



Antenna Composite Gain Test Report

FCC ID	MSQ-RTBE7L00
Equipment	ASUS RT-BE92U BE9700 Tri-band WiFi7 Router
Brand Name	ASUS
Model Name	RT-BE92U,RT-BE9700
Applicant	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou, Taipei City 112, Taiwan
Standard	KDB662911 D03 v01
Sample Received	Apr. 22, 2024
Start Test Date	May 09, 2024
Final Test Date	May 22, 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.)



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1. Operation Mode and Antenna Information

Antenna Position	RF Port			Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	2.4GHz	5GHz	6GHz					
2G5G Ant1	3	1	-	WHA Yu	C660-510630-A	Dipole Antenna	I-PEX	2.4GHz, 5GHz UNII 1~3
2G5G Ant2	2	2	-	WHA Yu	C660-510631-A	Dipole Antenna	I-PEX	2.4GHz, 5GHz UNII 1~3
2G Ant3	1	-	-	WHA Yu	C660-510634-A	Dipole Antenna	I-PEX	2.4GHz
6G Ant1	-	-	1	WHA Yu	C660-510632-A	Dipole Antenna	I-PEX	6GHz
6G Ant2	-	-	2	WHA Yu	C660-510633-A	Dipole Antenna	I-PEX	6GHz

Note:

2.4GHz Operation Mode (3TX/3RX)

2G5G Ant1~2 and 2G Ant3 can be used as transmitting/receiving antenna.

2G5G Ant1~2 and 2G Ant3 could transmit/receive simultaneously.

5GHz Operation Mode (2TX/2RX)

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

2G5G Ant1~2 could transmit/receive simultaneously.

6GHz Operation Mode (2TX/2RX)

6G Ant1~2 can be used as transmitting/receiving antenna.

6G Ant1~2 could transmit/receive simultaneously.



3. Table for Multiple Listing

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

Model Name	Description
RT-BE92U	All the models are identical, the difference model names served as a marketing strategy.
RT-BE9700	

Note 1: From the above models, model: RT-BE92U was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

4. Test Frequency

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

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

5. 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	Rofy Chen	23.5-24.5 / 45-55	May 09, 2024~ May 22, 2024

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

6. Test Facility and Configuration

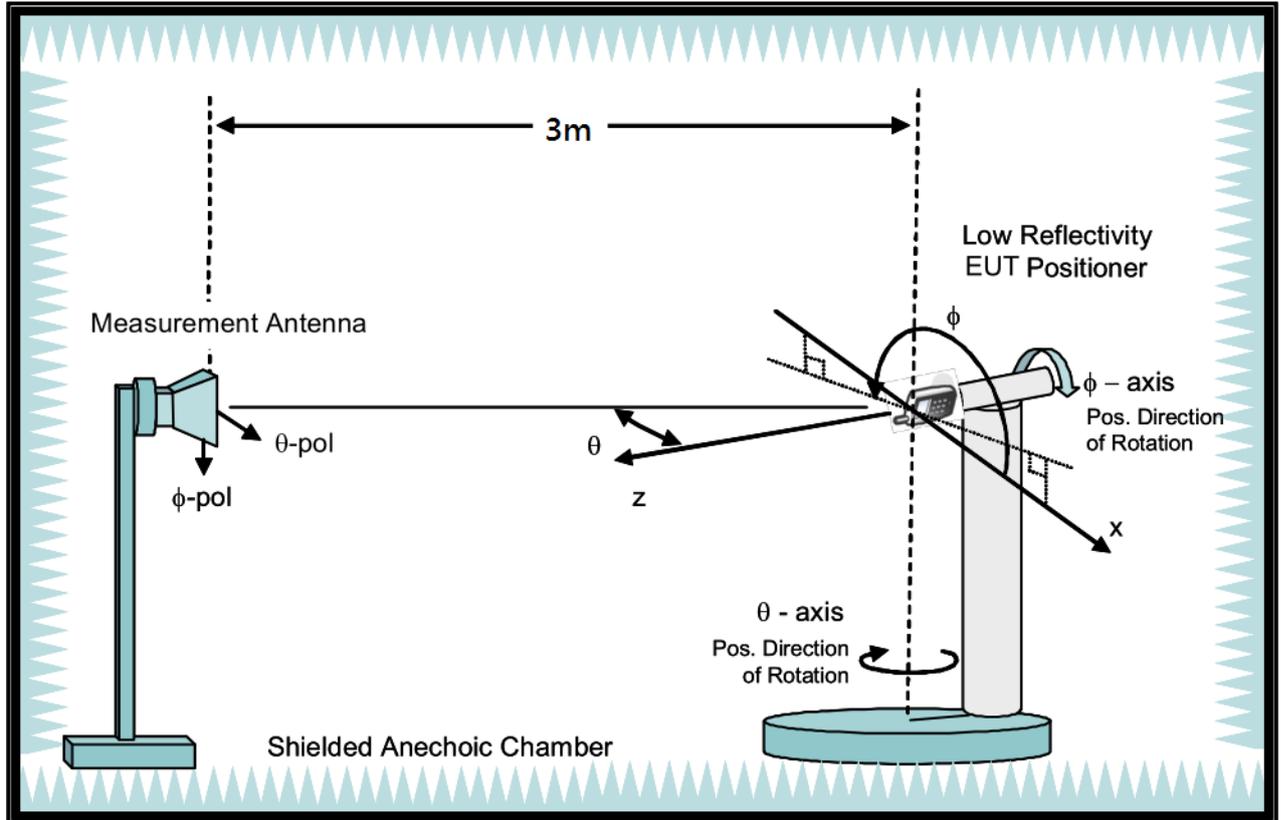
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

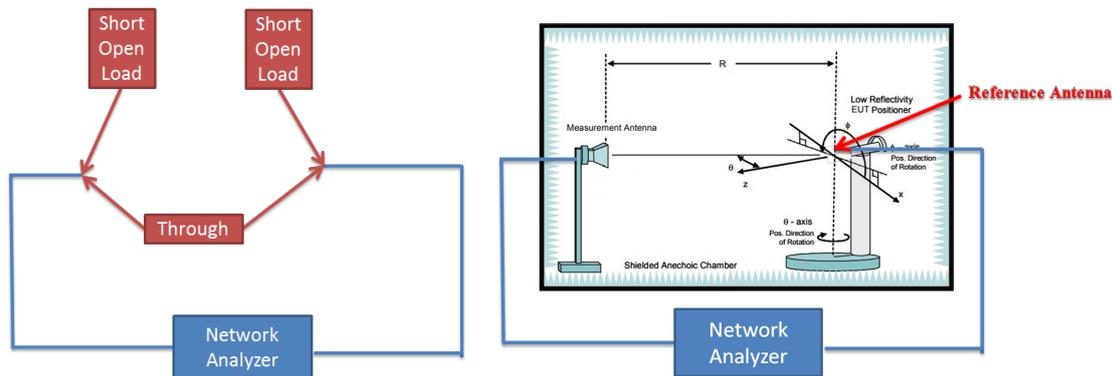
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



7. Reference Calibration

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

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



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

Note:

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

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

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

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



8. 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 9 tables.

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



9. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Test Mode 1

Frequency (Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	1.23	2.18	2.64	0.87	1.79	2.73	3.38
Ant. 2 (dBi)	1.22	1.94	2.33	2.33	2.47	3.4	3.52
Ant. 3 (dBi)	-5.17	-4.88	-7.26	-	-	-	-
DG [1SS] (dBi)	4.34	5.07	5.05	4.64	5.15	6.08	6.46
Polarization	Theta	Theta	Theta	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	67.5	67.5	67.5	75	82.5	105	105
$\Phi(^{\circ})$	120	127.5	127.5	75	112.5	247.5	247.5

Test Mode 2

Frequency (Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	1.53	1.52	1.71	-1.84	-10.48	1.05	1.72
Ant. 2 (dBi)	-7.72	-10.86	-13.13	-2.01	3.18	0.69	-1.36
Ant. 3 (dBi)	-0.12	2.06	2.5	-	-	-	-
DG [1SS] (dBi)	3.49	4	4.08	1.09	1.81	3.88	3.33
Polarization	Phi	Phi	Phi	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	105	15	15	45	82.5	67.5	30
$\Phi(^{\circ})$	60	292.5	292.5	7.5	262.5	180	22.5

Note: The DG 1SS max value position is the maximum value of section 13 table DG 1SS Result.



DG_1SS max value position calculation

Test Mode 1

Frequency (Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [10^(G/20)]	10^(1.23/20)	10^(2.18/20)	10^(2.64/20)	10^(0.87/20)	10^(1.79/20)	10^(2.73/20)	10^(3.38/20)
Ant. 2 [10^(G/20)]	10^(1.22/20)	10^(1.94/20)	10^(2.33/20)	10^(2.33/20)	10^(2.47/20)	10^(3.4/20)	10^(3.52/20)
Ant. 3 [10^(G/20)]	10^(-5.17/20)	10^(-4.88/20)	10^(-7.26/20)	-	-	-	-
Ant. 1 [10^(G/20)] value	1.152	1.285	1.355	1.105	1.229	1.369	1.476
Ant. 2 [10^(G/20)] value	1.151	1.25	1.308	1.308	1.329	1.479	1.5
Ant. 3 [10^(G/20)] value	0.551	0.57	0.434	-	-	-	-
Sum All Antenna [Amax]	2.854	3.106	3.096	2.413	2.558	2.848	2.975
DG [10*log(Amax^2/Nant)]	4.34	5.07	5.05	4.64	5.15	6.08	6.46

Test Mode 2

Frequency (Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [10^(G/20)]	10^(1.53/20)	10^(1.52/20)	10^(1.71/20)	10^(-1.84/20)	10^(-10.48/20)	10^(1.05/20)	10^(1.72/20)
Ant. 2 [10^(G/20)]	10^(-7.72/20)	10^(-10.86/20)	10^(-13.13/20)	10^(-2.01/20)	10^(3.18/20)	10^(0.69/20)	10^(-1.36/20)
Ant. 3 [10^(G/20)]	10^(-0.12/20)	10^(2.06/20)	10^(2.5/20)	-	-	-	-
Ant. 1 [10^(G/20)] value	1.193	1.191	1.218	0.809	0.299	1.128	1.219
Ant. 2 [10^(G/20)] value	0.411	0.286	0.221	0.793	1.442	1.083	0.855
Ant. 3 [10^(G/20)] value	0.986	1.268	1.334	-	-	-	-
Sum All Antenna [Amax]	2.59	2.745	2.772	1.603	1.741	2.211	2.074
DG [10*log(Amax^2/Nant)]	3.49	4	4.08	1.09	1.81	3.88	3.33

Note:

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

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



10. Summary of Test Result

Test Mode 1

Freq(Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	1.72	2.46	2.64	2.41	2.6	3.29	3.78
Ant. 2 Max Gain (dBi)	1.23	1.94	2.33	3.22	2.75	3.82	4.45
Ant. 3 Max Gain (dBi)	3.78	2.99	3.12	-	-	-	-
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/120	Theta/67.5/120	Theta/67.5/120	Theta/90/180	Theta/120/247.5	Theta/97.5/180	Theta/97.5/180
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/127.5	Theta/67.5/127.5	Theta/67.5/127.5	Theta/97.5/292.5	Theta/82.5/105	Theta/105/255	Theta/82.5/67.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/67.5/97.5	Phi/45/67.5	Phi/112.5/112.5	-	-	-	-
Max Gain (dBi)	3.78	2.99	3.12	3.22	2.75	3.82	4.45
DG [1SS] (dBi)	4.34	5.07	5.05	4.64	5.15	6.08	6.46
DG [2SS] (dBi)	3.78	2.99	3.12	3.22	2.75	3.82	4.45
DG [3SS] (dBi)	3.78	2.99	3.12	-	-	-	-

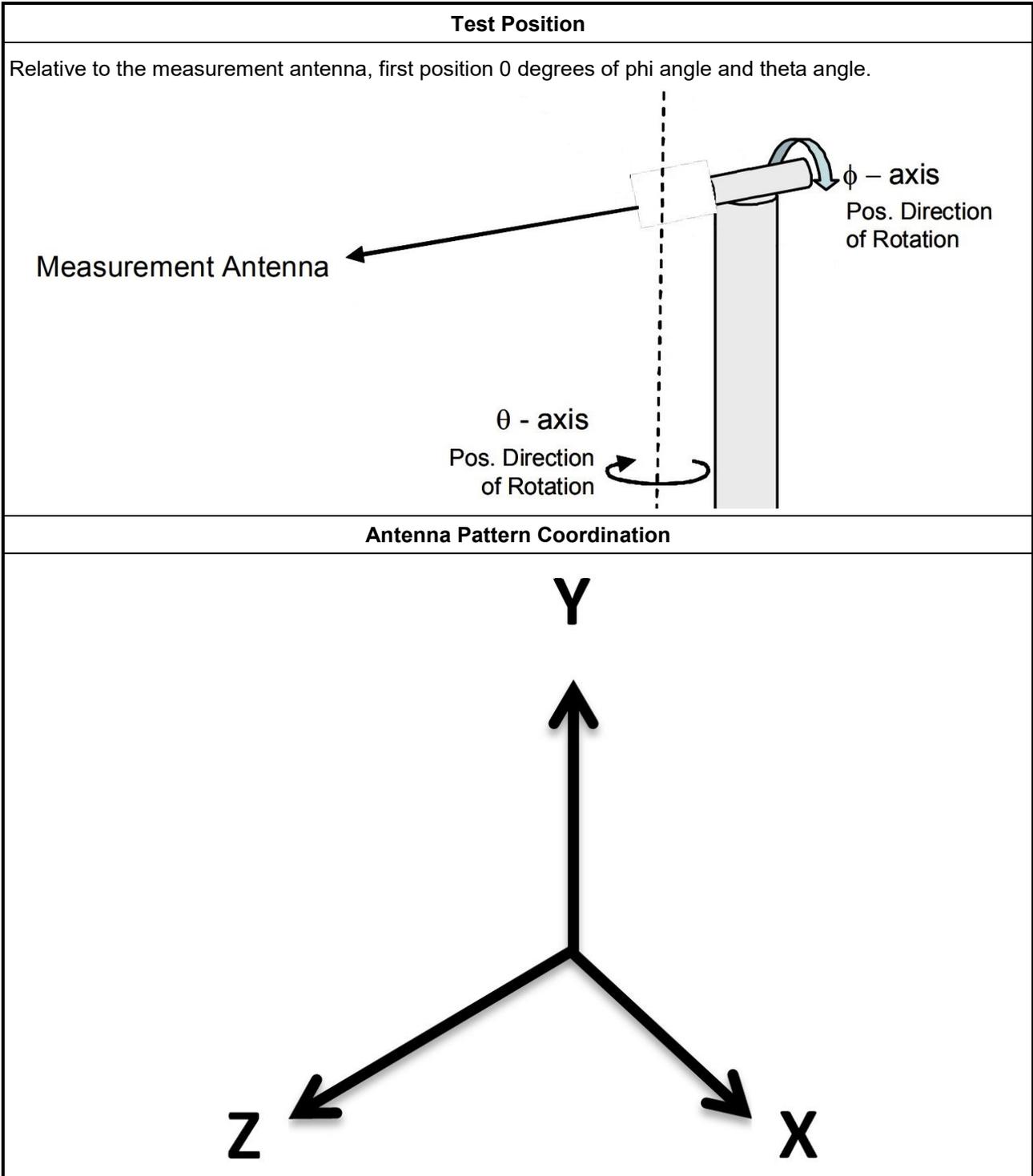
Test Mode 2

Freq(Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.03	1.52	1.93	1.97	1.6	1.89	1.9
Ant. 2 Max Gain (dBi)	-0.27	0.76	0.49	2.99	3.18	3.61	4.04
Ant. 3 Max Gain (dBi)	3.78	2.99	3.12	-	-	-	-
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/112.5/52.5	Phi/15/292.5	Phi/142.5/75	Phi/142.5/67.5	Phi/157.5/75	Theta/165/22.5	Theta/172.5/352.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/82.5/270	Theta/67.5/135	Theta/90/240	Theta/75/300	Theta/82.5/262.5	Theta/75/300	Theta/90/345
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/67.5/97.5	Phi/45/67.5	Phi/112.5/112.5	-	-	-	-
Max Gain (dBi)	3.78	2.99	3.12	2.99	3.18	3.61	4.04
DG [1SS] (dBi)	3.49	4	4.08	1.09	1.81	3.88	3.33
DG [1SS] Revised (dBi)	3.78	4	4.08	2.99	3.18	3.88	4.04
DG [2SS] (dBi)	3.78	2.99	3.12	2.99	3.18	3.61	4.04
DG [3SS] (dBi)	3.78	2.99	3.12	-	-	-	-

Note:

1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (3SS) = Directional Gain (1SS) – 4.77dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)

11. Test Setup



Note:

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



12. Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1531	1GHz~18GHz	Dec. 20, 2023	Dec. 19, 2024
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Jul. 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.



13. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz and 5GHz U-NII 1 ~ U-NII 3.....Page 16
Appendix B – Antenna Pattern of 2.4GHz and 5GHz U-NII 1 ~ U-NII 3.....Page 46
Appendix C – Test Photos..... Page 60



Radiated Composite Gain Data
Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Freq(Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	1.72	2.46	2.64	2.41	2.6	3.29	3.78
Ant. 2 Max Gain (dBi)	1.23	1.94	2.33	3.22	2.75	3.82	4.45
Ant. 3 Max Gain (dBi)	3.78	2.99	3.12				
Ant. 1 Polarization/ θ (°)/ ϕ (°)	Theta/60/120	Theta/67.5/120	Theta/67.5/120	Theta/90/180	Theta/120/247.5	Theta/97.5/180	Theta/97.5/180
Ant. 2 Polarization/ θ (°)/ ϕ (°)	Theta/67.5/127.5	Theta/67.5/127.5	Theta/67.5/127.5	Theta/97.5/292.5	Theta/82.5/105	Theta/105/255	Theta/82.5/67.5
Ant. 3 Polarization/ θ (°)/ ϕ (°)	Phi/67.5/97.5	Phi/45/67.5	Phi/112.5/112.5				
Max Gain (dBi)	3.78	2.99	3.12	3.22	2.75	3.82	4.45
DG [1SS] (dBi)	4.34	5.07	5.05	4.64	5.15	6.08	6.46
DG [2SS] (dBi)	3.78	2.99	3.12	3.22	2.75	3.82	4.45
DG [3SS] (dBi)	3.78	2.99	3.12				



