta(97.5°)	-2.63/-5.18	-1.3/-1.09	-1.35/-0.85	-1.08/-1.76	-2.88/-4.2	-2.93/-2.69	-6/-5.56	-5.73/-2.75	-1.91/-1.62	0.94/0.1	-0.59/-0.49	-0.12/-3.52	-2.29/-2.53	-1.43/-3.37	-1.88/-0.7	-4.16/-3.5	-3.99/-5.45	-1.9/-2.26	-2.62/-5.96	-3.07/-4.23	-2.86/-6.18	-7.13/-2.21	-2.24/-0.62	-6.67/-3.77	
Theta(105°)	-3.3/-5.15	-0.97/-1.86	-1.87/-1.69	-3.3/3.83	-5.19/-5.57	-3.09/-4.49	-9.17/-9.2	-5.97/-4.82	-2.29/-3.31	-6/0.6	-1.17/-1.89	-0.34/-3.49	-2.85/-5.27	-4.38/-4.25	-4.35/-1.66	-6.28/-6.29	-5.47/-6.84	-5.98/5.06	-4.72/-7.38	-4.51/-5.85	-4.23/-11.78	-9.74/-5.38	-5.23/-7.54	-8.36/-4	
Theta(112.5°)	-3.22/-4.17	-2.14/0.03	-3.14/2.31	-5.72/-5.79	-5.71/5.61	-6.73/6.45	-6.55/-11.07	-10.61/3.77	-6.14/1.6	-1.44/-2.5	-1.74/-1.85	-1.72/-3.95	-3.24/-6.22	-5.62/8.46	-8.53/-6.07	-5.95/-6.14	-7.18/-9.21	-8.79/-8	-5.84/-9.54	-6.51/-12.15	-7.12/-13.53	-8.12/-8.96	-6.35/-8.2	-5.26/-4.53	
Theta(120°)	-4.7/-4.68	-4.38/-1.12	-5.48/-7.4	-6.13/-6.74	-6.43/9.32	-11.76/-11.48	-8.71/-7.14	-5.27/5.74	-3.83/-3.04	-3.62/-2.97	-3.07/-5.85	-3.97/-5.8	-10.51/-11.64	-7.61/-6.6	-9.65/-13.67	-11.54/-5.75	-7.64/-9.89	-12.25/-8.74	-9.83/-15.51	-13.22/-6.91	-13.22/-6.91	-6.04/-6.36	-5.34/-3.82		
Theta(127.5°)	-8.55/-0.82	-7.47/-8.5	-5.75/-7.66	-8.27/7.36	-9.79/-10.07	-10.03/9.19	-9.72/-11.82	-11.16/-8.55	-8.65/-6.8	-5.09/-4.62	-4.61/5.22	-4.21/7.21	-7.81/-6.74	-8.34/-10.88	-14.28/-13.89	-8.61/8.7	-8.25/-12.75	-13.44/-13.21	-6.26/-15.47	-14.32/-10.36	-15.96/-11.52	-10.91/5.04	-8.82/-7.59	-5.02/-8.67	
Theta(135°)	-6.96/-7.94	-9.77/-6.42	-6.86/-10.65	-9.01/-8.46	-11.12/-11.2	-10.54/-10.43	-13.27/-13.34	-9.49/-9.1	-9.06/-6.68	-8.5/-5.46	-6.9/-5.48	-5.66/-8.34	-9.48/-10.09	-10.67/-11.94	-13.32/-13.32	-15.11/-14.69	-8.36/-11.12	-12.28/-12.51	-6.61/-12.77	-15.44/-11.93	-15.5/-7.03	-9.97/-6.05	-7.51/-10.02	-4.68/-7.9	
Theta(142.5°)	-10.63/-8.95	-7.51/-6.66	-8.16/-9.02	-11.61/11	-11.52/-13.83	-12.08/-13.14	-13.53/-10.6	-10.89/-9.66	-8.71/-7.14	-6.27/5.74	-7.64/9.61	-9.12/-16.5	-6.48/-8.84	-8.78/-9.17	-10.51/-11.64	-7.61/-6.6	-9.65/-13.67	-11.54/-5.75	-7.64/-9.89	-12.25/-8.74	-9.83/-15.51	-13.22/-6.91	-6.04/-6.36	-5.34/-3.82	
Theta(150°)	-9.43/-10.84	-8.57/-7.28	-9.36/10.15	-11.17/-12.21	-14.74/-11.15	-11.69/-13.88	-15.08/14.74	-13.54/-10.2	-8.64/-10.22	-7.5/6.22	-7.43/8.14	-7.27/6.52	-8.09/-11.02	-11.99/-14.17	-15.63/-13.4	-15.37/-11.23	-10.83/-15.43	-12.57/10.44	-14.03/-13.68	-14.53/15.27	-15.24/-13.53	-13.63/-10.61	-11.41/9.39		