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

DG 1SS Result

Freq(Hz)	2.4GPol.	Phi-	Phi+	Phi(15°)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°)	
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(°)	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°)	-8.05/6.34	-4.88/3.82	-2.97/2.33	-1.88/1.46	-1.24/0.86	-0.54/0.3	-0.14/0.1	-0.16/0.24	-0.42/0.76	-1.29/1.96	-2.9/4.12	-5.64/6.01	-5.6/4.34	-3.28/2.43	-1.71/1.08	-0.58/0.33	-0.31/0.44	-0.45/0.63	-0.77/1.01	-1.24/1.69	-2.31/3.04	-3.7/4.29	-5.05/6.01	-7.21/8.39		
Theta(15°)	-6.97/6.74	-4.77/3.71	-2.79/2.13	-1.71/1.32	-1.05/0.73	-0.45/0.3	-0.11/0.17	0.31/0.33	0.18/0.09	-0.52/1.12	-1.94/2.97	-4.09/5.36	-6.52/6.45	-6.18/4.83	-3.56/2.39	-1.35/0.53	0.05/0.31	0.28/0.03	-0.35/0.53	-0.84/1.26	-1.8/2.44	-2.9/3.29	-3.63/3.94	-4.37/5.05	-6/6.89	
Theta(22.5°)	-7.12/6.92	-5.79/4.31	-3.05/2.27	-1.91/1.79	-1.35/0.8	-0.74/0.45	-0.34/0.03	0.22/0.22	0.03/0.37	-1.05/1.97	-3.13/4.24	-5.12/5.48	-5.48/5.49	-5.37/4.59	-3.41/2.24	-1.15/0.27	0.36/0.63	0.54/0.12	-0.48/0.81	-1.13/1.63	-2.38/2.89	-3.28/3.36	-3.7/4.33	-5.21/6.22		
Theta(30°)	-8.12/7.99	-6.82/4.55	-3.05/2.24	-2.02/1.82	-1.54/1.16	-0.8/0.57	-0.4/0.36	-0.57/1.05	-1.83/2.78	-3.56/4.35	-4.56/4.42	-4.16/4.11	-4.4/4.58	-3.96/2.88	-1.69/0.63	0.21/0.61	0.58/0.14	-0.54/1.17	-1.65/2.2	-2.91/3.29	-3.04/2.7	-2.55/2.78	-3.32/4.13	-5.22/6.52		
Theta(37.5°)	-7.06/5.74	-4.24/3.01	-2.1/1.56	-1.3/0.98	-0.83/0.68	-0.53/0.33	-0.19/0.21	-0.78/1.83	-3.16/4.06	-4.39/4.19	-3.85/3.39	-3.29/3.7	-3.44/4.94	-4.69/3.6	-2.35/1.19	-0.25/0.29	0.41/0.1	-0.41/1.05	-1.56/2	-2.43/2.45	-1.96/1.76	-1.99/2.58	-3.44/4.55	-5.92/6.55		
Theta(45°)	-4.02/3.67	-3.19/2.86	-2.62/2.15	-1.89/1.4	-1.35/0.8	-0.9/0.45	-0.47/0.26	0.07/0.26	0.64/0.87	-2.92/4.37	-4.93/5.02	-4.52/3.84	-3.53/3.63	-4.01/4.5	-4.8/4.46	-3.48/2.19	-1.02/0.2	0.21/0.22	-0.06/0.58	-1.12/1.76	-1.82/1.53	-1.36/1.47	-1.81/2.29	-2.81/3.3		
Theta(52.5°)	-3.6/4	-4.74/5.47	-5.73/5.34	-4.71/3.44	-2.27/1.17	-0.55/0.07	0.97/1.57	1.29/0.18	-0.88/1.35	-1.76/2.93	-4.72/5.86	-5.14/4.46	-4.1/3.88	-3.9/4.03	-3.77/2.79	-1.53/0.55	0.13/0.37	0.23/0.29	-0.97/1.74	-1.93/1.61	-1.42/1.35	-1.28/1.3	-1.5/1.91	-2.5/3.11		
Theta(60°)	-6.19/6.34	-6.31/6.16	-5.08/3.97	-3.06/2.14	-1.35/0.69	-0.36/0.29	1.14/1.48	0.65/1.07	-1.75/0.74	0.13/0.23	-1.61/3.39	-6.11/5.58	-4.49/3.58	-3.15/3.38	-3.7/3.85	-3.34/2.27	-1.19/0.55	-0.43/0.94	-1.61/1.92	-1.28/0.46	0.06/0.17	-0.05/0.62	-1.62/2.91	-4.36/5.5		
Theta(67.5°)	-7.7/7.33	-6.58/6.12	-5.79/5.09	-4.32/3.52	-2.98/2.61	-2.05/0.28	1.59/2.49	1.92/0.18	-2.75/3.41	-2.38/1.52	-1.76/3.34	-6.08/8	-6.41/4.71	-3.85/3.76	-4.36/5.64	-6.41/5.16	-3.06/1.72	-0.87/0.82	-0.89/1.13	-0.81/0.17	-0.24/0.92	-1.56/3.23	-4.75/5.95	-7.3/7.41		
Theta(75°)	-10.85/10.07	-9.17/9.07	-9.29/8.79	-6.66/5.17	-4.33/5.13	-2.73/5.82	-2.18/0.22	0.06/0.79	-1.27/1.23	-1.8/3.44	-5.71/8.1	-9.69/9.17	-7.56/5.7	-4.69/4.19	-4.24/5.01	-5.39/3.88	-1.66/0.34	0.37/0.61	0.27/0.74	-2.46/3.49	-4.3/5.9	-7.73/8.81	-10.12/11.83	-12.08/11.3		
Theta(82.5°)	-12.05/10.26	-8.27/7.26	-7.66/7.42	-5.43/4.04	-3.38/3.9	-4.39/3.5	-1.43/0.74	-1.64/2.88	-1.58/0.05	0.31/0.4	-2.2/5.11	-7.31/7.08	-5.84/4.39	-3.17/2.32	-2.1/2.85	-3.75/3.42	-1.56/0.34	0/0.37	-1.06/2.04	-3.17/4.28	-5.53/7.93	-10.57/11.79	-11.59/11.73	-12.54/13.18		
Theta(90°)	-8.08/6.4	-5.55/5.45	-6.45/9.31	-8.54/6.54	-4.81/4.97	-5.34/3.12	-0.36/0.72	0.01/0.69	-1.67/1.18	-1.1/1.23	-2.06/3.75	-4.73/4.89	-5.39/5.56	-3.85/2.11	-1.3/1.93	-3.33/2.74	-0.56/0.21	1.06/0.21	-1.59/2.63	-3.5/4.9	-7.59/10.09	-18.91/6.3	-17.74/8.95	-10.32/10.02		
Theta(97.5°)	-5.95/6.72	-7.56/8.17	-8.47/7.75	-8.4/2.5	-1.52/2.02	-3.2/3.11	-1.56/0.24	-0.7/1.68	-1.25/0.86	-0.88/1.29	-2.52/4.81	-6.8/8.42	-8.56/7.14	-4.21/2.62	-2.29/2.64	-2.34/0.97	0.61/1.32	0.7/0.8	-2.07/2.07	-2.82/4.93	-7.94/10.44	-8.05/6.15	-6.26/7	-6.55/5.97		
Theta(105°)	-5.07/5.05	-4.49/3.73	-3.14/3.37	-4.31/3.25	-0.73/0.43	-1.25/2.04	-1.3/0.39	-0.13/0.87	-0.36/0.31	0.41/0.78	-2.68/4.2	-5.96/7.84	-4.44/2.22	-1.27/1.37	-1.55/0.95	0.17/0.89	-0.47/1.06	-2.15/2.34	-3.36/4.78	-6.11/3.1	-3.63/1.62	-2.89/1.52	-5.97/5.46	-9.75/6.55		
Theta(112.5°)	-4.22/3.34	-2.62/1.8	-1.32/1.37	-0.98/0.45	-1.67/0.87	1.02/0.05	-2.21/3.66	4.4/3.14	-0.69/0.52	0.62/0.33	-1.99/4.73	-8.29/11.34	-10.97/10.73	-3.88/2.21	-1.82/1.11	-2.52/2.18	-1.8/2.07	-3.52/4.47	-2.79/1.44	-1.89/3.26	-4.39/3.43	-3.06/3.81	-6.04/9.64	-9.71/6.35		
Theta(120°)	-3.79/1.77	-0.06/1.25	1.94/1.95	1.61/1.35	1.29/0.93	0.25/0.27	0.59/0.42	-0.19/1	-1.73/2.1	-1.3/0.29	-0.45/1.79	-3.9/6.29	-7.75/8.19	-6.03/3.89	-3.66/4.99	-4.3/2.78	-1.46/0.73	-0.54/0.22	-0.37/1.32	-3.31/4.46	-2.34/0.6	-0.11/0.35	-1.11/2.62	-4.94/5.43		
Theta(127.5°)	-0.97/0.08	0.76/1.11	1.01/0.33	-0.77/2.43	-4.61/5.08	-3.32/1.84	-0.6/0.37	0.79/0.65	0.09/0.56	-1.59/3.68	-6.28/7	-6.68/5.89	-4.83/3.88	-3.19/2.24	-0.59/1.1	2.22/2.78	2.93/2.41	0.91/1.52	-4.44/7.24	-7/2.77	-0.24/0.76	0.78/0.26	-0.77/2.59	-3.71/2.25		
Theta(135°)	-2.84/3.4	-3.58/4.03	-4.41/5.26	-5.94/5.24	-3.81/2.69	-1.8/1.35	-1.39/1.65	-1.62/2	-2.79/4.41	-3.59/4.62	-6.36/6.65	-10.28/10	-7.74/5.27	-4.52/2.93	-0.82/0.88	1.22/1.75	0.9/1.07	-1.44/4.78	-0.02/0.46	-1.9/3.63	-3.98/2.92	-2.36/2.15	-2.27/2.25			
Theta(142.5°)	-5.51/7.15	-6.34/6.26	4.37/4.43	-4.81/4.91	-4.22/2.96	-1.66/0.77	-0.01/0.24	-0.26/1.45	-3.15/5.23	-6.67/7.81	-8.27/8.99	-10.28/10.33	-9.8/8.14	-5.87/3.11	-1.87/0.64	0.06/0.13	-0.78/1.65	-1.41/0.09	0.89/0.94	-0.2/2.48	-4.76/3.2	-1.17/0.15	0.11/0.33	-1.48/3.3		
Theta(150°)	-5.67/5.66	-3.64/2.32	-1.68/1.62	-2.06/3.06	-4.28/4.75	-3.59/2.23	-1.25/0.71	-0.74/1.17	-1.93/2.68	-3.42/4.22	-4.71/5.09	-5.84/6.66	-6.98/6.14	-4.72/3.13	-1.69/0.69	-0.21/0.23	-0.53/0.96	-1.3/1.5	-1.98/3.13	-5.11/7.77	-4.71/6.69	-0.21/0.31	0.15/0.55	-1.83/3.64		
Theta(157.5°)	-5.45/3.96	-2.59/1.72	-1.31/1.32	-1.82/2.76	-3.99/5.55	-7.19/6.12	-4.54/3.67	-2.53/2.27	-2.27/2.53	-2.91/3.52	-4.26/5.1	-6/6.72	-6.58/5.5	-4.3/3.33	-2.77/2.28	-2.08/2.29	-2.92/3.72	-4.43/4.9	-4.98/3.73	-2.13/1.12	-0.77/0.96	-1.61/2.67	-4.16/5.86			
Theta(165°)	-5.73/4.85	-3.73/3.2	-3.14/3.34	-3.9/4.68	-5.58/6.63	-7.97/8.5	-6.21/5.1	-4.34/3.48	-2.86/2.42	-2.25/2.74	-3.36/3.96	-4.53/5.25	-6.19/7.24	-6.59/4.93	-3.69/2.61	-1.88/1.5	-1.43/1.6	-1.91/2.31	-2.74/2.87	-2.7/2.37	-2.11/2.09	-2.51/3.34	-4.52/5.88	-6.78/5.63		
Theta(172.5°)	-6.83/6.24	-5.54/5.64	-6.23/6.92	-7.42/7.77	-7.56/6.57	-5.6/4.77	-3.99/3.41	-2.94/2.65	-2.47/2.46	-2.57/3	-3.63/4.32	-5.11/6	-6.86/6.37	-4.92/3.78	-3.01/2.53	-2.24/1.97	-1.84/1.8	-1.86/2.04	-2.24/2.39	-2.56/2.79	-3.11/3.55	-4.17/4.94	-5.63/6.14	-6.6/6.85		
Theta(180°)	-8.27/8.3	-8.16/8.89	-9.89/9.28	-8.24/6.17	-4.55/3.35	-2.61/2.24	-2.04/2	-2.06/2.27	-2.48/2.8	-3.25/3.81	-4.39/4.95	-5.73/6.78	-6.74/6.59	-5.86/5.01	-4.58/4.04	-3.93/3.79	-3.36/2.88	-2.52/2.35	-2.37/2.43	-2.65/3.08	-3.79/4.44	-4.88/5.24	-5.52/6.04	-6.85/7.68		
Freq(Hz)	2.4GPol.	Theta-	Theta+	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°)
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(°)	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°)	-2.49/2.8	-3.19/3.29	-3.48/4.01	-4.71/5.45	-6.4/7.97	-9.79/11.2	-11/9.45	-7.84/6.46	-5.21/4.23																	



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

Theta (°)	-10.9/-11.21	-10.4/-10.09	-9.18/-8.16	-6.61/-5.07	-3.78/-3.03	-2.71/-2.19	-1.41/-0.73	-0.36/-0.22	-0.26/-0.4	-0.65/-0.98	-1.45/-2.07	-2.79/-3.56	-4.09/-4.11	-3.67/-3.12	-2.61/-2.13	-1.67/-1.35	-1.19/-1.19	-1.32/-1.53	-1.38/-1.38	-1.24/-1.21	-1.44/-1.17	-2.21/-2.79	-3.41/-4.43	-5.78/-7.84	
Theta (30°)	-10.5/-10.1	-9.15/-8.25	-7.06/-6.03	-5.26/-4.57	-3.75/-3.22	-2.91/-2.22	-1.24/-0.42	0.05/0.13	-0.09/-0.55	-1.23/-1.86	-2.26/-2.55	-2.83/-3.26	-3.27/-3.2	-2.84/-2.28	-1.56/-0.8	-0.18/0.1	0.04/-0.38	-1.13/-1.89	-2.01/-2.62	-2.07/-2.09	-2.42/-2.99	-3.69/-4.79	-5.32/-6.35	-7.72/-9.32	
Theta (37.5°)	-9.53/-9.34	-7.68/-6.15	-4.64/-3.51	-3.02/-3.03	-3.23/-3.79	-4.43/-4.01	-2.72/-1.57	-0.7/0.31	-0.26/-0.57	-1.29/-2.26	-2.94/-3.27	-3.37/-3.21	-2.99/-2.68	-2.23/-1.53	-0.53/-0.45	1.12/1.26	0.86/-0.07	-1.55/-2.97	-2.06/-2.64	-2.33/-2.28	-2.84/-2.94	-3.61/-5.08	-4.91/-7.76	-6.46/-9.21	
Theta (45°)	-7.01/-6.45	-5.39/-4.18	-2.96/-1.97	-1.39/-1.18	-1.33/-1.96	-3.38/-4.04	-4.04/-3.29	-2.52/-1.98	-1.64/-1.53	-1.72/-2.13	-2.85/-3.75	-4.53/-4.52	-3.97/-3.18	-2.51/-2.82	-0.89/-1.6	0.98/1.23	0.79/-0.42	-2.41/-3.93	-3.29/-1.97	-1.01/-0.75	-1.02/-2.06	-3.64/-5.4	-6.89/-7.43	-7.25/-1.11	
Theta (52.5°)	-3.33/-3.47	-3.67/-3.64	-3.32/-3.29	-2.71/-1.93	-1.41/-1.39	-2.02/-2.75	-2.54/-2.03	-1.64/-1.88	-2.61/-3.46	-3.71/-3.69	-3.89/-4.38	-5.3/-6.32	-7.16/-7.02	-8.82/-4.55	-3.24/-1.86	-0.71/-0.09	-0.07/-0.76	-2/-2.45	-1.44/-2.09	0.08/-0.21	-1.36/-3.11	-4.66/-4.9	-4.17/-3.59	-3.33/-3.31	
Theta (60°)	-4.22/-5	-5.81/-6.47	-7.48/-8.39	-7.66/-5.76	-3.82/-2.73	-2.74/-3.33	-3.36/-2.2	-0.77/-0.05	-0.25/-1.15	-2.53/-4.57	-6.71/-6.69	-6.04/-6.65	-7.95/-9.74	-11.1/-10.01	-7.46/-6.65	-2.21/-0.55	0.42/0.49	-0.08/-0.55	-0.66/-0.62	-0.75/-1.52	-2.28/-2.28	-3.61/-3.07	-2.65/-2.71	-3.22/-9.34	
Theta (67.5°)	-8.1/-8.63	-9.74/-10.11	-10.3/-8.7	-6.79/-4.91	-3.24/-1.89	-1.38/-1.82	-3.12/-4.22	-3.82/-2.33	-1.2/0.97	-1.04/-1.85	-3.76/-6.8	-9.69/-10.33	-9.56/-8.2	-7.33/-6.79	-5.07/-3.94	-2.26/-0.73	0.11/0.07	-1/2.62	-3.24/-2.33	-1.35/-1.28	-1.51/-1.69	-2.03/-2.42	-3.08/-4.21	-5.77/-7.22	
Theta (75°)	-7.68/-7.99	-8.11/-9.61	-11.64/-11.7	-10.5/-7.78	-5.36/-3.31	-2.03/-1.48	-1.38/-1.88	-2.62/-3.76	-4.96/-5.73	-6.66/-3.67	-3.65/-5.1	-7.04/-9.4	-9.9/-8.67	-7.27/-5.55	-4.71/-4.29	-3.44/-3.14	-3.96/-4.24	-3.36/-1.59	-0.49/-0.35	-1.25/-2.82	-4.62/-5.93	-6.59/-6.86	-7.08/-7.45		
Theta (82.5°)	-10.93/-10.24	-9.68/-9.67	-10.09/-11.1	-11.59/-8.74	-6.6/-5.13	-4.71/-4.51	-3.69/-2.74	-2.02/-1.9	-1.82/-2.09	-3.08/-4.86	-7.22/-9.61	-10.41/-9.86	-6.8/-4.9	-3.79/-3.07	-2.85/-3.24	-4/-3.62	-2.58/-1.82	-2.03/-2.65	-2.75/-2.31	-2.28/-3.29	-5.24/-7.32	-8.45/-8.73	-9.52/-10.86	-11.61/-11.08	
Theta (90°)	-11.55/-10.39	-8.32/-7.51	-7.45/-9.03	-11.68/-13.51	-10.36/-5.64	-3.11/-1.88	-1.21/-1.52	-2.52/-3.41	-2.88/-2.02	-1.66/-1.83	-2.77/-4.94	-7.84/-9.01	-7.08/-5.4	-3.14/-1.69	-1.04/-1.22	-2.06/-2.38	-1.32/-0.35	-0.65/-2.03	-2.46/-2	-2.37/-4.22	-7.09/-10.38	-9.81/-7.63	-7.33/-9.26	-11.89/-11.91	
Theta (97.5°)	-9.72/-8.59	-6.67/-6.06	-5.71/-5.95	-5.75/-6.37	-3.77/-8.12	-5.77/-6.29	-0.96/-0.79	-1.61/-2.47	-2.3/-1.99	-2.2/-2.35	-3.2/-4.84	-6.7/-8.4	-9.6/-8.51	-5.71/-3.44	-2.34/-2.32	-2.89/-2.3	-3.80/-9.4	0.62/-1.33	-2.76/-2.66	-4.41/-7.54	-10.22/-7.96	-6.22/-5.69	-6.65/-8.3	-12.11/-11.16	
Theta (105°)	-7.62/-7.6	-8.08/-8.51	-8.61/-7.57	-5.63/-4.57	-4.41/-5.23	-5.02/-2.59	-0.40/-0.35	-0.03/-0.8	-1.38/-1.48	-1.54/-1.54	-5.21/-7.79	-9.81/-9.52	-7.03/-4.66	-5.03/-6.83	-2.91/-2.64	-0.50/-0.83	0.62/-1.19	-2.93/-3.64	-4.51/-6.47	-9.2/-8.98	-7.32/-6.48	-4.76/-8.25	-8.58/-8.02		
Theta (112.5°)	-6.28/-5.72	-5.83/-5.83	-6.66/-7.62	-5.61/-2.69	-1.51/-1.87	-3.49/-4.95	-3.56/-1.51	-0.58/-0.24	-0.15/0.01	-0.37/-1.11	-2.21/-3.6	-5.15/-7.11	-9.71/-10.16	-8.78/-5.51	-3.95/-3.82	-3.85/-2.66	-1.2/-0.39	-1.12/-3.48	-4.83/-3.78	-3.38/-3.73	-4.71/-3.84	-3.14/-3.5	-5.06/-6.72	-7.8/-6.99	
Theta (120°)	-7.38/-8.83	-3.07/-1.88	-1.57/-2.15	-2.5/-1.45	-0.51/-0.49	-1.84/-3.97	-5.72/-5.28	-4.12/-3.08	-1.91/-0.81	-0.09/-0.21	-1.09/-2.71	-4.64/-6.31	-7.58/-10.11	-7.58/-4.78	-4.21/-5.18	-6.39/-5.7	-4.23/-2.27	-3.47/-2.9	-1.67/-1.47	-2.42/-3.67	-5.05/-4.42	-4.41/-5.43	-7.24/-9.51	-11.29/-9.71	
Theta (127.5°)	-4.31/-2.37	-0.91/-0.11	-0.14/-1.13	-2.81/-4.65	-4.86/-4.74	-4.64/-3.4	-3.78/-2.48	-1.57/-1.26	-1.56/-1.72	-2.01/-2.83	-3.82/-5.35	-5.64/-7.3	-4.43/-5.01	-5.94/-6.39	-6.73/-5.98	-3.31/-1.99	-0.07/0.69	0.4/0.68	-0.02/-3.76	-6.04/-6.3	-2.46/-1.01	-1.02/-1.69	-2.83/-4.55	-6.52/-6.17	
Theta (135°)	-3.89/-3.49	-3.01/-2.81	-3.38/-4.87	-6.8/-8.12	-5.53/-3.86	-3.18/-3.14	-3.94/-4.15	-3.03/-2.12	-2.28/-2.43	-2.2/-3.05	-5.2/-7.94	-8.86/-7.32	-5.88/-4.35	-3.26/-2.68	-2.21/-1.38	-0.61/-0.05	0.23/-0.51	-3.03/-7.08	-6.16/-3.67	-2.33/-2.11	-2.73/-4.22	-6.32/-6.88	-7.03/-6.1	-5.13/-4.49	
Theta (142.5°)	-4.66/-5.65	-6.6/-6.23	-7.18/8.9	-8.88/-6.4	-3.36/-1.72	-0.83/-0.47	-0.74/-1.89	-3.34/-5.3	-6.06/-6.78	-6.28/-1.8	-7.42/-7.19	-6.57/-8.3	-8.26/-9.4	-9.25/9	-7.53/-5.15	-5.11/-4.1	-3.77/-3.64	-2.91/-2.02	-0.71/-0.15	-0.57/-1.96	-3.89/-6.3	-3.34/-1.24	-1.55/-1.54	-2.21/-3.53	
Theta (150°)	-5.75/-6.79	-6.45/-6.24	-5.42/-5.78	-6.25/-5.49	-3.74/-2.06	-1.01/-0.66	-0.63/-1.1	-1.74/-2.82	-4.45/-6.15	-9.62/-9.37	-11.48/-11.97	-9.51/-7.7	-6.77/-6.08	-5.61/-4.94	-4/-2.88	-1.67/-0.62	0.06/0.2	-0.06/-0.56	-1.33/-2.57	-4.6/-6.91	-2.56/-1.58	-1.24/-1.56	-2.49/-3.88		
Theta (157.5°)	-5.78/-4.44	-3.39/-2.85	-2.95/-3.78	-5.21/-6.68	-6.37/-4.84	-3.66/-3.12	-2.77/-2.84	-3.03/-3.46	-4/-4.38	-4.98/-6.12	-7.81/-8.88	-11.01/-9.71	-8.46/-6.61	-5.46/-4.67	-3.89/-2.93	-1.93/-1.25	-1.09/-1.56	-2.71/-4.7	-7.54/-10.84	-12.19/-10.45	-7.09/-5.09	-4.02/-3.53	-5.33/-4.16	-5.35/-5.93	
Theta (165°)	-4.66/-3.75	-3.06/-2.86	-3.38/-4.83	-7.31/-10.08	-10.13/-7.58	-5.99/-5.05	-4.58/-4.38	-4.18/-3.96	-3.68/-3.76	-4.23/-4.93	-6.12/-7.35	-9.05/-9.66	-9.49/-9.77	-6.97/-6.3	-5.71/-5	-4.44/-4.13	-4.26/-4.85	-5.82/-6.88	-7.2/-7.64	-6.01/-5.2	-4.71/-7.47	-5.31/-6.18	-7.04/-7.29	-6.92/-6.05	
Theta (172.5°)	-5.25/-5.04	-5.17/-5.84	-7.22/-9.7	-6.64/-4.89	-3.81/-3.22	-2.94/-2.94	-3.2/-3.1	-3.13/-3.6	-4.24/-5.3	-6.58/-7.95	-9.57/-9.95	-10.07/-9.18	-8.52/-6.77	-6.95/-6.26	-5.89/-5.33	-5.08/-5.06	-4.98/-4.55	-4.06/-3.7	-3.56/-3.57	-3.68/-3.95	-4.49/-5.16	-6.75/-5.66	-5.56/-5.47		
Theta (180°)	-6.57/-7.14	-7.75/-8.47	-8.74/-8.81	-6.26/-4.74	-3.51/-2.52	-1.86/-1.52	-1.41/-1.62	-2.08/-2.29	-2.55/-2.94	-3.74/-7.2	-5.87/-7.39	-8.56/-9.82	-10.37/-10.32	-9.75/-8.69	-8.25/-7.23	-6.01/-5.23	-4.72/-4.29	-3.72/-3.12	-2.73/-2.62	-2.77/-3.16	-4.61/-5.09	-5.48/-5.69	-5.83/-6.28		
Freq (Hz)	2.4835GPol.	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(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°)	-3.31/-3.01	-2.71/-2.37	-2.17/-1.99	-1.92/-2.15	-2.44/-3.02	-3.84/-4.55	-5.33/-6.39	-7.78/-9.11	-9.04/-8.06	-7.6/0.7	-5.33/-4.43	-3.92/-3.45	-3.22/-3	-2.78/-2.48	-2.28/-2.28	-2.43/-2.83	-3.29/-3.76	-4.57/-5.47	-6.46/-7.84	-9.66/-11.1	-13.74/-8.31	-16.52/-5.13	-14.48/-3.9	-13.66/-3.37	
Theta (7.5°)	-3.49/-3.1	-3.14/-3.06	-3.13/-3.4	-3.4/-3.51	-4.08/-4.88	-5.49/-6.44	-7.25/-8.92	-9.49/-8.21	-7.03/-6.79	-4.85/-3.62	-3.13/-2.6	-2.19/-1.67	-1.36/-1.17	-1.09/-1.12	-1.25/-1.83	-2.39/-3	-3.61/-4.39	-5.31/-6.36	-7.69/-8.54	-10.35/-9.4	-13.64/-5.43	-16.52/-3.23	-15.32/-2.7		
Theta (15°)	-2.08/-2.3	-2.59/-2.29	-3.15/-3.54	-3.94/-7.2	-5.53/-6.74	-7.84/-9.96	-11.31/-11.34	-10.82/-9.57	-9.99/-6.37	-4.98/-3.82	-2.95/-2.16	-1.67/-1.28	-0.98/-0.87	-0.82/-0.4	-0.73/-1	-1.63/-2.34	-2.96/-3.48	-4.4/-5.2	-6.92/-6.2	-10.31/-3.6	-13.11/-1.08	-12.61/-1.6			
Theta (22.5°)	-1.35/-1.57	-1.68/-1.8	-1.89/-2.02	-2.29/-2.67	-3.39/-4.19	-5.44/-6.32	-6.97/-6.7	-6.17/-5.42	-4.81/-3.93	-3.17/-2.54	-2.05/-1.69	-1.43/-1.18	-0.98/-0.87	-0.81/-0.69	-0.49/-0.28	-0.14/-0.28	-0.75/-1.43	-2.07/-2.51	-2.73/-2.86	-2.8/-2.28	-1.46/-0.78	-0.35/-0.14	-0.11/-0.24	-0.48/-0.8	
Theta (30°)	-1.63/-1.83	-1.81/-1.55	-1.08/-0.55	-0.05/0.2	0.02/-0.64	-1.73/-0.99	-4.34/-4.66	-6.14/-6.33	-4.44/-4.24	-3.95/-3.75	-3.44/-3.12	-2.73/-2.35	-1.71/-1.2	-0.88/-0.66	-0.51/-0.29	0.02/0.15	0.05/-0.32	-0.88/-1.31	-1.38/-1.15	-0.85/-0.52	-0.21/0.06	0.16/0.04	-0.22/-0.54	-0.89/-1.23	
Theta (37.5°)	-2.36/-2.52	-2.55/-2.21	-1.61/0.81	0.09/0.78	0.86/0.34	-0.79/-2.47	-4.04/-4.97	-5.05/-5.25	-4.88/-3.88	-2.82/-2.09	-1.76/-1.48	-0.80/-0.63	-0.26/0.05	0.05/-0.15	-0.09/0.2	0.52/0.2	0.23/0.08	-0.15/0.18	0.67/0.9	0.66/0.34	-0.01/-0.43	-0.89/-1.31	-1.68/-1.96		
Theta (45°)	-2/2.04	-1.97/-1.64	-1.07/0.37	0.36/0.83	0.74/-0.03	-1.39/-2.45	-2.21/-2.19	-2.68/-3.54	-3.44/-1.71	-0.40/0.22	0.33/0.28	0.21/0.23	0.35/0.6	0.87/0.99	0.73/0.06	-0.64/-0.4	0.46/0.96	0.95/0.78	0.88/1.41	1.89/1.83	1.18/0.37	-0.44/-1.05	-1.51/-1.78	-1.91/-1.92	
Theta (52.5°)	-0.06/-0.02	-0.25/-0.55	-0.49/-0.01	0.93/1.57	1.58/0.91	0.03/-0.39	-0.41/-0.46	-0.34/-0.2	0.21/1.8	1.71/1.62	1.10/1.48	0.02/-0.2	-0.24/-0.13	0.08/0.27	0.18/-0.4	-1.72/-1.36	0.26/1.13	1.31/1.08	0.97/1.32	1.77/1.69	1.07/0.16	-0.65/-1.1	-1.29/-1.27	-0.76/-0.33	
Theta (60°)	1.17/0.97	0.99/-0.35	-0.7/0.1	0.97/1.94	2.88/2.65	2.26/1.75	1.34/1.26	1.74/2.5	3.32/3.8	3.66/3.01	2.18/1.56	1.29/1.19	1.08/0.84	0.44/0.1	-0.47/-1.27	-2.59/-2.37	-0.78/0.1	0.11/0.06	-1.23/-0.81	0.03/0.41	0.22/-0.12	-0.45/-0.62	-0.67/-0.34	0.47/1.03	
Theta (67.5°)	1.14/0.6	-0.16/-0.75	-0.83/-0.25	0.63/1.49	2.43/2.88	3.16/3.01	2.71/2.69	3.24/4.12	4.82/5.05	4.36/3.02															



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

Theta	Phi(125°)	Phi(120°)	Phi(115°)	Phi(110°)	Phi(105°)	Phi(100°)	Phi(95°)	Phi(90°)	Phi(85°)	Phi(80°)	Phi(75°)	Phi(70°)	Phi(65°)	Phi(60°)	Phi(55°)	Phi(50°)	Phi(45°)	Phi(40°)	Phi(35°)	Phi(30°)	Phi(25°)	Phi(20°)	Phi(15°)	Phi(10°)	Phi(5°)	Phi(0°)
Theta(125°)	-15.57/-12.44	-11.74/-13.26	-10.84/-11.52	-9.51/-10.29	-8.82/-8.19	-7.24/-12.3	-9.71/-7.7	-11.84/-10.75	-12.02/-14.89	-15.87/-10.05	-9.88/-12.18	-14.14/-12.37	-10.12/-9.27	-8.38/-7.73	-8.87/-14.95	-10.21/-15.46	-10.05/-14.15	-12.99/-9.32	-9.46/-9.72	-11.44/-10.02	-10.14/-9.6	-12.41/-11.05	-8.44/-14.36	-12.59/-13.71	-13.13/-15.61	
Theta(120°)	-11.74/-13.26	-13.11/-11.15	-11.07/-8.15	-7.02/-7.99	-7.57/-7.25	-6.25/-9.56	-15.29/-10.75	-8.74/-11.82	-14.53/-11.69	-11.45/-9.7	-13.36/-15.2	-15.17/-15.02	-15.17/-14.46	-10.59/-6.91	-6.15/-11.28	-10.67/-12.01	-13.74/-12.46	-12.43/-8.72	-9.81/-10.8	-9.03/-11.64	-9.23/-8.43	-10.27/-5.51	-5.71/-6.25	-10.91/-12.32		
Theta(115°)	-10.71/-15.09	-11.73/-7.38	-9.34/-7.38	-4.33/-5.46	-8.55/-13.49	-13.26/-11.62	-14.47/-13.56	-10.76/-14.48	-11.56/-13.17	-11.73/-8.26	-13.81/-14.25	-16.02/-10.44	-11.62/-13.6	-11.76/-15.23	-12.61/-9.76	-10.13/-13.04	-15.16/-9.89	-8.82/-7.89	-8.97/-8.88	-7.98/-14.57	-10.62/-12.85	-9.69/-9.88	-8.64/-5.74	-6.03/-8.24		
Theta(110°)	-8.43/-5.63	-7.34/-7.89	-8.91/-9.64	-10.59/-13.87	-11.54/-12.22	-11.59/-12.83	-14.68/-10.03	-9.69/-14.4	-11.02/-14.55	-15.71/-13.58	-14.04/-11.19	-11.79/-10.03	-10.71/-15.54	-11.82/-9.55	-12.17/-10.08	-6.29/-10.15	-15.46/-13.1	-9.53/-10.57	-13.39/-13.03	-11.22/-16.04	-11.27/-12.87	-15.55/-12.1	-10.36/-11.2	-131/-13.13		
Theta(105°)	-8.14/-8.99	-7.87/-7.28	-9.71/-10.22	-9.47/-12.1	-14.55/-8.99	-6.42/-8.61	-12.37/-12.05	-10.27/-11.5	-14.16/-13.72	-14.46/-11.53	-9.72/-9.16	-12.25/-14.48	-15.64/-11.94	-9.82/-8.88	-6.47/-5.3	-11.68/-13.57	-12.49/-10	-12.23/-13.28	-15.15/-15.35	-14.31/-12.76	-8.89/-5.52	-6.96/-10.51	-15.49/-12.97	-13.16/-8.8		
Theta(100°)	-9.82/-8.74	-6.28/-7.41	-8.83/-9.09	-11.36/-14.17	-12.31/-12.55	-14.81/-15.55	-15.36/-11.31	-8.96/-9.38	-9.39/-9.4	-11.67/-14.48	-14.68/-10.05	-9.47/-11.31	-8.69/-6.77	-6.51/-3.47	-1.4/-2.99	-8.22/-7.32	-8.06/-9.41	-11.07/-13.05	-10.94/-9.73	-11.05/-10.03	-10.55/-6.19	-3.27/-4.43	-7.01/-8.95	-11.05/-9.33		
Theta(95°)	-9.31/-13.11	-15.19/-14.95	-14.51/-15.23	-14.73/-15.01	-14.78/-14.45	-13.41/-14.71	-14.84/-12.8	-11.15/-10.65	-10.51/-11.09	-12.71/-12.18	-9.45/-7.15	-7.63/-11.44	-12.88/-10.9	-10.41/-7.76	-5.87/-5.76	-4.87/-4.8	-6.35/-7.32	-9.23/-11.71	-10.21/-9.35	-9.81/-7.41	-7.64/-8.61	-5.78/-5.49	-6.91/-6.88	-6.64/-7.09		
Theta(90°)	-13.71/-14.43	-12.75/-10.83	-9.03/-9.55	-11.33/-12.51	-12.83/-13.56	-13.53/-13.83	-13.89/-13.05	-13.81/-14.86	-15.15/-14.89	-15.19/-15.38	-13.76/-11.8	-9.97/-8.52	-8.42/-9.15	-10.33/-10.5	-10.69/-10.69	-10.69/-9.56	-8.54/-8.49	-8.81/-9.73	-10.27/-10.3	-10.61/-10.61	-10.95/-11.33	-10.03/-9.26	-9.77/-10.6	-10.61/-12.12		
Theta(85°)	-11.41/-11.52	-10.91/-10.16	-9.99/-8.61	-8.31/-8.87	-9.47/-11.69	-13.81/-15.39	-14.87/-15.61	-14.03/-13.96	-13.73/-14.76	-15.82/-14.47	-11.74/-9.78	-8.85/-8.32	-8.41/-9.38	-10.68/-11.12	-10.74/-10.83	-10.94/-10.88	-10.41/-10.27	-9.77/-9.28	-9.54/-10.21	-11.49/-12.32	-13.31/-14.48	-14.84/-13.84	-13.89/-12.52	-11.85/-11.3		
Theta(80°)	-9.07/-8.76	-8.39/-7.04	-6.79/-7.65	-8.53/-9	-11.12/8.7	-14.18/-14.87	-15.71/-14.87	-14.83/-15.6	-14.96/-12.36	-11.38/-11.03	-10.24/-9.4	-9.03/-9.82	-10.87/-10.35	-9.16/-8.68	-8.94/-8.66	-7.92/-7.89	-8.28/-9.02	-9.87/-9.73	-10.14/-10.18	-11.03/-12.3	-12.38/-12.2	-12.51/-11.5	-11.02/-11.82	-11.21/-10.29		
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(0°)	-13.44/-12.93	-13.43/-13.78	-12.29/-11.75	-11.04/-11.43	-11.47/-11.55	-12.28/-11.82	-11.52/-11.14	-12.36/-13.09	-13.08/-13.82	-14.58/-15.62	-15.66/-16.09	-15.26/-15.21	-14.26/-14	-13.16/-12.25	-11.21/-11.24	-10.94/-10.67	-10.55/-10.65	-11.11/-11.32	-11.66/-11.65	-11.86/-13.23	-13.91/-15.55	-15.56/-15.31	-15.15/-14.94	-15.15/-14.77		
Theta(7.5°)	-12.35/-11.98	-12.65/-12.9	-11.98/-10.65	-9.53/-9.66	-10.13/-11.27	-11.51/-11	-10.41/-10.72	-12.16/-13.33	-14.21/-16.21	-16.14/-15.73	-15.31/-14.18	-15.12/-14.81	-15.34/-15.35	-14.23/-13.06	-11.41/-10.46	-10.65/-10.61	-10.93/-10.81	-10.83/-10.85	-10.61/-9.99	-10.51/-11.84	-141/-13.98	-13.28/-14.45	-14.72/-15.27	-13.57/-12.07		
Theta(15°)	-9.49/-9.1	-8.36/-8.09	-7.93/-8.69	-8.59/-8.97	-9.28/-9.7	-9.01/-7.71	-7.41/-7.57	-7.92/-9.06	-11.51/-13.27	-15.61/-15.9	-14.95/-15.56	-15.11/-12.73	-11.35/-10.31	-9.87/-10.07	-10.67/-11.39	-12.53/-12.63	-13.14/-11.73	-11.52/-11.59	-10.95/-10.13	-10.05/-10.87	-10.79/-10.41	-9.98/-10.17	-9.68/-9.64	-9.68/-10.28		
Theta(22.5°)	-7.41/-6.59	-5.33/-5.04	-4.78/-4.11	-3.55/-4.4	-5.94/-6.38	-5.13/-4.1	-3.54/-3.78	-4.84/-5.98	-6.85/-8.16	-9.54/-12.13	-14.71/-15.13	-13.74/-11.25	-9.04/-7.29	-6.22/-5.46	-5.39/-6.89	-8.26/-8.69	-9.02/-9.63	-12.02/-14.21	-12.33/-10.17	-9.92/-10.56	-9.95/-9.98	-7.45/-7.84	-8.79/-9.35	-8.79/-8.1		
Theta(30°)	-4.51/-3.68	-3.63/-3.31	-2.77/-1.97	-1.74/-1.58	-1.95/-2.47	-2.61/-1.31	-0.54/-0.96	-1.92/-1.97	-2.07/-2.4	-3.17/-4.82	-6.67/-8.35	-9.74/-11.23	-10.39/-9.44	-8.61/-7.64	-7.04/-5.51	-5.04/-5.02	-5.49/-8.08	-10.01/-7.67	-7.64/-8.28	-7.08/-4.61	-3.54/-3.93	-5.14/-6.7	-8.52/-8.81	-7.47/-5.83		
Theta(37.5°)	-2.67/-1.65	-0.98/-1.92	-3.65/-3.19	-2.46/-1.46	-0.97/-0.95	-1.77/-1.7	-0.58/-0.5	-0.73/-1.4	-1.96/-1.89	-1.74/-2.31	-3.39/-5.07	-6.86/-6.85	-6.93/-5.79	-4.91/-3.56	-1.99/-1.96	-3.06/-3.33	-3.43/-2.69	-2.62/-3.57	-4.04/-2.81	-1.82/-2.75	-4.93/-5.2	-4.41/-3.63	-2.97/-3.06			
Theta(45°)	-2.12/-3.49	-3.61/-3.32	-5.44/-7.67	-6.22/-5.36	-4.91/-5.54	-7.05/-3.96	-3.31/-3.87	-3.13/-3.38	-2.91/-1.07	-0.14/-0.62	-1.95/-2.76	-2.31/-2.11	-3.11/-4.71	-5.34/-4.51	-3.76/-4.19	-5.21/-4.72	-3.86/-3.61	-2.19/-2.55	-3.89/-3.23	-2.31/-1.07	-1.51/-1.27	-0.21/-1.02	1.38/0.29	-1.18/-1.58		
Theta(52.5°)	-1.69/-1.44	-0.63/-0	0.17/0.19	-0.55/-1.13	-1.02/-1.05	-1.77/-3.99	-5.36/-4.71	-5.12/-3.57	-3.31/-6.14	-5.85/-3.19	-2.58/-2.11	-2.05/-2.01	-0.76/-0.27	-0.38/-0.91	-2.72/-3.55	-3.61/-2.48	-1.07/-1.29	-2.04/-1.69	-1.09/-0.97	-1.27/-0.73	0.22/-0.08	-0.87/-1.84	-1.27/-0.42	-0.72/-1.34		
Theta(60°)	0.06/1.26	0.86/0.98	2.83/2.87	2.47/2.54	3.74/5.3	3.48/1.82	2.92/2.77	1.57/2.78	2.72/1.23	-0.97/-1.96	-1.91/-1.48	-1.56/-0.29	0.50/4.9	1.07/1.51	1.33/1.15	0.65/0.7	0.28/1.07	-1.09/-0.36	-1.76/-2.94	-3.21/-0.85	0.66/0.54	0.37/0.98	-1.15/-1.93	-0.84/-0.59		
Theta(67.5°)	1.78/1.61	2.01/0.75	0.66/0.33	-0.47/0.57	1.05/1.39	1.13/1.08	1.85/1.09	1.77/3.6	3.56/3.07	3.14/3.32	3.17/2.4	0.69/-0.32	-1.57/-2.48	-2.16/-0.56	0.95/1.14	2.12/0.7	2.78/3.85	2.72/1.71	3.19/1.94	4.03/5.27	3.50/6.1	-0.01/2.2	3.01/3.47	3.66/3.04		
Theta(75°)	2.2/2.25	2.17/2.69	2.38/2.68	2.32/2.79	1.69/3.51	1.51/-0.89	0.59/0.44	0.18/1.59	-0.33/0.08	2.08/0.81	2.66/2.57	2.88/3.04	2.58/2.82	1.70/4.5	-0.87/-0.27	1.25/3.07	1.24/2.4	1.84/1.45	1.72/2.37	1.02/2.33	3.04/2.77	2/1.91	1.91/1.77			
Theta(82.5°)	2.85/2.81	3.33/3.44	2.95/3.45	3.84/3.28	3.77/6	4.17/2.32	3.63/6.2	3.19/5.34	3.44/2.05	0/-0.06	-0.14/-0.25	2.33/3.89	4.36/4.64	4.11/2.17	2.43/2.36	1.67/0.57	2.02/2.41	0.01/-1.67	-0.36/-0.65	0.38/2.17	1.88/2.42	2.74/2.37	1.28/0.03	1.15/2.83		
Theta(90°)	3.99/2.71	2.14/0.07	-0.05/0.09	0.44/1.68	3.36/3.34	1.72/2.16	2.56/2.26	3.99/5.31	3.02/2.09	3.12/3.38	2.92/2.47	3.36/2.13	1.09/1.61	1.71/0.55	-0.75/-0.55	-0.61/1.19	3.54/4.19	2.72/3.27	3.77/3.88	3.33/3.11	2.52/1.11	1.71/1.42	2.25/3.57	4.71/6.05		
Theta(97.5°)	2.41/0.56	1.31/1.18	0.41/0.86	0.51/1.54	0.51/1.83	0.48/-2.37	-1.37/-0.47	1.21/0.43	-0.64/0.95	-0.52/-0.12	1.51/9.7	3.87/4.75	5.98/5.67	4.13/2.52	2.11/1.13	-0.51/-1.21	-0.07/1.41	2.21/-0.32	0.88/-1.57	2.11/3.09	0.23/2.88	3.88/2.77	1.35/0.88	1.52/9.99		
Theta(105°)	1.69/0.64	-0.88/0.02	-2.96/-2.77	-3.02/-1.34	1.74/3.99	-0.09/0.12	3.11/4.38	0.24/-2.02	-3.23/-1.34	-2.22/-0.73	1.13/1.64	4.05/4.61	3.45/1.85	2.2/27	2.81/3.29	3.57/6.46	3.58/0.07	-2.07/1.2	2.55/3.94	1.72/-1.5	0.52/1.41	0.24/0.86				
Theta(112.5°)	-2.72/-5.39	-4.41/-5.31	-3.28/0.59	-2.21/-1.45	0.82/0.02	-0.73/-1.72	-1.56/-2.15	1.12/2.47	0.84/0.18	-3.65/-0.58	-3.29/-0.84	-2.54/-1.44	0.82/-0.3	-1.32/-1.49	-3.38/-4.09	-2.05/-0.87	2.39/2.06	3.46/-0.22	3.62/5.2	1.64/2.12	-4.65/-6	-0.31/-1.01	-2.49/-2.87	-1.91/-0.52		
Theta(120°)	-1.74/-5.06	-2.65/-3.94	-3.91/-1.26	-1.93/-1.38	-1.74/-1.14	-2.13/-6.64	-5.34/-4	0.29/0.19	-1.71/-2.59	-9.11/-2.42	-5.89/-5.41	-3.26/-3.85	-0.07/-0.25	-3.63/-2.87	-1.39/2.1	-0.48/-4.74	-4.28/2.63	-3.63/-4.41	-7.41/-3.37	0.7/0.44	1.31/1.1	-0.17/0.07	-2.27/-5.25	-2.14/-0.76		
Theta(127.5°)	-0.93/-1.35	-0.88/-1.31	-2.76/-4.09	-5.58/-6.65	-5.34/-5.16	-6.51/-9.76	-6.68/-5.25	-5.32/-6.47	-4.12/-5.18	-4.82/-4.69	-6.17/-3.56	-5.27/-7.05	-2.34/-3.07	-4.65/-6.67	-5.38/-7.94	-5.27/-3.46	3.24/3.3	0.97/-1.26	-2.38/1.47	0.97/2.21	-5.67/-3.57	-3.11/-3.69	-2.72/-2.89	-2.54/-1.16		
Theta(135°)	-8.79/-9.27	-8.44/-5.8	-3.74/-2.71	-3.91/-5.52	-5.94/-5.18	-8.21/-15.29	-9.77/-13.49	-13.44/-10.1	-6.04/-5.8	-8.27/-7.75	-7.05/-8.96	-9.63/-8.27	-10.53/-10.64	-8.56/-6.81	-7.65/-6.36	-7.57/6.4	-3.41/7.23	-11.18/-9.95	-6.81/-5.05							