Theta(157.5°)	-9.42/-9.44	-11.46/-10.68	-13.3/-13.68	-14.38/-13.9	-14.66/-14.12	-14.07/-15.63	-15.32/-16.04	-14.78/-15.13	-11.06/-10.51	-9.82/-10.13	-7.97/6.43	-6.64/-9.11	-10.83/-10.81	-10.84/-14.61	-13.28/-11.55	-15.99/-15.33	-15.75/-13.88	-15.01/-15.89	-16.25/-14.79	-16.11/-12.7	-14.33/-15.17	-16/-15.3	-13.3/-13.73	-14.34/-16.34	
Theta(165°)	-12.95/-11.5	-10.04/-10.05	-11.15/-13.03	-14.5/-14.84	-14.15/-14.93	-14.15/-14.12	-13.71/15.64	-14.48/-13.63	-12.98/-12.09	-13.15/-11.95	-10.3/-10.84	-12/-14.65	-14.22/-10.42	-10.3/-14.07	-11.59/7.78	-14.05/-15.94	-15.24/-15.33	-14.98/-15.67	-15.28/-12.78	-12.65/-11.1	-10.82/-12.23	-10.26/-10.62	-11.05/-11.46	-11.74/-15.12	
Theta(172.5°)	-9.82/-11.23	-9.71/-11.52	-13.39/-13.53	-15.99/-15.77	-15.21/-15.67	-15.09/-14.83	-15.27/-15.33	-16.06/-14.61	-12.84/-11.37	-9.8/9.69	-11.56/-14.28	-14.89/-15.48	-15.84/-13.78	-13.26/-15.31	-12.48/-10.89	-12.08/-13.86	-15.99/-15.16	-13.8/-13.17	-13.44/-12.97	-12.09/-11.29	-10.48/9.77	-9.28/-9.62	-8.91/9.08	-9.64/-8.79	
Theta(180°)	-10.12/-8.88	-10.12/-8.88	-9.57/-9.6	-10.71/-11.64	-12.64/-14.83	-15.27/-15.5	-15.32/-15.25	-13.67/-11.18	-10.23/-10.37	-11.66/-13.27	-14.33/-14.82	-14.29/-14.09	-13.77/-11.79	-10.49/-12.15	-12.48/-12.15	-12.45/-13.64	-13.05/-13.79	-13.87/-16.15	-14.04/-13.09	-11.84/-11.91	-10.34/-9.13	-9.41/-11.28	-9.72/-9.16	-9.99/-10.06	
Freq(Hz)	6.985/Pol.	Theta	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	
DG(dB)	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°)
Theta(0°)	-7.71/6.68	4.4/-2.74	-1.84/-0.86	-0.26/0.16	0.61/0.44	-0.35/-0.31	-0.8/-1.6	-3.16/-4.18	-5.07/-7.28	-9.3/-9.09	-8.07/7.65	-7.69/-6.91	-4.96/-3.42	-2.12/-1.24	-0.77/0.39	0.27/0.79	0.58/0.27	-0.41/0.26	-1.04/-2.21	-2.67/-3.21	-4.62/-4.48	-7.41/-8.96	-10.03/-9.1	-6.88/-8.22	
Theta(7.5°)	-5.89/-4.93	-3.43/-2.24	-2.21/-1.5	-1.62/-1.77	-1.37/-1.33	-2.16/-1.12	-2.25/-2.83	-3.21/-4.32	-4.72/-5.38	-8.02/-6.88	-6.99/-8.31	-6.24/-4.49	-3.14/-1.93	-0.95/-0.53	-0.06/0.38	0.44/-0.47	-0.95/-1.36	-2.5/-3.43	-4.82/-5.66	-6.51/-8.66	-9.93/-11.39	-11.71/-10.27	-8.57/-6.83		
Theta(15°)	-4.28/-3.76	-3.63/-3.44	-2.77/-2.81	-2.46/-2.25	-1.16/-0.49	-0.56/-0.87	-0.50/-1.52	-2.09/-3.27	-3.48/-3.24	-3.84/-4.18	-6.59/-7.5	-7.55/-8.52	-8.49/-6.6	-4.14/-2.63	-1.67/-0.29	0.81/0.73	1.14/0.98	0.31/0.42	-0.89/-1.37	-2.96/-5.56	-6.51/-8.18	-11.33/-10.1	-9.73/-8.46	-5.72/-5.45	