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

Theta (°)	10.49-12.22	15.19-17.8	16.67-14.34	12.99-12.34	12.25-12.42	13.83-14.64	14.29-13.21	12.18-11.64	11.52-11.74	12.06-12.16	11.91-11.49	11.22-11.07	10.96-10.67	10.27-9.86	9.65-9.81	10.36-11.25	12.54-14.14	16.41-19.13	18.09-18.85	19-18.88	17.18-16.24	15.44-14.22	12.52-10.95	9.98-9.8	
Theta (30°)	-11.74-12.98	-15.25-17.22	-16.59-14.44	-13.05-12.05	-11.76-12.42	-13.91-15.51	-16.01-15.28	-14.64-14.4	-15.31-16.72	-16.39-17.43	-13.74-11.02	-9.45-8.72	-8.65-8.8	-8.87-8.7	-8.34-8.01	-8.02-8.6	-9.88-11.89	-15.14-18.53	-19.04-18.09	-19.25-18.4	-17.46-16.49	-15.91-14.45	-13.82-12.63	-11.74-11.31	
Theta (45°)	-13.53-13.74	-13.33-12.28	-11.28-10.95	-10.98-11.22	-12.04-14.23	-18.63-18.42	-17.77-16.12	-16.02-18.43	-19.05-18.13	-16.58-12.99	-11.24-10.46	-9.87-9.22	-8.61-8.07	-7.68-7.32	-6.93-6.53	-6.37-6.73	-8.05-10.56	-14.65-17.91	-18.74-18.07	-17.77-17.37	-15.72-15.01	-14.32-13.75	-13.48-13.31	-13.11-13.11	
Theta (60°)	-12.89-12.4	-11.7-10.93	-10.61-10.9	-11.61-12.27	-12.83-14.05	-16.67-19.2	-16.77-14.54	-14.33-16.49	-18.97-17.75	-12.86-10.02	-8.68-8.5	-8.96-9.73	-10.39-10.83	-10.72-9.88	-8.61-7.33	-6.39-16.5	-6.79-8.42	-11.27-15.57	-18.91-19.34	-18.66-15.7	-14.36-14	-14.01-14.45	-14.78-14.43	-13.64-13.06	
Theta (75°)	-12.03-11.66	-10.83-10.3	-10.36-10.99	-11.87-12.29	-12.22-12.57	-13.91-16.29	-13.91-16.29	-14.41-16	-19.01-18.26	-13.07-9.61	-8.03-7.84	-8.95-11.4	-13.89-16.4	-17.77-17.14	-14.06-10.39	-6.66-6.6	-6.33-7.01	-8.62-11.24	-15.22-18.11	-15.86-13.55	-12.65-12.5	-12.99-13.75	-13.99-13.17	-12.91-12.09	
Theta (90°)	-10.67-10.59	-10.43-10.54	-11.01-11.4	-11.65-11.65	-11.54-11.67	-12.96-16.14	-19.42-16.65	-14.79-16.08	-17.78-19.23	-13.72-10.04	-8.62-9.23	-11.66-15.79	-17.44-15.55	-15.58-19.05	-17.74-17.99	-14.06-11.29	-10.04-10.02	-11.07-13.22	-15.93-15.65	-12.29-10.34	-9.87-10.31	-11.35-12.24	-12.31-11.67	-11.04-10.91	
Theta (105°)	-10.66-10.54	-11.01-12.14	-13.51-14.02	-13.55-12.51	-11.35-10.85	-12.04-16.19	-18.95-18.88	-17.71-17.47	-19.06-17.38	-12.07-9.45	-8.68-8.96	-12.56-14.09	-12.23-10.7	-10.67-12.09	-15.07-18.71	-18.89-18.92	-18.49-18.39	-18.66-17.92	-17.93-19.03	-15.67-12.3	-11.87-12.86	-14.11-14.22	-13.42-12.52	-11.89-11.42	
Theta (120°)	-17.11-16.1	-15.08-14.62	-14.64-14.89	-14.61-13.53	-12.12-11.77	-14.05-19.03	-18.07-14.98	-15.25-18.31	-15.86-12.36	-10.09-8.62	-8.51-10.27	-12.58-11.91	-10.02-9.04	-8.11-9.88	-11.34-13.93	-18.29-18.39	-18.83-18.7	-18.26-16.67	-17.29-19.2	-18.21-18.57	-19.12-19.16	-18.65-18.93	-18.16-17.03	-17.41-17.89	
Theta (135°)	-18.68-18.25	-14.15-12.25	-12.76-15.48	-19.18-18.18	-15.84-15.56	-17.47-18.08	-12.52-10.42	-12.21-16.58	-14.53-11.97	-11.13-10.57	-11.16-13.85	-15.89-13.24	-11.14-10.17	-9.57-9.1	-9.9-8.5	-12.37-15.72	-14.66-13.59	-15.79-19.07	-19.23-18.35	-18.04-19.41	-18.09-18.24	-18.66-19.25	-18.05-18.58	-18.32-18.62	
Theta (150°)	-14.28-13.41	-12.61-12.48	-14.7-19.14	-14.78-15.61	-18.35-16.71	-14.48-15.36	-10.67-9.98	-13.51-18.42	-13.82-11.17	-10.91-11.55	-13.59-17.52	-18.06-15.99	-15.15-13.4	-10.62-8.36	-7.22-7.26	-8.58-10.17	-10.15-9.6	-10.82-10.51	-17.99-18.2	-18.84-18.23	-18.76-17.31	-17.96-17.37	-16.59-17.97	-18.91-16.43	
Theta (165°)	-11.09-10.42	-10.89-12.09	-14.88-18.51	-15.87-17.29	-14.52-14.77	-15.13-11.91	-9.29-9.16	-12.66-18.6	-16.87-11.83	-10.52-10.87	-17.61-13.33	-10.14-14.84	-9.64-8.3	-5.94-6.55	-8.44-10.48	-9.99-8.8	-7.58-8.68	-11.57-15.42	-15.65-14.3	-14.59-16.59	-14.49-18.02	-17.42-18.82	-16.09-12.69		
Theta (180°)	-11.16-10.57	-11.43-14	-19.54-18.22	-15.91-11.04	-9.21-9.55	-11.53-13.38	-12.63-12.42	-15.49-18.11	-16.77-10.97	-8.77-8.62	-10.06-12.14	-12.71-13.59	-15.97-12.41	-8.11-6.1	-6.05-7.52	-10.15-12.41	-10.86-8.06	-6.79-7.21	-9.15-11.27	-10.47-8.54	-8.17-9.33	-10.99-13.45	-17.64-17.22	-14.41-12.79	
Theta (202.5°)	-15.69-11.7	-10.18-10.27	-10.99-10.85	-9.61-8.33	-8.14-9.11	-14.35-18.4	-18.61-14.41	-14.74-18.69	-16.89-10.59	-7.49-6.76	-7.92-10.61	-13.53-14.79	-15.42-12.01	-8.57-7.36	-8.22-10.97	-14.88-13.77	-9.56-7.28	-6.66-7.29	-8.37-10.58	-10.26-8.94	-8.95-10.75	-13.34-16.45	-18.22-18.42		
Theta (225°)	-11.26-8.75	-7.56-8.17	-8.56-8.98	-11.03-11.89	-13.54-15.81	-18.31-12.5	-8.61-7.17	-7.61-11.01	-14.63-12.08	-8.33-7.59	-9.69-15.93	-18.52-16.12	-11.68-8.86	-7.39-7.22	-8.54-11.75	-16.67-13.41	-9.35-8.13	-8.85-10.82	-13.14-15.75	-13.91-12.18	-11.47-11.95	-12.75-13.06	-13.35-13.89	-14.22-13.15	
Theta (247.5°)	-12.61-11.57	-11.1-11.69	-13.27-14.53	-13.98-12.84	-12.73-13.09	-11.29-8.11	-5.95-5.11	-5.74-8.09	-13.5-15.15	-10.64-9.87	-13.41-18.82	-15.54-10.29	-8.3-7.5	-7.1-6.84	-7.18-8.51	-11.09-12.56	-11.31-10.76	-12.11-15.3	-18.14-18.51	-17.85-18.95	-17.25-17.01	-17.61-17.27	-16.37-15.36	-14.32-13.3	
Theta (270°)	-11.19-12.54	-13.75-13.68	-13.06-12.11	-11.41-11.42	-11.21-11.97	-9.66-7.06	-5.5-5.09	-5.97-8.49	-13.85-16.55	-14.07-13.44	-18.85-18.21	-12.69-9.36	-8.49-7.4	-9.19-9.19	-9.09-9.36	-9.92-9.93	-9.51-9.62	-10.87-13.22	-15.97-17.03	-16.28-15.01	-13.88-12.19	-12.17-11.47	-10.68-9.91	-9.55-9.9	
Theta (300°)	-9.19-10.14	-12.76-13.35	-12.82-11.93	-11.48-11.46	-11.22-9.99	-8.16-7.62	-6.03-6.29	-7.43-9.83	-14.41-18.27	-19.02-18.79	-18.06-17.79	-11.08-11.61	-12.58-13.26	-13.63-13.36	-12.13-10.51	-9.25-8.96	-9.78-11.51	-14.48-13.37	-11.99-10.39	-8.87-7.6	-6.68-6.27	-6.48-7.37			
Theta (330°)	-7.98-8.96	-9.32-9.18	-9.07-9.25	-11.72-10.23	-10.33-9.83	-9.12-8.71	-8.95-10.01	-11.95-14.8	-17.71-18.37	-18.41-18.47	-19.39-15.38	-13.25-12.12	-11.81-12.2	-13.26-14.99	-16.41-15.57	-13.16-11.05	-9.76-9.55	-10.41-12.22	-14.42-15.74	-15.3-13.7	-11.81-9.84	-8.88-6.7	-5.83-5.57	-5.84-6.61	
Theta (352.5°)	-8.06-8.23	-8.24-8.47	-9.23-10.52	-12.12-13.52	-13.91-13.51	-13.1-13.18	-14.19-16.35	-19.72-18.72	-18-18.02	-18.29-17.39	-17.62-15.58	-14.23-13.51	-13.17-13.31	-14.11-14.99	-15.53-14.24	-12.67-11.43	-10.78-10.92	-11.89-13.56	-15.51-16.67	-16.07-14.18	-12.17-10.36	-8.87-7.86	-7.34-7.21	-7.47-7.7	
Theta (360°)	-10.53-10.66	-11.1-12.31	-14.38-16.72	-17.73-16.67	-15.17-14.15	-13.63-13.78	-14.64-16.39	-19.32-17.89	-17.33-19.04	-18.5-17.55	-16.37-15.39	-14.41-13.49	-12.87-12.25	-11.61-10.98	-10.42-10.99	-11.81-12.74	-13.81-14.87	-15.59-15.72	-15.11-13.67	-12.26-11.33	-10.75-10.43	-10.31-10.35			
Theta (243.5°)	-16.01-15.71	-15.87-16.16	-15.9-14.78	-15.93-12.69	-12.22-12.11	-12.34-12.94	-13.83-15.72	-18.43-17.66	-17.83-17.63	-18.33-18.45	-17.93-18.61	-16.28-14.11	-12.82-10.91	-10.03-9.57	-9.26-9.07	-8.96-9.08	-9.55-10.06	-10.44-10.83	-11.54-12.58	-14-16.07	-17.91-17.68	-19.13-17.6	-16.52-16.1	-16.06-16.11	
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°)	
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°)	-18.77-18.89	-16.52-14.67	-13.24-12.14	-11.26-10.69	-10.3-10	-9.69-9.44	-9.38-9.67	-10.26-11.18	-12.27-13.39	-14.67-16.25	-18.16-17.85	-18.91-18.62	-18.91-18.18	-18.56-16.55	-14.61-13.66	-12.85-12.06	-11.25-10.67	-10.49-10.49	-10.72-11.14	-12.01-13.59	-15.93-19.02	-18.19-17.74	-18.35-18.53	-18.22-17.94	
Theta (7.5°)	-19.37-17.17	-19.04-13.83	-17.63-17.92	-16.57-14.05	-13.03-12.14	-11.71-11.35	-11.38-11.81	-12.71-13.39	-15.21-16.31	-17.28-17.18	-19.02-13.31	-18.26-18.91	-17.43-15.11	-13.21-11.75	-10.78-10.35	-10.10-9.98	-9.69-9.58	-9.55-9.6	-9.69-9.66	-9.79-10.78	-10.89-11.96	-13.35-14.83	-16.35-17.48	-18.25-18.97	
Theta (15°)	-14.77-15.85	-17.35-18.26	-17.72-18.14	-17.46-18.71	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16	-17.52-18.16
Theta (22.5°)	-13.03-14.12	-14.45-14.49	-14.55-14.84	-15.41-16.32	-17.17-17.15	-18.69-17.46	-17.71-18.08	-19.07-17.94	-17.38-14.72	-12.91-11.83	-11.39-11.41	-11.63-11.64	-11.18-10.28	-9.28-8.27	-7.51-7.05	-6.87-6.99	-7.38-7.97	-8.66-9.21	-9.24-8.82	-8.16-7.61	-7.26-7.15	-7.24-7.53	-8.11-8.98	-10.28-11.19	
Theta (30°)	-10.27-12.05	-13.31-13.04	-11.74-10.33	-9.27-8.67	-8.61-9.09	-9.96-11.23	-12.78-14.56	-16.59-18.84	-19.01-18.92	-17.8-17.99	-17.72-17.17	-18.25-19.74	-16.67-13.85	-11.42-9.27	-6.55-6.22	-6.22-6.51	-7.05-7.53	-7.59-7.14	-6.54-6.12	-5.98-6.07	-6.34-6.62	-7.01-7.49	-8.21-9.34		
Theta (37.5°)	-7.92-9.48	-10.89-10.51	-8.72-6.83	-6.34-4.47	-4.27-4.67	-5.49-6.63	-8.07-9.68	-11.15-12.16	-12.42-12.13	-11.63-11.34	-11.27-11.52	-11.79-11.75	-11.51-10.85	-8.93-8	-7.29-6.75	-6.51-6.91	-5.57-5.45	-5.62-6.8	-5.16-5.25	-4.78-4.49	-4.46-4.62	-4.85-5.12	-5.45-5.8	-6.26-6.99	
Theta (45°)	-5.89-6.67	-7.31-7.25	-6.24-4.69	-3.27-2.44	-2.3-2.7	-3.49-4.58	-6.02-7.66	-8.41-7.75	-6.62-8.84	-5.59-5.74	-4.15-6.61	-7.1-7.37	-7.2-6.54	-5.63-4.83	-4.36-4.3	-4.43-4.57	-4.61-4.55	-4.57-4.51	-4.16-3.61	-3.16-2.99	-3.09-3.4	-3.82-4.24	-4.61-4.86	-5.08-5.44	
Theta (52.5°)	-3.93-4.17	-4.72-5.29	-5.16-3.98	-2.61-1.69	-1.41-1.57	-2.03-2.92	-4.21-5.06	-4.27-2.74	-1.66-1.34	-1.85-1.32	-4.71-6.05	-6.72-7													



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

Theta (°)	Phi (°)	Phi(22.5°)	Phi(37.5°)	Phi(52.5°)	Phi(67.5°)	Phi(82.5°)	Phi(97.5°)	Phi(112.5°)	Phi(127.5°)	Phi(142.5°)	Phi(157.5°)	Phi(172.5°)	Phi(187.5°)	Phi(202.5°)	Phi(217.5°)	Phi(232.5°)	Phi(247.5°)	Phi(262.5°)	Phi(277.5°)	Phi(292.5°)	Phi(307.5°)	Phi(322.5°)	Phi(337.5°)	Phi(352.5°)	
Theta (112.5°)	-18.55/-13.94	-13.13/-14.13	-9.58/-12.07	-14.32/-8.66	-8.07/-12.96	-11.29/-8.95	-12.88/-16.3	-17.11/-18.06	-19.02/-12.22	-14.15/-16.98	-18/-18.42	-16.08/-12.08	-12.34/-11.44	-12.35/-18.2	-13.29/-18.28	-9.92/-18.17	-14.29/-15.05	-12.64/-12.7	-18.86/-18.43	-13.56/-18.01	-18.21/-15.53	-14.01/-16.73	-14.06/-18.36	-14.01/-18.22	
Theta (120°)	-15.02/-19.16	-14.69/-11.35	-11.12/-9.18	-9.44/-9.66	-11.37/-8.62	-9.49/-13.01	-18.16/-10.62	-11.27/-15.77	-17.81/-14.69	-13.55/-14.36	-16.78/-18.59	-18.85/-18.25	-19.03/-16.56	-15.79/-5.83	-8.83/-17.95	-17.61/-13.07	-14.88/-17.58	-16.46/-11.06	-16.69/-17.69	-15.36/-17.05	-15.88/-13.81	-10.22/-7.36	-7.58/-12.21	-15.22/-13	
Theta (127.5°)	-16.51/-18.63	-13.45/-8.65	-13.13/-11.19	-7.77/-8.48	-12.06/-18.49	-14.1/-12.14	-16.97/-18.18	-15.75/-18.06	-15.22/-18.69	-13.69/-11.59	-17.96/-18.67	-19.18/-13.88	-11.71/-18.54	-18.11/-17.97	-18.26/-13.89	-9.68/-14.93	-19.05/-11.9	-11.68/-17.43	-17.44/-16.57	-18.78/-18.74	-17.38/-10.31	-18.16/-17.31	-18.01/-10.31	-18.16/-6.29	-5.02/-8.52
Theta (135°)	-11.66/-8.48	-6.37/-6.75	-9.64/-15.58	-18.29/-15.82	-12.31/-15.35	-18.1/-18.25	-16.32/-12.62	-11.28/-16.34	-12.41/-18.58	-19.26/-17.56	-18.61/-18.28	-17.75/-12.68	-12.52/-17.81	-13.43/-12.27	-17.35/-13.65	-7.27/-9.97	-19.68/-14.4	-13.18/-19.11	-16.07/-17.24	-17.23/-18.87	-18.72/-18.24	-18.22/-18.72	-12.95/-12.25	-14.36/-17.94	
Theta (142.5°)	-18.93/-17.53	-14.73/-12.54	-12.55/-14.02	-12.86/-14.65	-18.4/-13.88	-9.16/-9.76	-14.01/-14.44	-14.88/-15.88	-16.07/-15.43	-17.17/-11.82	-10.14/-8.53	-12.9/-16.58	-18.55/-17.78	-19.17/-17.67	-9.21/-7.74	-12.41/-17.76	-13.81/-9.79	-12.69/-18.56	-19.01/-18.24	-19.18/-19.09	-14.31/-11.2	-15.82/-17.72	-18.16/-14.34	-18.31/-18.74	
Theta (150°)	-9.74/-10.69	-11.52/-15.71	-17.38/-18.23	-18.01/-15.69	-13.26/-13.61	-16.98/-10.07	-16.98/-10.07	-17.17/-15.38	-15.78/-16.68	-10.74/-8.79	-17.16/-16.77	-17.17/-10.02	-10.84/-12.67	-11.71/-12.79	-17.29/-8.91	-4.56/-5.8	-12.88/-11.77	-12.86/-18.97	-18.65/-17.42	-14.37/-11.12	-13.30/-7.88	-17.73/-9.58	-11.08/-11.95	-11.13/-8.75	
Theta (157.5°)	-12.88/-14.85	-17.73/-17.23	-17.37/-18.66	-18.83/-18.14	-17.62/-17.38	-17.45/-18.56	-17.33/-14.12	-12.93/-13.83	-13.29/-12.69	-13.17/-12.94	-11.26/-8.54	-8.35/-12.76	-18.02/-18.47	-19.04/-14.37	-12.71/-16.16	-13.44/-9.77	-7.69/-6.77	-8.59/-13.84	-16.34/-13.84	-10.08/-7.28	-7.54/-9.78	-8.99/-7.86	-7.88/-9.74	-11.31/-11.67	
Theta (165°)	-17.81/-18.65	-17.28/-15.15	-12.24/-13.35	-15.5/-16.99	-18.34/-17.79	-15.14/-15.13	-17.56/-18.38	-19.3/-19.1	-19.02/-17.21	-18.34/-18.61	-15.67/-12.16	-10.47/-13.01	-11.43/-14.06	-16.81/-16.14	-14.29/-12.19	-10.52/-9.04	-8.09/-7.75	-8.39/-6.66	-10.81/-12.69	-12.85/-11.44	-10.89/-11.54	-12.18/-11.43	-12.82/-17.61	-18.53/-18.72	
Theta (172.5°)	-19.05/-18.25	-16.05/-14.26	-14.4/-12.8	-11.6/-11.71	-11.74/-12.69	-15.99/-17.85	-17.4/-18.02	-17.17/-19.01	-18.62/-19.48	-18.49/-16.49	-13.02/-10.81	-9.96/-9.63	-11.02/-11.91	-13.89/-14.11	-12.78/-11.64	-10.29/-10.88	-10.24/-9.98	-9.42/-9.12	-9.18/-10.14	-11.84/-13.07	-14.64/-16.37	-18.01/-18.9	-18.89/-17.77	-18.42/-18.46	
Theta (180°)	-10.03/-10.94	-12.87/-12.35	-11.99/-13.06	-13.42/-13.04	-15.86/-18.05	-18.95/-18.19	-18.74/-16.88	-17.16/-18.83	-17.38/-14.59	-13.44/-12.91	-11.92/-10.81	-10.85/-13.22	-16.69/-16.55	-14.61/-14.13	-14.36/-14.49	-13.81/-13.03	-11.47/-10.76	-10.22/-9.4	-9.72/-9.95	-11.31/-12.68	-13.47/-13.06	-12.86/-12.16	-11.67/-12.61	-11.44/-10.21	
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°)	-17.17/-39	-18.37/-18.77	-17.63/-19.08	-17.91/-18.81	-18.58/-17.83	-18.98/-16.34	-15.01/-14.08	-14.59/-14.77	-14.13/-15.32	-17.53/-18.06	-18.74/-18.94	-18.45/-18.51	-18.61/-19.18	-17.91/-18.89	-18.19/-19.01	-18.16/-17.37	-16.02/-15.17	-15.71/-16.39	-16.95/-16.99	-17.65/-18.69	-18.88/-19.39	-18.81/-18.87	-17.69/-18.65	-18.49/-17.3	
Theta (7.5°)	-18.15/-17.78	-18.26/-19	-18.71/-18.61	-18.28/-17.23	-17.51/-18.32	-16.09/-14.26	-13.83/-14.64	-17.22/-19.11	-19.95/-19.07	-19.09/-18.7	-19.13/-17.19	-18.51/-18.75	-17.26/-17.52	-16.01/-15.98	-16.03/-15.48	-16.17/-16.22	-14.41/-12.69	-14.12/-12.69	-12.99/-14.12	-15.47/-15.38	-14.93/-16.13	-17.72/-17.2	-16.65/-16.63	-16.05/-16.63	
Theta (15°)	-17.17/-88	-18.07/-18.99	-18.37/-18.74	-18.73/-18.01	-18.05/-19.16	-15.55/-12.79	-12.04/-12.22	-13.15/-15.25	-19.09/-18.13	-18.73/-19	-17.91/-18.49	-18.17/-15.52	-18.53/-17.42	-18.06/-17.12	-16.48/-13.85	-13.17/-12.61	-11.32/-9.98	-10.19/-10.63	-10.78/-11.38	-12.25/-13.49	-12.45/-13.49	-13.56/-13.74	-14.17/-16.01		
Theta (22.5°)	-18.08/-18.79	-14.96/-15.25	-14.71/-11.06	-9.86/-12.22	-16.05/-18.77	-14.02/-11.63	-10.42/-10.45	-13.21/-16.53	-16.37/-13.91	-12.83/-15.13	-17.58/-17.79	-16.96/-14.96	-13.55/-12.71	-12.43/-12.27	-12.32/-15.11	-18.48/-18.98	-18.36/-16.88	-16.48/-16.87	-13.35/-11.06	-11.84/-14.42	-15.81/-15.57	-15.53/-15.58	-17.17/-17.45	-16.91/-17.48	
Theta (30°)	-12.01/-11.06	-11.06/-10.74	-10.81/-10.4	-8.51/-7.44	-6.57/-8.41	-10.57/-8.62	-6.77/-6.92	-7.93/-7.64	-6.72/-6.14	-6.44/-7.6	-8.99/-10.1	-11.14/-10.32	-13.64/-13.1	-13.55/-14.1	-14.73/-13.32	-11.01/-12.13	-11.84/-12.14	-14.42/-14.92	-18.37/-18.5	-16.06/-11.9	-11.29/-11.77	-11.89/-12.58	-15.32/-17.42	-15.38/-17.2	
Theta (37.5°)	-6.58/-5.92	-5.61/-5.72	-9.11/-7.76	-7.03/-5	-3.96/-4.31	-5.12/-4.04	-2.86/-3.39	-4.51/-5.45	-5.81/-6.37	-5.72/-5.75	-1.62/-8.49	-11.41/-10.64	-10.14/-10.93	-11.62/-8.56	-7.22/-11.67	-3.86/-6.71	-7.17/-7.75	-4.52/-8.65	-4.57/-3.99	-6.22/-7.94	-8.21/-6.85	-6.11/-6.77			
Theta (45°)	-7.03/-7.81	-6.08/-4.89	-7.47/-10.58	-9.51/-7.93	-6.85/-8.2	-11.85/-6.21	-5.02/-6.13	-6.49/-8.07	-5.75/-2.43	-2.12/-3.04	-4.38/-5.87	-5.21/-4.62	-6.06/-8.56	-10.16/-8.94	-7.33/-7.92	-8.32/-6.89	-6.59/-5.77	-3.94/-5	-5.18/-4.79	-5.37/-3.46	-3.66/-4.15	-4.13/-3.02	-2.06/-3.56	-6.12/-6.73	
Theta (52.5°)	-8.07/-7.36	-4.71/-4.79	-4.38/-2.79	-3.87/-6.55	-7.01/-6.46	-5.25/-8.9	-14.11/-7.88	-8.02/-7.29	-7.15/-10.44	-9.93/-6.84	-5.58/-11.7	-3.81/-3.39	-3.81/-3.7	-3.78/-5.48	-6.82/-6.63	-5.98/-5.21	-4.72/-7.08	-6.63/-4.14	-4.87/-4.48	-5.17/-4.65	-3.08/-4.39	-4.37/-5.08	-5.67/-5.37	-5.77/-7	
Theta (60°)	-3.43/-2.92	-2.24/-2.76	-1.75/-1.61	-3.09/-3.31	-1.30/-3.6	-0.59/-2.91	-0.72/-0.5	-1.95/-0.68	-2.47/-3.24	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	-5.38/-3.47	-4.75/-4.32	
Theta (67.5°)	-3.05/-2.84	-2.88/-2.99	-3.61/-4.02	-4.68/-2.46	-1.62/-1.82	-1.48/-1.45	-0.63/-1.84	-1.540/-4.2	0.89/-0.51	-1.08/-0.48	0.460/-2.4	-1.77/-2.33	-4.93/-6.35	-3.61/-0.69	-0.41/-1.25	-0.93/-0.49	0.630/-7.4	-0.44/-1.48	-1.27/-2.75	0.830/-6	-0.77/-0.38	-1.04/-0.21	-0.270/-1.7	-0.9/-2.28	
Theta (75°)	-1.33/-1.39	-0.53/-0.19	-0.37/-1.59	-0.680/-2.1	-2.18/-1.3	-1.89/-1.39	-3.96/-4	-5.76/-2.07	-1.59/-1.86	-1.32/-2.94	0.05/-0.81	0.530/-5.2	-1.590/-4.6	-2.65/-0.42	-1.48/-2.7	-5.13/-1.81	-1.28/-0.5	0.10/-55	0.191/-19	-0.970/-3.4	-1.25/-1.53	-1.83/-1.66	-1.1/-1.06		
Theta (82.5°)	0.73/-0.65	0.450/-3	-2.31/-2.04	-0.24/-1.58	-2.21/-2.3	-0.48/-1.17	1.1/-1.31	-0.892/-4.1	2.85/-1.91	1.12/-2.08	2.06/-5.04	-1.440/-0.3	1.121/-32	0.2/-2.36	-1.51/-0.04	-1.99/-3.73	-2.14/-1.31	-3.86/-3.36	-5.26/-7.79	-6.4/-5.7	-4.67/-1.7	-1.18/-1.43	-0.67/-0.87	-0.850/-4.6	
Theta (90°)	-0.73/-1.42	-2.42/-3.38	-3.33/-4.22	-5.35/-2.22	0.11/-64	-2.16/-0.43	-9.02/-1.3	0.263/-29	1.26/-0.37	1.061/-67	0.311/-1.04	0.12/-1.23	-1.68/-1.48	-1.39/-2.54	-1.02/-0.59	-3.46/-2.72	0.391/-39	-0.29/-0.74	1.020/-53	2.0/-2	0.55/-0.02	0.870/-16	-0.190/-11	0.31/-0.01	
Theta (97.5°)	-0.82/-0.73	-0.340	-0.291/-1.01	-0.61/-0.34	-3.43/-0.76	0.273/-36	-4.12/-4.24	-4.8/-3.7	-3.07/-2.17	-3.05/-2.23	-1.45/-2.98	-0.581/-19	3.782/-3	-0.73/-2.39	-1.391/-109	-2.62/-7.37	-1.22/-1.92	-3.93/-13	-2.23/-2.13	0.09/-7.2	-4.86/-2.38	-4.44/-6.68	-2.87/-1.64	-1.190/-9.4	
Theta (105°)	-1.84/-2.03	-3.36/-3.1	-5.71/-10.15	-6.57/-4.94	-4.39/-2.31	-4.09/-2.58	-1.9/-1.4	-0.382/-19	-0.514/-36	-6.25/-2.76	-7.11/-6.42	2.261/-64	-0.671/-154	-5.11/-69	0.383/-38	-0.88/-3.4	-5.12/-4.9	-3.62/-1.45	-4.28/-3.38	-2.72/-7.83	-4.52/-2.02	-1.8/-2.52	-1.61/-2.52		
Theta (112.5°)	-8.34/-10.33	-8.89/-17.68	-8.4/-11	-6.96/-8.4	-4.01/-5.08	-4.46/-6.63	-5.22/-4.47	-1.403/-4	-7.95/-1.86	-6.78/-0.31	-2.96/-1.94	-8.42/-5.11	-1.673/-74	-6.48/-3.78	-1.673/-38	-6.514/-39	-0.08/-1.16	-1.15/-1.16	1.89/-0.48	1.310/-59	-4.19/-1.7	-3.39/-7.49	-5.23/-8.36	-8.29/-5.15	
Theta (120°)	-9.48/-6.7	-6.26/-6.57	-5.13/-3	-3.53/-3.66	-5.02/-3.52	-4.41/-4.21	-10.38/-11.6	-5.11/-4.29	-4.63/-4.3	-4.46/-4	-5.39/-5.95	-1.014/-94	-13.14/-9.81	-3.55/-4.5	-0.59/-7.68	-2.590/-73	-5.37/-6.39	-8.23/-16.57	-5.73/-5.99	-5.65/-6.99	-1.717/-8.6	-1.286/-8.96	-7.890/-10.76		
Theta (127.5°)	-5.23/-3.18	-3.07/-3.1	-1.79/-2.37	-4.25/-6.35	-6.04/-4.65	-6.97/-14.92	-7.46/-9.92	-13.26/-16.85	-9.62/-13.17	-12.98/-11.08	-13.77/-6.76	-6.82/-10.77	-5.2/-6.41	-11.38/-17.54	-7.06/-6.97	-7.84/-6.35	0.731/-53	-3.56/-4	-3.18/-3.33	-7.09/-6.73	-9.82/-10.54	-8.28/-5.91	-4.89/-3	-3.57/-5.32	
Theta (135°)	-9.99/-11.52	-9.41/-8.23	-8.19/-8.4	-12.12/-18.53	-13.81/-8.94	-12.17/-19.05	-14.02/-15.97	-17.08/-9.75	-7.46/-6.95	-8.37/-8.77	-12.39/-17.34	-18.44/-14.28	-18.36/-17.35	-18.55/-16.18	-15.59/-9.92	-11.07/-18.36	-10.65/-13.72	-17.21/-9.95	-5.58/-6.87	-3.91/-7.16	-8.22/-10.37	-5.57/-6.61	-8.79/-11.58	-10.12/-9.79	
Theta (142.5°)	-12.46/-10.77	-9.37/-9.04	-9.83/-10.85	-11.73/-10.16</																					



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

Theta (°)	-13.25/-13.23	-13.64/-13.1	-11.6/-12.05	-9.43/-9.51	-10.39/-11.19	-11.77/-12.39	-12.11/-12.58	-13.51/-13.8	-14.79/-15.22	-15.27/-16.35	-19.21/-19.02	-17.98/-18.21	-18.81/-18.63	-18.52/-19.15	-18.46/-17.36	-15.78/-14.43	-13.59/-13.91	-14.21/-13.21	-13.64/-14.43	-15.31/-16.71	-17.81/-18.22	-19.09/-18.01	-19.15/-17.84	-15.97/-14.67
Theta (15°)	-8.7/-8.19	-8.37/-9.38	-11.34/-12.05	-11.02/-9.82	-10.31/11.55	-13.08/-14.32	-15.18/-13.28	-12.48/-11.76	-11.64/-11.83	-11.18/-11.24	-12.14/-13.5	-15.28/-16.56	-17.94/-18.45	-18.35/-19.14	-18.97/-17.75	-18.97/-18.03	-18.57/-19.37	-19.07/-18.58	-17.07/-16.43	-17.18/-16.6	-17.79/-18.83	-18.51/-17	-15.47/-14.98	-12.63/-13.24
Theta (22.5°)	-10.9/-9.74	-9.08/-9.34	-11.03/-14.69	-11.86/-14.85	-12.61/11.54	-12.12/2.88	-14.64/-13.19	-11.35/-10.25	-9.89/-9.67	-10.05/-10.18	-10.46/-10.71	-11.02/-12.46	-14.47/-16.69	-18.33/-18.71	-19.35/-19.03	-18.83/-18.56	-17.72/-19.28	-18.61/-18.37	-17.44/-18.91	-18.73/-18.51	-15.97/-14.76	-14.86/-13.69	-14.38/-15.91	-15.28/-13.24
Theta (30°)	-16.83/-16.22	-14.98/-13.33	-11.21/-9.58	-9.81/-13.9	-18.12/-18.59	-18.47/-18.66	-17.04/-14.16	-12.81/-13.89	-12.65/-12.68	-11.79/-11.42	-10.74/-9.91	-9.78/-10.62	-11.39/-11.36	-11.94/-13.43	-15.42/-16.86	-19.07/-18.53	-19.34/-14.96	-12.81/-12.53	-12.17/-10.44	-8.19/-6.75	-6.92/-6.23	-9.76/-10.41	-11.46/-12.33	-14.56/-16.64
Theta (37.5°)	-5.39/-5.96	-5.8/-4.7	-4.07/4	-3.33/-3.05	-3.52/-3.79	-4.08/-5.51	-6.82/-7.21	-7.9/-10.47	-12.27/-11.61	-10.44/-10.16	-8.86/-8.96	-8.28/-7.7	-7.61/-7.42	-8.03/-8.42	-8.36/-8.15	-8.74/-8.98	-8.19/-7.75	-7.04/-6.19	-5.77/-5.82	-5.76/-5.73	-5.61/-5.77	-6.35/-6.24	-5.9/-6.69	-5.31/-5
Theta (45°)	-2.65/-2.41	-2.79/-2.75	-1.84/-1.88	-2.1/1.1	-0.71/-0.59	-0.75/-1.14	-0.93/-0.88	-2.08/-2.83	-0.59/-5.83	-6.68/-7.27	-8.8/-8.1	-8.69/-8.88	-7.38/-6.42	-5.73/-5.43	-5.49/-4.82	-3.32/-2.68	-3.63/-3.66	-3.64/-3.71	-3.63/-3.07	-3.63/-3.07	-3.53/-3.83	-3.39/-3.23	-3.59/-3.94	-3.61/-3.45
Theta (52.5°)	-2.32/-2.38	-1.72/-1.6	-1.6/-2.12	-4.1/3.67	-1.89/-1.13	-1.7/2.35	-1.68/-0.29	-0.59/-1.04	-0.090/2.4	-0.75/-1.82	-2.35/-3.29	-4.27/-4.43	-4.61/-5.39	-6.36/-7.38	-6.83/-4.61	-2.17/-0.51	-0.38/-1.51	-2.31/-1.82	-1.96/-1.91	-0.44/0.4	0.04/-1.44	-3.6/3.75	-2.93/-2.61	-2.4/-2.17
Theta (60°)	-0.76/-0.89	-1.74/-1.24	-0.58/-0.52	-0.92/-2.81	-2.19/-1.63	-3.37/-6.34	-6.5/-4.98	-3.5/-2.12	-0.61/-0.62	-1.77/-2.64	-1.99/-1.53	-1.24/-3.05	-5.24/-5.85	-5.61/-4.75	-1.690/27	0.61/-0.16	-1.29/-0.2	-0.93/-2.65	-1.77/-0.88	-2.98/-4.45	-1.250/7.9	1.270/5	-0.6/-1.1	
Theta (67.5°)	-1.97/-0.96	-0.81/-1.82	0.051/0.5	-0.56/-0.16	-0.520/0.99	0.31/-1.95	-1.65/-0.99	-1.68/-1.35	-0.78/-2.24	-4.86/-5.03	-3.66/-3.53	-2.28/1	-0.97/-1.02	-0.8/-0.99	-2.01/-3.11	-4.06/-3.72	-2.71/-3.56	-4.69/-4.88	-6.78/-5.15	-2.050/0.1	0.94/0.4	0.19/-0.88	-0.85/-1.29	
Theta (75°)	-0.14/-1.23	-0.440/0.9	1.152/8.5	2.181/67	1.832/6	2.331/44	1.250/91	-0.20/37	1.590/33	-0.550/28	0.18/0.71	-1.49/-1.77	-0.97/-0.12	0.861/79	1.320/66	-1.72/-1.72	0.61/0.03	-1.5/-0.53	-0.070/44	1.01/0.08	0/-1.36	-1.53/-1.9	-2.33/-1.3	-0.340/15
Theta (82.5°)	2.110/9	0.45/-0.86	-2.28/-0.17	-0.09/0.74	-0.180/18	-0.54/-1.65	0.461/0.3	0.61/46	1.62/0.06	-0.23/1.1	1.89/1.7	0.75/-0.13	-1.03/-1.59	-1.46/-1.65	-1.26/-1.8	-3.07/-0.69	1.440/71	-0.06/0.5	-0.94/-1.77	-0.480/3.8	-2.49/-2.53	-0.350/3.2	1.13/1.64	2.23/2.83
Theta (90°)	-1.19/-1.9	-1.18/-0.61	-2.350/15	-0.121/5.8	0.322/25	0.912/81	-0.44/-3.29	-2.240/34	-0.21/88	-0.260/109	-0.330/49	-0.602/50	-0.05/51	-0.42/1.64	-4.01/2.66	-1.93/-0.79	-3.17/-2.69	-2.13/-4.2	-0.46/0.7	2.39/3.1	-1.34/2.39	-1.1/2	-1.1/2	
Theta (97.5°)	0.85/-0.7	-2.5/0.85	-0.381/7.6	1.25/-1.12	0.932/84	1.670/44	-0.07/0.55	-1.5/1.25	0.72/4.25	-5.42/2.39	-3.11/3.81	-2.46/2.47	-2/1.17	-0.62/-0.29	-0.55/0.32	-0.39/0.34	1.572/65	1.15/-0.22	-0.580/38	2.91/3.22	2.11/5.4	0.45/-1.93	-1.73/-1.03	-2.08/-1.17
Theta (105°)	1.07/0.04	-3.010/56	-1.46/0.4	-0.54/-1.22	0.391/3	0.21/1.85	-0.38/-1.11	-1.830/19	-0.51/-3.59	-3.42/-1.41	-2.15/-2.44	-3.29/-4.4	-5.75/-4.2	-2.24/-3.26	-3.13/-3.11	-1.69/-3.77	0.91/1.98	1.62/-1.32	0.38/-3.68	-1.23/3.4	-3/4.8	-0.2/0.81	-0.47/-1.02	-1.28/0.35
Theta (112.5°)	-1.01/-2.98	-7.79/-2.76	-6.38/-6.88	-3.58/-10.56	-3.15/-1.95	-4.61/-7.27	-3.2/3.29	-2.630/38	-1.315/-0.56	-4.56/-4.29	-2.98/-1.64	-2.39/-5.83	-2.88/-2.52	-0.92/-3.35	0.06/0.1	-4.03/-3.4	-4.08/-0.91	-9.67/-2.8	-3.86/-7.7	1.250/3.7	-1.530/2.7	1.872/27	0.97/3.7	-5.47/-1.92
Theta (120°)	-1.91/-4.74	-13.08/-4.7	-3.93/-11.99	-8.11/-7.45	-6.04/-4.73	-5.87/-8.8	-6.59/-7.84	-13.37/-4.95	-4.14/-6.79	-7.61/-5.67	-3.7/-1.7	-3.2/-3.55	-1.88/-0.81	-0.98/-1.58	-4.09/-10.22	-8.58/-3.45	1.730/26	-0.24/-0.08	1.472/14	2.622/05	-0.55/-1.79	-1.52/-3.54	-5.79/-6.24	-7.42/-3.67
Theta (127.5°)	-5.59/-0.75	-8.85/-1.4	-4.16/-6.69	-7.35/-4.5	-2.87/-2.92	-3.06/-3.66	-3.56/-6.91	-11.82/-10.2	-9.63/-9.53	-17.67/-18.95	-10.26/-8.54	-8.66/-9.5	-8.5/-8.6	-4.99/-6.2	-9.95/-10.7	-8.5/-1.7	-4.54/-3.3	-9.08/-9.9	-11.98/-12.2	-10.73/-5.1	-16.69/-15.07	-12.27/-8.7	-8.99/-15.89	-12.51/-6.33
Theta (135°)	-5.9/-8.29	-15.42/-13.24	-15.89/-12.69	-7.36/-5.43	-5.94/-8.58	-7.33/-6.76	-8.61/-8.53	-9.12/-8.47	-7.14/-6.98	-10.76/-8.1	-17.76/-17.63	-11.43/-10.58	-10.76/-8.5	-9.15/-14.12	-18.79/-15.68	-12.69/-11.57	-15.49/-4.3	-7.02/-7.05	-4.86/-5.04	-19.73/-7.4	-5.57/-5.1	-12.87/-7.7	-7.69/-7.8	-6.97/-6.24
Theta (142.5°)	-4.77/-4.34	-6.68/-12.73	-18.19/-19.1	-12.28/-9.14	-9.05/-11.21	-9.82/-7.44	-7.12/-8.54	-9.83/-9.21	-8.98/-8.79	-10.61/-15.68	-14.9/-14	-18.18/-17.91	-15.14/-11.42	-11.09/-9.74	-10.63/-11.04	-6.69/-7.19	-5.22/-3.32	-6.75/-8.72	-4.83/-3.32	-4.39/-6.92	-5.86/-5.24	4.36/-4.17	-7.11/-11.52	-11.53/-7.75
Theta (150°)	-6.42/-5.07	-7.42/-15.29	-17.34/-16.6	-18.03/-15.39	-13.63/-15.46	-16.32/-12.73	-11.46/-14.92	-13.37/-11.63	-12.67/-17.46	-16.19/-11.48	-10.43/-11.85	-12.44/-10.26	-8.47/-4.74	-6.94/-6.7	-11.35/-11.8	-5.06/-6.21	-6.6/-2.6	-9.08/-11.31	-7.83/-4.27	-2.45/-3.3	-5.79/-8	-7.81/-7.03	-9.05/-13.2	-15.87/-11.05
Theta (157.5°)	-7.88/-9	-15.2/-18.02	-19.19/-18.17	-18.09/-14.1	-12.65/-16.35	-18.48/-14.28	-15.37/-18.3	-18.31/-15.83	-13.17/-10.98	-9.53/-9.43	-8.49/-9.1	-8.59/-8.07	-8.06/-8.52	-9.91/-11.8	-11.03/-10.94	-10.28/-9.85	-11.13/-11.5	-10.12/-8.08	-8.62/-7.04	-7.67/-9.01	-9.66/-7.55	-6.28/-6.3	-7.35/-7.58	
Theta (165°)	-18.19/-18.75	-19.23/-17.81	-14.75/-13.75	-14.39/-15.05	-14.17/-16.16	-17.71/-18.45	-17.64/-15.18	-11.63/-10.75	-9.53/-8.53	-7.58/-6.79	-6.37/-5.93	-5.55/-5.34	-5.55/-5.83	-6.29/-6.84	-7.91/-9.51	-11.16/-12.98	-13.58/-13.5	-13.31/-12.82	-11.65/-11.01	-10.63/-11.03	-12.18/-13.76	-14.65/-13.11	-12.13/-13.3	-14.72/-18.15
Theta (172.5°)	-15.59/-16.22	-17.59/-18.91	-18.89/-18.42	-18.25/-17.69	-18.51/-18.68	-19.1/18.4	-18.45/-19.44	-18.34/-18.39	-18.96/-19.36	-19.33/-18.99	-18.77/-18.37	-18.95/-18.75	-18.35/-19.02	-18.03/-19.1	-18.95/-19.2	-19.07/-16.89	-14.46/-13.86	-14.42/-13.93	-12.96/-11.85	-10.9/-15.7	-11.72/-14.28	-17.6/-18.58	-17.88/-18.45	-16.44/-14.97
Theta (180°)	-18.21/-17.82	-18.64/-17.6	-19.54/-16.06	-13.89/-11.97	-11.75/-11.75	-11.63/-12.31	-13.02/-13.49	-13.13/-12.22	-13.45/-14.25	-14.94/-14.94	-15.12/-15.46	-16.07/-16.47	-16.51/-16.7	-17.19/-16.5	-15.18/-13.19	-11.91/-11.04	-10.49/-10.87	-10.71/-10.08	-9.65/-9.21	-9.29/-10.51	-11.89/-14.53	-16.22/-17.91	-19.16/-18.67	-18.39/-16.74
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°)
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°)
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°)
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°)
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°)
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°)
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°)
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°)
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°)
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														