Theta(22.5°)	-2.65/-2.16	-1.6/-0.75	-0.99/-0.57	-1.24/-1.75	-2.22/-2.47	-2.41/-3.79	-2.92/-4.02	-4.42/-7.02	-7.11/-5.4	-9.37/-3.67	-6.28/-6.03	-4.64/-9.04	-3.38/-6.62	-5.43/-3.66	-2.99/-2.59	-3.28/-4.46	-3.07/-1.48	-1.48/-1.49	-1.11/1.62	-2.74/-3.61	-6.32/-6.92	-10.99/-10.15	-8.28/-6.44	-5.03/-4.02	
Theta(30°)	-3.92/-0.76	0.3/0.75	-0.01/0.58	-1.34/-1.25	-0.57/-0.37	-0.34/-2.86	-4.61/-4.62	-5.06/-4.94	-3.86/-4.67	-5/4.02	-2.94/-3.7	-4/3.55	-6.61/-10.25	-10.34/-11.13	-7.65/-3.47	-2.17/0.31	-2.84/-2.66	-2.67/3.72	-3.51/-3.62	-4.02/-4.07	-5.09/-2.29	-9.25/-10.38	-9.07/-7.34	-5.63/-5.62	
Theta(37.5°)	-3.1/-0.14	-0.05/-1.48	-3.64/-3.49	-3.1/-1.48	-0.68/-0.01	-0.21/-0.72	-2.59/-4.34	-4.83/-5.73	-6.01/-2.48	-2.65/-2.86	-1.71/-1.47	-1.2/-3.08	-3.9/-3.25	-3.92/-3.63	-7.7/-5.4	-4.09/-4.35	-4.69/-6.17	-5.16/-2.99	-2.92/-3.88	-5.4/-4.08	-4.36/-6.52	-7.23/-6.74	-5.86/-5.52	-6.28/-5.2	
Theta(45°)	-0.83/1.01	0.47/-0.48	-2.51/-2.98	-3.04/-2.25	-0.79/0.04	-0.03	-0.52/-1.8	-2.98/-1.99	-3.4/-2.55	-2.37/-2.68	-3.03/-2.21	-0.23/-3.51	-4.82/-2.97	-2.19/-3.68	-2.97/-4.83	-4.11/-3.82	-4.31/-2.68	-2.17/-1.8	-1.86/-2.12	-1.55/-2.13	-1.79/-3.74	-6.25/-5.41	-4.54/-3.96	-4.6/-2.74	
Theta(52.5°)	1.21/2.24	0.15/-1.07	-2.03/-1.77	-0.6/-1.1	-1.76/-0.92	-0.24/0.91	-1.87/-0.22	-1.06/-1.55	-1.01/0.7	-1.22/0.84	-1.39/-3.51	-4.66/-1.96	-2.26/-1.13	0.19/-0.52	-2.59/-4.76	-0.76/0.36	-0.04/0.35	-1.49/0.61	-0.07/-1.1	-0.84/-0.4	-1.99/-4.74	-6/-2.56	-1.07/0.17		
Theta(60°)	0.94/0.77	-0.64/-0.79	-2.02/-4.07	0.52/0.39	-2.23/-3.17	-1.03/0.57	-0.48/-4.02	-2.39/-2.07	-1.63/-0.99	-1.42/0.23	-0.21/0.35	-1.58/-3.18	-7.89/-7.59	-3.71/0.23	0.48/0.01	-2.25/-4.39	-0.79/0.95	0.13/-0.32	-1.26/-0.79	0.58/-0.69					

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.69	3.74	4.57	5.38
Ant. 2 Max Gain (dBi)	4.68	5.42	5.56	4.3
Ant. 3 Max Gain (dBi)	4.77	4.82	4.67	4.42
Ant. 4 Max Gain (dBi)	4.7	2.33	3.23	3.98
Ant. 1 Polarization/ θ (°)/ Φ (°)	Theta/75/127.5	Theta/75/337.5	Theta/75/45	Theta/67.5/45
Ant. 2 Polarization/ θ (°)/ Φ (°)	Phi/60/135	Phi/67.5/112.5	Phi/67.5/112.5	Phi/75/105
Ant. 3 Polarization/ θ (°)/ Φ (°)	Phi/45/270	Phi/52.5/270	Phi/75/135	Phi/75/165
Ant. 4 Polarization/ θ (°)/ Φ (°)	Theta/60/7.5	Theta/75/0	Theta/67.5/0	Theta/60/277.5
Max Gain (dBi)	4.77	5.42	5.56	5.38
DG [1SS] (dBi)	6.14	6.09	6.02	5.46
DG [2SS] (dBi)	4.77	5.42	5.56	5.38
DG [4SS] (dBi)	4.77	5.42	5.56	5.38