Radiated Composite Gain Data

Test Mode 1_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.1

Theta (112.5°)	-6.42/-4.09	-3.21/-0.41	-6.2/-8.03	-7.97/-8.23	-9.59/-11.19	-11.98/-13.2	-14.37/-13.33	-11.55/-10.56	-9.49/-9.01	-6.81/-5.84	-5.22/-4.57	-4.44/-9.7	-6.19/-7.55	-8.55/-4.82	-11.18/-13.98	-16.65/-17.95	-16.66/-14.82	-11.51/-7.9	-5.65/-4.82	-5.51/-7.67	-10.82/-13.92	-15.61/-12.93	-9.61/-8.08	-8.44/-8.79
Theta (120°)	-5.54/-6.66	-4.77/-6.69	-10.39/-10.96	-8.36/-6.86	-6/-3.3	-5.41/-6.5	-8.17/-9.72	-11.31/-12.87	-13.99/-13.75	-13.43/-13.81	-12.88/-10.12	-7.63/-6.01	-5.18/-4.8	-5.01/-5.85	-7.43/-9.78	-12.58/-12.74	-10.59/-9.77	-10.04/-9.21	-7.6/-7.42	-9.97/-17.44	-17.94/-11.63	-8.59/-6.24	-4.78/-4.4	-5.01/-5.95
Theta (127.5°)	-6.43/-6.5	-6.89/-8.63	-13.64/-18.96	-15.73/-12.25	-10.63/-9.79	-9.35/-8.62	-7.07/-5.86	-5.89/-6.96	-8.25/-7.9	-6.31/-5.24	-5.26/-6.29	-7.94/-9.82	-11.26/-12.25	-13.07/-13.99	-14.46/-13.47	-9.93/-6.84	-5.43/-5.82	-8.27/-14.01	-11.79/-17.43	-13.92/-13.79	-13.48/-13.15	-13.54/-13.6	-11.94/-9.22	-7.05/-6.2
Theta (135°)	-3.25/-4.02	-5.11/-6.6	-8.43/-8.23	-6.53/-5.56	-5.74/-7.18	-10.72/-18.44	-18.44/-11.49	-9.05/-9.05	-11.17/-14.74	-13.63/-9.54	-7.15/-9.53	-5.41/-5.21	-5.22/-5.31	-5.37/-4.99	-6.16/-6.96	-7.97/-8.77	-9.95/-11.27	-13.58/-18.03	-18.35/-14.12	-11.96/-13.88	-16.65/-16.61	-17.11/-12.61	-9.04/-6.12	-4.09/-3.13
Theta (142.5°)	-8.09/-9.67	-10.32/-8.94	-6.74/-4.59	-3.01/-2.23	-2.29/-2.84	-4.43/-7.2	-11.51/-16.68	-15.14/-11.93	-10.86/-11.64	-13.68/-15.77	-14.23/-10.47	-7.63/-5.82	-4.88/-4.5	-4.63/-5.31	-6.57/-8.05	-9.03/-8.79	-7.58/-6.54	-6.53/-8.07	-11.38/-14.22	-11.99/-10.37	-10.72/-12.36	-13.58/-12.92	-11.21/-9.31	-7.87/-3
Theta (150°)	-16.51/-18.72	-18.96/-15.09	-10.17/-7.15	-5.13/-3.86	-3.27/-3.32	-4.14/-6.53	-13.63/-16.76	-13.65/-13.06	-10.34/-8.6	-7.63/-7.18	-6.97/-6.61	-5.15/-4.01	-3.24/-2.88	-2.93/-3.41	-4.14/-5.9	-4.97/-5.39	-6.16/-6.99	-8.54/-6.42	-4.95/-4.69	-5.55/-7.89	-11.82/-17.22	-17.99/-17.43	-17.29/-15.75	
Theta (157.5°)	-12.21/-13.01	-15.29/-19.11	-18.51/-14.08	-10.54/-8.31	-7.11/-6.44	-6.57/-7.43	-9.25/-12.16	-16.59/-16.03	-10.67/-7.41	-5.33/-4.23	-3.97/-3.88	-4.01/-4.45	-5.24/-6.29	-7.27/-8.01	-8.37/-8.71	-9.68/-11.61	-14.81/-16.82	-15.36/-12.6	-10.13/-7.94	-6.76/-6.98	-8.59/-11.82	-17.51/-18.65	-18.13/-17	-14.43/-13.06
Theta (165°)	-8.79/-9.12	-9.84/-11.22	-12.51/-12.94	-12.19/-11.06	-10.12/-9.68	-9.76/-10.35	-11.84/-14.75	-17.56/-18.59	-11.72/-6.73	-5.06/-3.39	-2.34/-1.6	-1.31/-3.7	-1.79/-2.55	-3.4/-3.9	-5.57/-7.4	-10.29/-13.79	-16.36/-15.73	-14.71/-14.64	-14.54/-15.08	-15.55/-17.14	-18.54/-18.04	-16.99/-14.71	-12.98/-11.54	-10.21/-9.48
Theta (172.5°)	-8.36/-9.31	-10.61/-11.85	-12.01/-11.05	-10.17/-9.69	-9.61/-10.33	-11.39/-12.95	-15.29/-18.51	-19.18/-19.24	-12.74/-9.16	-6.62/-4.87	-3.69/-2.77	-2.21/-1.86	-1.74/-1.81	-2.05/-2.61	-3.65/-5.16	-7.13/-6.67	-9.84/-11	-12.33/-14.58	-18.13/-18.53	-17.55/-18.51	-17.77/-14.64	-12.51/-11.02	-9.84/-8.97	-8.37/-8.31
Theta (180°)	-8.28/-8.3	-8.15/-7.73	-7.03/-6.35	-6.09/-6.43	-7.25/-8.57	-10.31/-13.04	-16.84/-18.99	-18.97/-17.54	-13.99/-11.59	-9.76/-8.38	-7.37/-6.53	-5.93/-5.42	-4.96/-4.59	-4.52/-4.9	-5.78/-6.75	-7.46/-7.76	-8.35/-9.54	-11.41/-14.19	-18.28/-18.52	-19.87/-17.35	-14.53/-12.55	-11.19/-9.66	-8.61/-7.92	-7.71/-7.94
Freq(Hz)	2.45GPol.	PhiAnt.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°)	-11.69/-15.81	-15.68/-12.38	-9.39/-6.86	-4.82/-3.27	-1.99/-0.9	-0.120/-0.3	0.540/0.67	0.70/0.53	0.21/-0.37	-1.25/-2.47	-4.04/-5.93	-8.14/-10.53	-11.59/-10.58	-8.32/-5.95	-3.95/-2.35	-1.11/-0.14	0.61/1.12	1.46/1.69	1.82/1.82	1.76/1.64	1.51/1.24	0.69/-0.2	-1.51/-3.2	-5.27/-7.93
Theta (7.5°)	-14.73/-13.77	-10.56/-8.48	-7.14/-5.84	-4.45/-3.27	-2.23/-1.35	-0.84/-0.63	-0.52/-0.36	-0.41/-0.73	-1.21/-1.87	-2.76/-3.95	-5.55/-7.76	-10.37/-13.17	-13.89/-10.56	-6.89/-4.2	-2.18/-0.66	0.51/2.7	1.78/2.1	2.32/2.35	2.26/2.03	1.62/0.96	-0.01/-1.8	-2.81/-4.96	-7.92/-11.98	
Theta (15°)	-18.12/-12.26	-8.13/-6.11	-5.4/-3.2	-2.91/-2.79	-2.04/-1.46	-1.23/-1.42	-1.78/-1.97	-1.99/-2.2	-1.52/-2.06	-1.95/-1.93	-1.78/-2.02	-2.38/-3.08	-4.16/-5.99	-8.55/-12.49	-19.41/-18.11	-4.18/-2	-0.32/0.81	1.56/2.08	2.43/2.54	2.44/2.06	1.39/0.42	-4.13/-6.62	-10.47/-17.88	
Theta (22.5°)	-15.21/-11.22	-7.92/-5.75	-4.34/-3.58	-3.02/-2.37	-1.87/-1.09	-1.03/-1.45	-1.97/-2.06	-1.87/-1.64	-1.38/-1.2	-1.07/-1.14	-1.49/-2.27	-3.53/-5.55	-8.47/-12.95	-18.85/-13.78	-9.24/-6.07	-3.65/-1.84	-0.41/0.61	1.33/1.77	2.08/2.16	1.94/1.28	0.18/-1.33	-3.03/-4.71	-6.39/-8.23	-10.81/-14.11
Theta (30°)	-11.41/-12.19	-8.96/-6.36	-4.11/-2.79	-2.04/-1.54	-1.06/-0.76	-0.98/-1.61	-2.08/-1.84	-1.15/-0.52	-0.03/0.2	0.26/0.13	-0.28/-0.15	-2.25/-4.03	-6.51/-9.65	-11.78/-9.5	-6.67/-4.52	-2.93/-1.69	-0.65/0.1	0.61/0.95	1.13/1.14	0.80/0.03	-1.31/-2.71	-4.16/-4.54	-6.15/-6.81	-7.94/-9.54
Theta (37.5°)	-13.61/-13.69	-8.89/-5.21	-2.71/-1.01	0.04/0.6	0.84/0.77	0.11/-1.12	-2.31/-2.5	-1.69/-0.59	0.36/0.87	1.11/1.02	0.55/-0.28	-1.49/-3.18	-5.41/-8.22	-12.97/-9.77	-5.29/-3.62	-2.72/-1.69	-1.62/-1.22	-0.89/-0.39	0.09/0.42	0.48/0.08	-0.71/-1.78	-3.02/-4.31	-5.49/-6.78	-8.61/-11.09
Theta (45°)	-9.53/-7.85	-5.86/-4.11	-2.34/-0.6	0.84/1.93	2.67/2.99	2.62/1.64	0.26/-1.19	-2.31/-2.48	-1.84/-1.21	-0.71/0.51	-0.79/-1.49	-2.51/-3.71	-5.25/-7.31	-9.72/-10.18	-7.59/-5.4	-4.37/-3.93	-3.57/-3.03	-2.1/0.59	0.52/1.07	1.11/0.64	-0.26/-1.7	-3.55/-5.35	-6.69/-7.85	-9.19/-10.16
Theta (52.5°)	-4.58/-4.83	-5.41/-6.04	-5.99/-7.49	-2.92/-0.96	0.61/1.76	2.07/1.8	1.25/0.7	0.32/0.08	-0.48/-1.9	-4.05/-6.6	-6.52/-6.16	-6.02/-6.61	-8.48/-12.5	-17.87/-18.17	-11.93/-8.34	-6.13/-4.4	-2.92/-1.67	-0.44/0.61	1.11/0.9	0.07/-1.1	-2.34/-3.52	-4.02/-4.34	-2.81/-2.89	-3.55/-4.1
Theta (60°)	-5.39/-6.85	-8.54/-13.34	-18.59/-18.24	-11.96/-6.78	-3.44/-0.99	0.12/0.07	-1.07/-2.56	-2.14/-0.12	1.32/1.36	0.01/-2.98	-8.75/-9.05	-12.08/-7.2	-5.46/-5.05	-5.21/-4.98	-4.17/-3.15	-2.16/-1.37	-0.69/-0.32	-0.23/-0.33	-0.73/-1.54	-2.02/-1.72	-1.37/-1.31	-1.19/-2.08	-3.42/-4.77	
Theta (67.5°)	-14.76/-17.34	-18.28/-17.34	-17.52/-11.34	-7.43/-4.58	-2.44/-0.21	1.54/2.47	2.18/2.27	-3.28/-5.66	-3.68/-1.65	-0.91/-1.4	-3.63/-8.66	-17.81/-13.28	-7.47/-4.69	-3.15/-2.04	-1.25/-0.95	-1.23/-1.99	-2.63/-3.02	-3.2/-2.6	-1.48/-0.26	0.65/0.79	-0.04/-1.56	-3.21/-4.7	-6.53/-9.03	-11.91/-14.35
Theta (75°)	-11.55/-11.6	-11.87/-13.22	-17.32/-17.61	-15.17/-13.03	-8.45/-6.13	-2.62/0.5	1.82/1.23	1.68/0.72	-1.14/-2.29	-0.91/-1.08	-8.85/-8.82	-10.79/-13.22	-12.67/-9.82	-7.34/-5.36	-4.24/-4.21	-2.22/2.58	-5.12/-2.92	-0.97/0.35	1.04/1.21	0.58/-1.8	-1.11/-1.4	-13.47/-17.77	-16.84/-13.99	-12.17/-11.46
Theta (82.5°)	-12.31/-12.91	-14.21/-16.22	-18.15/-14.89	-10.32/-10.4	-5.46/-5.23	-4.53/-4.42	-2.75/-2.36	-1.39/-0.14	0.38/0.08	-1.48/-1.2	-8.55/-13.91	-13.07/-9.79	-7.38/-5.34	-3.72/-2.48	-1.82/-1.76	-2.22/2.02	-1.19/-0.14	0.45/0.39	-1.69/-3.92	-6.43/-9.14	-12.78/-17.22	-18.34/-19.02	-15.55/-12.96	
Theta (90°)	-9.95/-8.28	-8.02/-8.72	-10.41/-11.67	-10.37/-9.02	-9.53/-10.65	-6.03/-1.93	-0.13/0	-0.89/-1.98	-3.4/-3.1	-3.01/-2.99	-4.1/-6.21	-8.34/-9.18	-8.18/-6.04	-3.74/-1.87	-0.76/-0.81	-2.56/-4.43	-3.44/-1	0.37/0.79	0.88/0.22	-1.74/-1.54	-10.03/-18.34	-18.19/-16.47	-14.51/-16.97	-10.99/-13.26
Theta (97.5°)	-9.96/-9.64	-9.96/-10.16	-8.81/-5.54	-2.55/-0.87	-0.88/-3.09	-7.09/-5.23	-1.46/0.29	0.73/0.36	-0.73/-1.8	-2.02/-2.47	-4.34/-6.73	-11.22/-13.98	-16.34/-16.51	-11.75/-6.68	-5.51/-5.66	-7.25/-4.82	-1.09/0.88	1.16/0.31	-0.26/-1.23	-3.06/-7.5	-7.37/-11.51	-18.36/-18.32	-17.96/-19.21	-14.22/-11.12
Theta (105°)	-9.54/-9.4	-9.21/-9.02	-8.46/-6.58	-3.51/-0.92	-0.10/-0.63	-3.21/-4.79	-1.66/0.99	2.25/2.29	1.15/-0.9	-2.49/-2.67	-3.22/-4.88	-7.16/-9.57	-12.41/-15.82	-14.02/-9.18	-6.33/-6.1	-6.6/-4.4	-1.64/-0.18	-0.28/-1.71	-2.8/-2.13	-2.5/-3.3	-12.76/-18.49	-11.03/-8.07	-7.38/-7.89	-8.63/-9.85
Theta (112.5°)	-5.19/5	-5.24/-5.65	-6.8/-8.21	-6.78/-1.86	0.34/0.88	-0.37/-3.8	-1.27/-3.53	0.29/2.14	2.76/2.3	1.12/-0.71	-3.43/-6.94	-10.43/-14.33	-17.45/-18.01	-10.17/-6.45	-5.15/-3.7	-1.91/-3.58	-1.96/-1.45	-3.19/-8.23	-3.67/-7.29	-13.51/-13.21	-13.24/-10.04	-11.51/-11.06	-7.93/-9.76	
Theta (120°)	-9.29/-7.67	-6.51/-5.54	-5.11/-5.35	-5.12/-3.16	-0.84/0.75	1.24/0.58	-1.07/-3.22	-4.9/-8.7	-3.14/-1.21	0.27/0.8	0.26/-1.01	-2.51/-4.5	-8.25/-14.17	-9.61/-5.66	-4.95/-6.87	-11.26/-13.78	-10.67/-7	-5.85/-2.73	-0.13/0.3	-1.75/-3.66	-10.38/-18.8	-8.67/-9.28	-10.92/-15.71	-18.64/-12.54
Theta (127.5°)	-7.25/-5.65	-4.41/-3.4	-3.02/-3.8	-6.12/-9.99	-10.24/-6.93	-4.69/-3.75	-3.12/-1.11	-1.17/-1.2	-2.48/-4.93	-7.11/-6.56	-5.43/-4.76	-4.45/-8.2	-6.41/-9.37	-12.82/-16.37	-14.96/-8.64	-4.28/-1.5	0.44/1.13	0.43/-1.31	-3.54/-7.76	-19.09/-9.67	-4.93/-3.71	-4.28/-5.86	-8.84/-15.91	-17.14/-10.21
Theta (135°)	-5.84/-5.86	-5.73/-5.54	-5.81/-7.26	-10.69/-13.85	-9.15/-2.26	-3.55/-3.51	-5.17/-4.75	-6.99/-5.11	-4.13/-4.24	-5.14/-6.44	-8.22/-10.93	-15.21/-17.97	-13.35/-9.48	-8.16/-8.65	-6.76/-6.33	-4.01/-2.68	-3.28/-3.92	-9.42/-11.15	-3.99/-1.21	-0.71/-1.8	-13.73/-10.03	-17.05/-16.86	-4.71/-6.85	-6.91/-6.1
Theta (142.5°)	-5.2/-8.4	-12.13/-16.14	-19.1/-17.91	-16.97/-9.61	-5.12/-0.26	-0.22/0.55	0.34/0.75	-2.55/-0.55	-8.81/-14.48	-17.34/-14.75	-12.14/-11.79	-12.77/-15.44	-18.68/-19.1	-17.95/-16.85	-11.84/-8.47	-6.12/-4.47	-3.35/-2.55	-1.14/0.75	1.1/1.92	-5.82/-5.66	-2.86/-1.1	-0.34/-0.42	-1.29/-2.97	
Theta (150°)	-10.51/-18.9	-18.09/-11.67	-8.99/-7.66	-7.42/-7.61	-6.59/-4.27	-1.99/-0.43	0.36/0.54	0.23/-0.48	-1.78/-3.63	-6.21/-9.68	-13.99/-18.19	-16.52/-13.13	-10.84/-8.69	-8.88/-5.15	-3.59/-2.33	-1.26/-0.6	-0.35/-0.47	-0.71/-0.93	-1.43/-2.9	-6.22/-10.72	-6.73/-2.53	-0.35/0.49	0.39/-0.54	-2.43/-5.59
Theta (157.5°)	-19.32/-12.43	-8.26/-5.97	-4.6/-4.07	-4.54/-6.14	-8.4/-9.22	-6.79/-4.2	-2.39/-1.28	-0.64/-0.5	-0.89/-1.79	-3.27/-5.11	-7.34/-9.99	-12.86/-13.31	-11.28/-9.39	-8.02/-6.93	-6.06/-6.35	-4.91/-4.88	-5.38/-6.3	-7.65/-9.43	-11.42/-13.79	-15.59/-11.34	-7.24/-8.2	-3.77/-3.74	-4.71/-6.85	-9.17/-8.51
Theta (165°)	-9.62/-7.57	-6.2/-5.32	-4.78/-4.86	-5.9/-8.43	-13.1/-19.9	-1																		



Radiated Composite Gain Data
Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Freq(Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.03	1.52	1.93	1.97	1.6	1.89	1.9
Ant. 2 Max Gain (dBi)	-0.27	0.76	0.49	2.99	3.18	3.61	4.04
Ant. 3 Max Gain (dBi)	3.78	2.99	3.12				
Ant. 1 Polarization/ θ (°)/ ϕ (°)	Phi/112.5/52.5	Phi/15/292.5	Phi/142.5/75	Phi/142.5/67.5	Phi/157.5/75	Theta/165/22.5	Theta/172.5/352.5
Ant. 2 Polarization/ θ (°)/ ϕ (°)	Theta/82.5/270	Theta/67.5/135	Theta/90/240	Theta/75/300	Theta/82.5/262.5	Theta/75/300	Theta/90/345
Ant. 3 Polarization/ θ (°)/ ϕ (°)	Phi/67.5/97.5	Phi/45/67.5	Phi/112.5/112.5				
Max Gain (dBi)	3.78	2.99	3.12	2.99	3.18	3.61	4.04
DG [1SS] (dBi)	3.49	4	4.08	1.09	1.81	3.88	3.33
DG [1SS] (dBi) Revised	3.78	4	4.08	2.99	3.18	3.88	4.04
DG [2SS] (dBi)	3.78	2.99	3.12	2.99	3.18	3.61	4.04
DG [3SS] (dBi)	3.78	2.99	3.12				



Radiated Composite Gain Data

Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.2

DG 1SS Result

Freq(Hz)	24GPol	PhiL	PhiR	Phi(15°)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°)
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(°)	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°)	-6.38/6.23	-5.68/4.86	-3.92/2.83	-1.86/-1.01	-0.41/0.21	0.69/1.03	1.26/1.29	1.13/0.9	0.63/0.35	-0.13/0.97	-2.37/4.04	-5.36/5.78	-5.28/4.17	-3.08/2.1	-1.35/0.68	-0.09/0.47	1.02/1.53	1.96/2.16	2.24/2.29	2.31/2.23	1.97/1.54	1.02/0.49	-0.33/-1.39	-3.76/-5.53	
Theta(15°)	-5.59/6.23	-5.36/4.97	-4.83/3.08	-1.42/-0.58	-0.04/0.61	1.19/1.16	1.69/1.63	1.83/1.73	1.26/0.69	0.15/-0.67	-1.78/-2.82	-4.03/-5.68	-3.37/2.77	-2.68/1.38	-0.36/0.44	1.02/1.32	1.48/1.69	1.98/2.25	2.42/2.56	2.74/2.63	2.26/1.73	1.19/0.64	-0.33/-1.47	-2.84/-4.28	
Theta(22.5°)	-5.79/5.86	-4.77/3.77	-3.37/2.54	-1.18/-0.57	-0.36/0.26	1.03/1.54	1.73/1.51	0.88/0.33	-0.25/-1.37	-1.33/-3.95	-4.33/-4.6	-4.62/4.25	-4.15/-3.8	-2.81/-1.61	-0.50/0.44	1.16/1.5	1.58/1.72	1.98/2.15	2.29/2.44	2.51/2.24	1.77/1.3	0.77/0.02	-0.94/-1.92	-2.97/-4.14	
Theta(30°)	-5.71/5.52	-4.58/3.07	-1.92/-1.19	-0.29/0.29	0.20/0.41	1.08/1.32	1.26/0.72	0.86/0.44	-0.25/-1.56	-2.77/-3.28	-2.38/-1.61	-1.51/-1.87	-2.44/2.83	-2.36/-1.51	-0.62/0.28	1.12/1.55	1.51/1.4	1.55/1.74	1.91/2.12	2.15/1.89	1.61/0.36	-0.32/-1.33	-2.32/-3.26	-4.33/-5.42	
Theta(37.5°)	-5.55/3.44	-2.14/-1.22	-0.01/0.55	0.88/1.32	1.04/1.19	1.69/1.63	1.32/0.6	0.05/0.59	-2.05/-3.13	-2.95/-2.37	-1.65/-0.93	-0.88/-1.78	-2.86/-3.56	-3.37/2.77	-2.09/-1.19	-0.34/0.05	0.01/0.43	0.01/0.43	1.01/1.6	1.66/1.41	1.19/0.64	-0.34/-1.58	-3.49/-5.62	-7.02/-6.91	
Theta(45°)	-4.41/2.52	-1.62/1.22	-0.06/0.67	0.78/0.97	1.15/1.66	2.11/1.84	1.46/1.21	0.59/0.89	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37	-3.31/-3.37
Theta(52.5°)	-4.14/2.77	-1.98/-1.8	-0.83/0.03	-0.12/0.16	0.48/1.12	1.32/1.01	1.17/1.45	0.87/0.84	-2.05/-0.63	-0.97/-2.5	-5.3/-8.66	-8.04/-6.03	-4.89/-3.87	-2.77/-2.43	-2.37/-2.38	-2.26/-1.09	0.68/1.78	2.08/2.15	2.58/2.49	1.77/1.41	1.10/0.68	-0.27/-1.63	-2.86/-4.11	-4.95/-5.22	
Theta(60°)	-5.54/5.96	-5.22/4.41	-2.33/-0.79	-0.62/0.08	1.21/1.17	0.57/0.48	1.03/0.89	0.16/-2.57	-1.34/0.35	-0.22/-1.48	-3.35/-0.61	-8.27/-5.73	-3.62/-3.28	-1.63/-1.1	-0.78/-0.37	-0.84/-1.44	0.91/0.78	1.27/1.48	1.11/1.31	1.33/0.95	0.92/0.31	-0.11/0.81	-1.49/-3.05	-4.59/-5.63	
Theta(67.5°)	-7.73/7.82	-7.51/5.43	-2.78/-1.18	-0.79/0.71	1.69/0.86	0.29/1.86	2.34/0.44	0.24/0.83	-2.68/-4.57	-5.94/-7.79	-9.53/9.38	-5.66/-3.68	-2.75/-2.61	-0.47/1.99	-2.27/-3.12	-2.28/-1.02	0.47/1.99	3.22/3.22	2.34/1.62	1.99/1.71	-1.99/-2.95	-4.07/-5.19	-6.62/-6.69		
Theta(75°)	-6.04/7.41	-7.86/6.63	-4.71/3.58	-1.52/0.28	0.75/0.57	-1.8/-0.65	0.77/1.59	2.19/2.29	2.13/0.98	-1.67/5.92	-8.95/10.37	-11.14/11.63	-9.86/7.26	-5.72/5.5	-7.08/-5.65	-3.41/-2.66	-1.75/-0.11	0.92/1.44	1.88/1.13	-0.08/-1.22	-2.62/-2.84	-3.18/-3.02	-3.01/-4.2	-4.9/-4.95	
Theta(82.5°)	-6.12/6.68	-5.99/4.88	-3.71/-1.91	0.55/1.77	2.51/2.02	0.53/0.05	0.13/-1.87	-0.41/0.1	-1.86/-3.65	-3.18/-4.15	-6.54/-8.86	-6.31/-3.08	-1.05/-0.59	-1.58/-2.88	-0.82/-0.5	-0.25/1.52	1.95/2.65	2.54/0.43	0.38/1.01	0.43/-0.13	-1.38/-1.92	-2.05/-3.24	-4.65/-5.94		
Theta(90°)	-5.61/5.11	-4.31/3.77	-2.85/-2.61	-1.67/0.49	2.05/1.04	0.67/2.51	-0.78/0.28	0.59/1.18	0.98/0.74	-0.73/-1.47	-3.67/4.1	-2.85/-3.65	-9.86/7.41	-3.62/-1.59	-1.84/4.31	-4.27/-2.42	-0.99/1.31	1.48/1.55	1.73/0.02	-1.32/-1.27	-1.17/1.69	-1.99/-2.68	-2.56/-4.38	-4.76/-6.78	
Theta(97.5°)	-4.06/5.42	-6.41/5.28	-3.5/-2.04	-0.16/2.21	3.1/2	1.07/0.22	-0.31/0.68	1.89/0.29	-0.4/-1.22	-2.4/-1.11	-0.21/1.62	-5.11/9.07	-7.2/-3.41	-0.42/0.15	-1.21/-3.75	-1.39/0.08	-0.07/1.51	0.94/0.44	1.73/1.02	0.34/0.64	-0.2/-0.93	-0.01/0.43	-0.25/-1.72	-3.04/-3.61	
Theta(105°)	-5.54/5.81	-6.41/6.23	-1.46/-0.96	0.07/2.23	3.49/2.83	1.44/0.02	-0.63/0.94	1.65/0.43	0.08/-0.91	-2.81/-95	-0.88/-1.51	-3.84/6.8	-8.52/6.07	-3.07/-2.15	-0.04/-3.22	-2.47/-1.18	-1.29/0.03	0.03/0.75	0.42/0.33	-1.21/-2.31	-2.96/-2.09	0.54/0.79	0.17/-1.85	-3.91/-5.06	
Theta(112.5°)	-3.97/3.27	-2.55/1.69	-0.68/0.4	0.63/2.51	3.2/2.46	2.49/1.13	-1.89/-1.49	-1.1/-3.8	-0.10/2.4	-0.7/0.81	-0.38/-1.17	-8.48/-5.25	-2.29/-1.35	-1.02/2.91	-1.46/0.79	-1.91/0.99	-1.94/2.68	0.19/0.47	-0.61/-1.05	-1.33/0.83	-0.72/0.93	-1.66/-1.39	-4.72/-6.19		
Theta(120°)	-5.65/3.85	-2.27/0.39	1.28/1.86	1.97/2.05	1.82/2.46	2.95/1.33	0.32/1.27	1.25/-0.14	-1.18/-2.36	-2.89/-2.27	-1.91/-1.88	-2.81/-5.13	-9.19/-9.9	-7.79/-6	-7.41/-9.98	-6.75/-3.92	-2.35/-0.89	-0.5/0.4	2.09/2.06	-0.1/-2.38	-0.39/0.7	0.63/-0.23	-1.5/-3.66	-6.22/-7.42	
Theta(127.5°)	-2.71/1.55	-0.37/0.74	1.16/0.57	-0.21/-0.69	-1.21/-1.45	-2.35/-3.89	-1.7/0.71	1.51/2.1	1.03/0.67	-0.53/-2.68	-5.14/-4.64	-3.97/-4.76	-5.39/-4.08	-3.55/-3.28	-2.4/0.51	0.71/0.74	1.46/2.83	2.62/1.07	0.24/-0.8	-2.87/-2.59	-1.44/-1.3	-1.71/-2.28	-3.88/-6.23	-6.54/-4.11	
Theta(135°)	-2.79/2.74	-2.88/3.2	-3.09/2.56	-2.25/-1.97	-1.95/-1.55	-0.69/-0.82	-1.38/-2.32	-2.96/3.66	-6.61/7.37	-7.81/8.08	-7.12/5.3	-4.35/-3.28	-1.57/0.5	0.37/0.44	1.62/0.84	1.88/2.2	1.59/0.13	1.58/0.2	-2.87/-2.59	-1.44/-1.3	-1.71/-2.28	-3.88/-6.23	-6.54/-4.11		
Theta(142.5°)	-5.79/6.26	-4.83/2.74	-0.97/0.33	-0.75/-1.85	-1.54/0.21	1.13/0.83	0.08/0.05	0.26/0.53	0.63/-0.03	-1.44/-3.51	-6.8/2	-10.93/-10.99	-10.28/-8.26	-5.41/-2.93	-0.92/0.63	1.45/1.38	1.03/1.27	1.73/2.61	3.32/2.2	2.40/4.8	-2.19/-1.87	-1.11/0.78	-0.63/-1.55	-3.18/-4.91	
Theta(150°)	-6.66/3.44	-1.32/0.2	1.07/1.24	0.65/0.33	-0.64/0.7	-0.86/-1.57	-2.01/-1.11	1.17/1.81	2.04/1.6	0.94/-0.21	-1.49/-2.72	-4.35/-5.98	-7.12/-6.99	-5.79/-3.83	-2.28/-1.27	-0.66/0.47	-0.35/-0.26	-0.39/-0.41	-0.42/-0.8	-1.78/-3.36	-2.04/-0.96	-0.45/-0.99	-2.04/-3.34	-4.67/-5.87	
Theta(157.5°)	-4.65/2.28	-0.88/0.23	0.26/0.18	-0.28/0.41	-0.87/-2.66	-6.13/-7.72	-4.22/1.54	0.06/0.91	1.41/4.2	0.95/0.14	-0.89/-1.96	-2.88/-4.29	-5.75/-6.53	-6.5/-5.87	-5.22/-4.66	-3.93/-2.81	-1.66/-1.17	-1.22/-1.23	-1.26/-1.59	-1.71/-1.01	-0.23/0.04	-0.13/-0.91	-2.11/-3.53	-4.91/-5.8	
Theta(165°)	-4.41/4.05	-3.96/3.79	-3.2/-2.54	-2.06/-2.14	-3.41/6.07	-9.86/9.09	-6.24/0.1	-3.17/2.09	-1.57/-1.42	-1.71/-95	-2.37/2.89	-4.39/-4.37	-5.28/-4.15	-5.82/4.81	-3.39/-3.25	-2.72/-1.4	-1.81/-1.93	-2.34/-2.66	-3.01/-3.25	-3.35/-3.03	-2.51/-2.07	-2.98/3.73	-4.39/-4.12	-4.41/6.68	
Theta(172.5°)	-6.65/7.51	-7.68/7.85	-6.35/-5.76	-5.64/6.87	-8.13/8.13	-6.59/4.72	-3.13/-2.18	-1.79/-1.8	-1.98/2.09	-2.05/-2.19	-2.59/-3.2	-4.07/5.4	-6.49/6.05	-4.74/-3.65	-2.82/-2.25	-1.78/-1.51	-1.49/-1.71	-1.96/-2.07	-2.09/-1.24	-2.37/-2.58	-2.61/2.55	-2.83/3.44	-4.18/4.48	-5.01/5.61	
Theta(180°)	-7.52/9.25	-10.51/11.69	-12.49/10.7	-9.67/7.89	-5.93/4.16	-2.92/-2.18	-1.97/-1.87	-2.02/-2.2	-2.09/-1.97	-2.08/-2.64	-3.81/5.4	-7.24/-9.4	-10.17/9.9	-8.31/7.08	-5.97/4.81	-3.99/3.55	-3.2/-2.74	-2.29/-1.94	-1.71/-1.61	-1.72/0.23	-2.51/2.75	-2.96/3.34	-3.93/4.44	-5.23/6.54	
Freq(Hz)	24GPol	ThetaL	ThetaR	Phi(15°)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°)
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°)	-1.31/1.45	-1.37/1.14	-1.71/2.49	-3.31/3.95	-4.71/5.81	-7.39/8.38	-8.71/8.26	-7.15/6.05	-5.34/4.95	-3.43/3.13	-2.51/2.36	-1.92/1.45	-1.52/1.83	-1.19/1.83	-0.82/0.53	-0.67/0.43	-0.54/0.74	-0.82/0.53	-0.92/0.85	-0.28/0.15	-0.28/0.15	-0.28/0.15	-0.28/0.15	-0.28/0.15	-0.28/0.15
Theta(7.5°)	0.43/0.11	-0.5/0.66	-0.81/1.45	-2.32/3.23	-4.13/5.64	-7.16/8.89	-9.19/8.11	-6.74/5.34	-4.31/3.8	-2.93/2.82	-1.97/1.44	-1.66/1.85	-1.47/1.27	-1.43/1.96	-2.57/3.15	-3.72/4.62	-6.7/0.9</								



Radiated Composite Gain Data

Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.2

Θ (67.5°)	-13.28/-15.56	-15.72/-11.64	-4/3.19	-4.08/-7.59	-2.82/-2.4	-4.38/-3.04	-3.27/-4.6	-3.53/-5.26	-9.75/-14.15	-9.96/-7.53	-5.56/-5.64	-5.85/-7.73	-15.01/-11.49	-9.89/-9.34	-9.47/-12.45	-10.82/-6.59	-6.68/-7.26	-4.9/-6.67	-4.45/-2.45	-2.1/-3.17	-3.82/-3.39	-6.49/-7.13	-8.41/-9.09	-12.14/-12.47	
Θ (75°)	-10.06/-8.92	-9.15/-11.73	-4.13/-0.28	-1.8/-4.5	-2.23/-1.8	-0.02/-3.09	-2.14/-3.69	-3.93/-5.13	-7.87/-9.13	-7.28/-9.46	-3.08/-4.92	-5.76/-6.27	-14.52/-11.48	-9.84/-6.7	-5.01/-7.39	-8.56/-5.28	-5.57/-6.84	-5.12/-3.49	-3.74/-1.7	-2.03/-3.51	-3.2/-4.7	-5.76/-8.09	-9.02/-9.04	-14.4/-15.04	
Θ (82.5°)	-7.67/-6.68	-5.04/-7.57	-6.25/-2.69	-1.33/-4.96	-4.49/-0.96	-2.95/-2.7	-4.75/-4.25	-4.09/-9.03	-11.69/-9.15	-7.18/-4.64	-4.34/-4.74	-10.19/-12.43	-8.75/-12	-3.81/-5.12	-3.25/-5.97	-5.99/-8.62	-3.69/-3.62	-4.84/-1.47	-3.14/-3.01	-1.9/-4.28	-5.47/-7.04	-8.54/-10.29	-13.47/-9.11		
Θ (90°)	-8.12/-6.4	-3.96/-5.6	-13.6/-3.47	-4.33/-4.76	-2.5/-2.6	-1.04/-6.29	-1.12/-7.19	-4.3/-5.66	-16.07/-9.86	-10.26/-9.86	-5.64/-8.67	-4.84/-7.6	-11.81/-11.97	-9.85/-5.35	-2.74/-4.03	-8.14/-11.7	-4.98/-9.37	-5.5/-3.57	-3.71/-1.45	-2.09/-1.47	-1.22/-8.88	-5.61/-6.57	-8.97/-11.66	-13.72/-13.01	
Θ (97.5°)	-7.34/-5.87	-4.97/-6.15	-11.86/-5.27	-3.45/-3.85	-5.77/-1.3	-3.26/-3.08	-2.46/-4.06	-12.02/-4.6	-9.13/-10.39	-9.19/-10.21	-9.13/-11.35	-9.68/-12.2	-14.07/-13.32	-13.71/-9.37	-5.29/-5.03	-10.11/-5.98	-5.93/-11.96	-5.06/-3.45	-4.12/-1.09	-2.96/-3.25	-2.05/-4.71	-4.57/-6.41	-8.25/-10.2	-14.08/-11.45	
Θ (105°)	-9.37/-5.28	-3.48/-6.93	-12.5/-5.67	-2.13/-2.87	-5.23/-10.3	-2.07/-2.53	-6.49/-2.73	-3.44/-9.22	-7.24/-12.7	-12.72/-8.12	-9.27/-11.87	-6.6/-12.67	-11.18/-10.54	-14.21/-10.69	-7.56/-6.53	-8.22/-6.76	-5.89/-7.61	-6.45/-3.53	-4.86/-1.66	-2.72/-3.14	-1.99/-3.56	-3.98/-6.96	-7.72/-10.33	-11.99/-9.49	
Θ (112.5°)	-9.58/-5.89	-5.95/-9.87	-8.38/-4.02	-3.57/-4.42	-3.71/-2.28	-1.21/-9.77	-0.98/-6.44	-6.95/-7.39	-10.36/-10.19	-11.37/-14.56	-14.87/-15.73	-13.98/-15.04	-11.61/-13.08	-12.4/-11.59	-8.54/-9.69	-9.52/-6.73	-7.5/-8.77	-5.75/-5.26	-5.94/-2.07	-3.17/-2.97	-2.22/-2.89	-4.7/-7.36	-7.9/-10.99	-12.94/-14.19	
Θ (120°)	-9.02/-8.24	-11.68/-13.18	-6.52/-2.8	-3.23/-5.81	-6.38/-0.73	-5.17/-3.46	-6.04/-1.34	-5.14/-10	-7.84/-10.61	-10.99/-11.76	-15.82/-15.35	-11.67/-14.3	-12.24/-11.62	-15.83/-11.15	-8.81/-7.91	-9.34/-4.34	-5.38/-	-5.59/-3.17	-4.26/-0.99	-1.13/-3.29	-3.38/-3.31	-5.83/-5.88	-6.6/-6.59	-10.85/-12.7	
Θ (127.5°)	-10.69/-13.49	-14.13/-6.01	-3.58/-3.48	-4.03/-7.03	-2.71/-2.17	-1.36/-5.18	-2.44/-6.17	-6.62/-7.12	-11.62/-7.17	-8.92/-8.23	-9.15/-12.9	-14.13/-9.95	-12.27/-13.02	-12.95/-12.41	-8.36/-15.37	-7.16/-5.64	-5.81/-10.64	-5.74/-4.44	-5.68/-1.43	-1.41/-3.99	-2.27/-4.03	-5.82/-4.1	-5.99/-10.29	-9.9/-11.75	
Θ (135°)	-13.52/-10.36	-9.28/-7.2	-4.96/-5.71	-6.73/-9.5	-1.81/-4.03	-1.45/-2.39	-8.73/-3.59	-3.26/-4.39	-7.16/-11.07	-11.59/-10.1	-9.98/-10.99	-11.64/-13.13	-15.11/-13.93	-15.09/-12.88	-15.65/-7.73	-4.82/-4.32	-5.23/-11.76	-6.21/-5.01	-5.01/-2.83	-1.74/-2.89	-4.36/-2.74	-4.73/-6.16	-8.19/-10.46	-11.2/-10.48	
Θ (142.5°)	-8.41/-5.46	-4.34/-6.67	-7.64/-6.79	-8.9/-3.54	-3.77/-0.82	-2.52/-6.09	-5.27/-2.72	-2.58/-4.23	-7.51/-12.39	-14.83/-14.6	-13.68/-10.88	-13.75/-13.38	-12.33/-14.18	-11.56/-11.74	-10.01/-6.38	-7.12/-4.94	-7.27/-10.21	-6.96/-5.04	-4.64/-3.62	-1.93/-1.97	-3.94/-3.51	-2.78/-5.58	-8.37/-9.14	-10.64/-11.86	
Θ (150°)	-14.86/-16	-10.32/-10.36	-9.88/-5.73	-6.03/-3.61	-1.53/-4.63	-4.02/-1.53	-3.02/-6.05	-7.6/-7.81	-9.53/-11.5	-15.29/-14.61	-16.56/-14.46	-12.13/-9.79	-11.97/-14.15	-14.76/-12.58	-11.24/-10.71	-6.14/-4.47	-6.43/-5.46	-6.32/-7.74	-4.41/-2.82	-3.15/-2.46	-4.4/-5.3	-2.22/-4.05	-6.59/-8.33	-11.16/-12.94	
Θ (157.5°)	-11.97/-11.24	-10.17/-8.96	-6.54/-5.38	-2.84/-4.24	-5.35/-1.97	-0.65/-1.59	-5.32/-14.85	-11.37/-7.59	-7.65/-9.17	-10.71/-13.46	-13.85/-14.25	-13.67/-13.88	-14.81/-15.49	-13.44/-12.14	-10.05/-7.5	-6.23/-5.81	-5.44/-4.51	-4.3/-4.47	-3.79/-3.73	-3.82/-3.03	-2.52/-2.75	-3.51/-6.07	-8.54/-10.05	-12.38/-12.58	
Θ (165°)	-8.68/-10.24	-9.59/-7.24	-4.34/-3.24	-3.63/-2.81	-3.43/-5.54	-2.52/-6.65	-13.19/-13.7	-10.74/-8.74	-11.57/-11.89	-11.93/-11.85	-12.84/-12.04	-12.25/-13.05	-14.86/-15.43	-15.71/-15.2	-15.14/-11.91	-9.35/-6.79	-4.93/-4.67	-5.1/-4.69	-4.35/-4.38	-4.34/-5.14	-4.96/-5.09	-5.07/-5.3	-5.63/-5.94	-6.53/-7.87	
Θ (172.5°)	-8.13/-7.38	-6.58/-6.34	-5.95/-5.55	-4.35/-3.32	-2.73/-4.61	-8.38/-10.73	-9.08/-9.8	-9.31/-9.31	-7.23/-5.81	-5.42/-5.6	-6.93/-7.24	-8.58/-11.1	-11.62/-13.36	-13.29/-12.38	-8.59/-7.05	-5.54/-5.3	-3.78/-3.95	-4.23/-4.03	-4.11/-4.13	-5.12/-5.85	-6.45/-7.97	-9.93/-12.49	-15.3/-14.93	-13.63/-11.37	
Θ (180°)	-12.06/-11.76	-15.16/-14.6	-10.99/-7.92	-5.72/-4.77	-6.2/-8.51	-8.12/-7.49	-8.09/-9.51	-7.99/-4.69	-3.35/-3.6	-4.08/-5.27	-5.53/-6.97	-7.82/-9.5	-10.67/-12.92	-11.76/-9.83	-7.56/-6	-4.99/-4.47	-3.83/-3.45	-2.73/-1.9	-2.1/-1.98	-2.4/-2.77	-2.91/-3.21	-3.91/-4.57	-5.41/-6.38	-7.88/-10.02	
Freq(Hz)	5.03GPol	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)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)	
Θ (0°)	-3.97/-2.52	-3.09/-2.89	-3.67/-2.4	-3.87/-4.75	-4.56/-5.57	-7.05/-9.04	-11.09/-11.97	-12.67/-11.93	-10.22/-8.82	-7.53/-6.89	-5.2/-5.92	-4.38/-4.89	-3.88/-3.74	-3.07/-3.33	-2.79/-3.11	-3.34/-3.93	-4.42/-5.38	-6.26/-7.99	-9.17/-11.38	-11.56/-11.09	-9.14/-7.49	-7.08/-6.43	-5.88/-4.32	-4.19/-3.08	
Θ (7.5°)	-2.35/-2.3	-1.67/-2.07	-2.27/-1.6	-2.24/-3.57	-3.31/-3.55	-4.21/-5.42	-6.76/-8.84	-9.08/-7.45	-6.29/-5.2	-5.43/-5.27	-5.02/-4.24	-4.21/-3.63	-4.21/-3.79	-3.55/-3.65	-3.5/-3.5	-4.02/-4.35	-4.84/-5.95	-7.52/-9.91	-11.82/-13.72	-13.92/-12.17	-11.01/-8.91	-6.72/-5.28	-4.4/-3.72	-4.43/-3.77	
Θ (15°)	-1.17/-1.77	-1.01/-1.20	-1.63/-1.15	-1.52/-4.45	-2.58/-2.77	-3.59/-3.75	-3.19/-3.79	-4.92/-4.16	-6.25/-5.28	-5.15/-5.08	-4.32/-3.55	-4.91/-5.83	-6.09/-6.56	-5.59/-6.28	-6.82/-7.55	-7.62/-6.09	-5.48/-5.54	-6.31/-8.72	-12.92/-14.06	-12.9/-10.12	-7.9/-6.6	-5.39/-4.65	-3.64/-2.72	-2.04/-2.05	
Θ (22.5°)	-1.23/-1.57	-1.99/-1.53	-2.56/-2.77	-4.36/-6.08	-5.62/-4.6	-5.19/-6.72	-8.5/-7.5	-6.51/-6.46	-6.54/-6.49	-6.42/-5.92	-5.42/-4.41	-4.18/-3.76	-3.77/-4.92	-5.55/-6.49	-7/-7.3	-7.2/-7.87	-8.16/-7.88	-8.05/-10.56	-13.94/-15.67	-12.01/-9.52	-8.2/-6.89	-5.41/-3.62	-2.19/-1.46	-0.94/-1.02	
Θ (30°)	-1.98/-0.96	-1.29/-0.21	-0.34/-1.26	-1.49/-2.45	-1.78/-2.61	-1.92/-1.9	-1.92/-1.4	-3.67/-3.33	-12.68/-15.21	-12.38/-11.72	-11.08/-8.3	-5.91/-3.99	-3.16/-3	-3.89/-3.85	-4.42/-4.68	-4.81/-6.02	-8.19/-8.61	-8.66/-11	-11.39/-15.11	-11.41/-9.26	-7.92/-3.46	-2.84/-1.83	-1.66/-1.54	-1.39/-1.33	
Θ (37.5°)	0.36/0.25	0.41/0.51	0.63/0.38	-0.23/-1.45	-2.93/-2.63	-1.63/-1.63	-6.75/-8.3	-10.48/-11.29	-9.43/-10.43	-11.11/-11.24	-8.66/-6.6	-5.19/-4.6	-4.77/-5.08	-6.19/-6.07	-8.03/-6.47	-7.99/-7.96	-5.74/-5.59	-5.78/-4.54	-3.47/-3.14	-1.56/-1.13	-0.52/-0.24	-0.17/-0.25			
Θ (45°)	1.25/1.16	1.26/1.09	0.63/0.47	0.39/-0.19	-1.41/-0.98	0.67/-0.07	-2.24/-3.04	-4.12/-5.35	-6.11/-6.53	-6.26/-6.12	-6.77/-8.87	-6.91/-7.11	-6.23/-6.53	-5.87/-5.69	-5.22/-3.7	-3.14/-3.6	-4.66/-3.02	-4.04/-5.64	-5.62/-4.86	-3.27/-2.95	-2.94/-0.39	-0.31/-0.43	0.51/0.53	0.54/0.67	
Θ (52.5°)	-0.21/-0.26	-0.47/-1.82	-1.03/-0.09	-1.78/-0.92	-1.22/-3.61	-1.72/-2.02	-2.19/-1.4	-2.33/-2.94	-3.45/-3.85	-5.06/-3.71	-3.64/-2.74	-2.76/-2.1	-1.81/-2.63	-3.51/-4.87	-5.35/-5.07	-3.48/-3.33	-4.21/-2.67	-3/-3.47	-3.73/-3.19	-2.62/-2.27	-0.84/-0.54	-1.26/-1.12	-2.1/-1.62	-1.01/-0.5	
Θ (60°)	-0.93/-1.76	-0.46/-0.82	0.89/0.85	-0.40/-0.14	-1.3/-2.97	-1.61/-2.43	-5.81/-3.54	-2.49/-3.56	-4.33/-3.53	-4.31/-3.33	-1.96/-1.16	-0.43/0.02	1.14/0.55	-0.96/-3.57	-5.21/-5.67	-5.51/-3.03	-3.08/-1.89	-2.04/-1.65	-2.74/-3.61	-3.95/-3.14	-1.34/-3.08	-0.51/-2.3	-0.37/-0.36	-0.91/-0.57	
Θ (67.5°)	1.37/0.91	0.61/-0.42	-1.09/-1.25	-1.26/0.39	-0.33/-0.31	-1.1/0.58	-0.65/-1.06	-1.23/-2.43	-4.36/-4.74	-5.17/-4.47	-4.12/-3.17	-2.11/-1.27	0.77/0.62	-0.32/-1.34	-2.3/-4.57	-4.55/-4.16	-6.51/-5.61	-5.56/-4.76	-6.35/-3.1	-2.14/-0.84	-0.86/0.29	-0.1/-1.43	-2.61/-0.66	-0.01/0.51	
Θ (75°)	-0.09/-0	0.25/0.36	0.75/0.19	-0.46/0.87	0.93/-1.52	-0.21/-1.8	0.26/-0.26	-0.26/-0.23	-2.33/-1.69	-0.78/-2.25	-2.7/-2.41	-2.18/-1.15	0.62/0.65	0.79/0.76	0.63/-0.5	-2.34/-2.14	-1.44/-0.96	-1.22/-0.62	0.02/1.35	0.21/0.49	-0.46/-1.47	-2.66/-3.2	-1.01/-0.11	-0.46/-1	
Θ (82.5°)	0.12/0.04	0.83/-0.78	-1.78/-1.44	-4.29/-1.87	-2.26/-3.16	-4.06/-4.28	-1.24/0.79	1.52/0.19	-2.35/-3.37	-1.68/-0.94	-1.06/-1.12	-1.2/-2.12	-0.91/-2.26	-2.93/-2.77	-1.89/-1.87	-1.51/-2.04	-1.26/-0.77	0.38/1.81	-0.5/-0.73	-2.89/-2.96	-1.82/-1.93	-2.84/-2.23	-1.65/-1.71	-1.31/-0.62	
Θ (90°)	-3.06/-2.99	-3.47/-2.32	-3.03/-1.91	-2.41/-1.12	0.86/-1.36	-1.73/-3.4	-2.83/-4.8	-2.66/-2.28	-3.01/-2.17	-2.07/-2.4	-0.64/-1.33	-0.35/-0.87	-0.77/-1.27	-0.89/-2.38	-3.45/-3.6	-4.83/-5.73	-4.12/-4.32	-2.42/-1.3	-0.87/-7.42	-4.2/-2.43	-2.57/-1.82	-1.94/-2.74	-4.22/-3.07	-2.02/-2.03	
Θ (97.5°)	-1.16/-1.32	-1.71/-2.28	-2.91/-3.93	-3.72/-2.59	-0.71/-1.41	-1.01/-1.23	-1.41/-1.04	0.06/0.83	-3.86/-3.13	-6.15/-3.97	-2.78/-2.49	-1.92/-1.48	-1.99/-1.8	0.35/1.1	-1.41/-1.33	-2.91/-0.1	-1.68/-1.17	-2.85/-3.63	-4.51/-0.83	-0.51/-2.58	-2.25/-2.47	-6.45/-6.54	-3.3/-1.97	-1.49/-1.46	
Θ (105°)	-2.06/-4.39	-5.75/-4.06	-3.9/-4.31	-5.61/-5.46	-5.62/-5.47	-5.93/-3.75	-4.38/-3.88	-2.18/-0.94	-2.67/-2.9	-1.65/-1.25	-4.02/-3.12	-3.99/-2.13	-3.84/-3.34	-4.16/-3.86	-4.33/-6.26	-4.42/-4.15	-2.42/-2.69	-2.27/-2.72	-3.68/-5.37	-4.18/-4.63	-7.24/-7.88	-4.66/-2.71	-2.68/-2.56	-2.34/-1.93	
Θ (112.5°)	-4.01/-6.55	-10.43/-6.19	-7.47/-11.57	-6.39/-6.78	-5.47/-7.25	-7.84/-8.23	-5.65/-5.54	-4.25/-4.09	-6.66/-4.06	-5.31/-3.38	-3.13/-2.62	-3.67/-2.99	-5.83/-4.37	-7.56/-6.96	-8.62/-6.1	-11.39/-9.46	-13.63/-7.81	-11.6/-5.88	-3.67/-7.11	-3.82/-0.59	-0.89/-2.58	-4.74/-5.2	-5.92/-5.34		
Θ (120°)	-7.97/-4.42	-5.53/-4.54	-4.57/-1.11	-4.47/-5.21	-6.98/-7.26	-7.62/-12.82	-12.51/-10.55	-8.55/-6.3	-5.14/-2.6	-4.86/-6.24	-6.93/-5.84	-4.03/-2.79	-5.12/-4												



Radiated Composite Gain Data

Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.2

Theta (112.5°)	-8.36/6.05	-3.81/4.18	-4.2/11.8	-5.8/2.85	-3.28/6.16	-1.88/2.6	-7.43/2.68	-6.15/10.83	-6.7/5.02	-9/7.09	-7.73/12.21	-11.3/13.11	-11.46/12.8	-12.8/14.34	-10.29/9.38	-3.21/4.99	-11.81/5.24	-5.71/5.22	-1.48/2.06	-2.08/2.66	-6.42/3.44	-3.19/4.31	-6.65/10.9	-15.64/10.96
Theta (120°)	-11.75/10.73	-9.11/6.62	-9.24/7.75	-3.78/3.67	-3.74/5.29	-3.3/2.42	-8.13/3.43	-1.43/4.28	-10.36/6.12	-7.8/9.07	-8.14/10.39	-12.06/14.25	-10.83/13.48	-12.13/13.07	-14.99/7.99	-3.57/5.62	-11.39/6.12	-5.18/4.73	-0.92/1.99	-1.76/2.26	-4.46/6.38	-4.27/6.26	-8.57/8.32	-15.67/15.51
Theta (127.5°)	-7.16/9.99	-6.79/6.49	-13.01/10.23	-4.06/2.97	-5.69/4.73	-2.1/5.28	-4.25/4.14	-7.62/8.25	-5.68/11.85	-11.95/8.46	-6.96/11.74	-12.79/13.45	-14.64/11.46	-10.11/5.89	-9.53/5.35	-5.48/4.48	-10.31/3.91	-4.98/4.29	-0.62/0.23	-0.89/3.27	-2.04/10.52	-5.83/3.7	-5.87/7.89	-9.5/8.13
Theta (135°)	-10.89/7.96	-9.39/14.52	-6.7/3.67	-5.17/2.19	-7.95/2.56	-4.26/2.02	-6.57/6.37	-4.9/4.98	-4.38/7.82	-13.56/13.21	-12.76/14.17	-14.96/13.03	-11.99/15.12	-13.22/11.69	-11.08/5.61	-3.13/8.03	-5.73/5.05	-3.67/6.47	-4.09/1.56	-0.69/3.75	-1.33/3.8	-8.84/7.09	-6.92/8.63	-10.79/13.21
Theta (142.5°)	-8.76/8.22	-7.52/5.62	-5.72/3.84	-2.7/4.81	-6.31/1.87	-2.88/4.16	-2.61/4.22	-2.5/3.56	-10.23/9.25	-8.89/9.57	-11.28/13.15	-12.24/12.84	-15.79/12.44	-9.71/10.28	-8.05/7.47	-9.68/6.63	-7.01/5.31	-7.33/7.01	-5.46/2.29	-1.47/2.52	-4.47/2.01	-2.83/7.39	-9.5/10.98	-11.51/8.86
Theta (150°)	-11.88/7.85	-4.5/2.78	-1.79/2.58	-3.33/11.02	-3.56/4.35	-4.43/2.16	-2.05/3.5	-7.51/13.39	-11.31/10.56	-9.83/9.75	-10.54/10.86	-10.77/9.95	-9.34/7.66	-5.83/5.2	-6.55/8	-6.05/4.48	-6.39/4.16	-2.83/6.51	-5.01/1.89	-1.83/1.61	-2.98/3.77	-1.18/2.07	-4.79/8.48	-12.19/15.63
Theta (157.5°)	-10.71/11.03	-11.47/7.78	-5.09/6.68	-7.27/5.36	-5.71/3.22	-2.32/3.09	-4.11/6.03	-10.16/13.99	-10.68/9.13	-10.12/12.31	-11.13/10.63	-10.57/11.41	-13.36/11.87	-9.02/7.24	-6.19/4.29	-2.09/1.56	-2.73/3.2	-3.15/4.9	-5.71/3.95	-3.04/3.49	-3.64/2.33	-1.54/2.8	-4.35/5.03	-6.89/9.1
Theta (165°)	-5.7/5.9	-6.57/6.3	-5.43/3.26	-2.96/3.19	-2.65/3.39	-5.6/8.37	-8.86/6.12	-8.34/12.46	-14.57/13.06	-10.35/7.79	-7.69/8.29	-11.69/13.19	-14.97/12.37	-11.54/10.88	-9.51/7.02	-5.22/4.49	-4.62/5.48	-5.19/4.71	-4.99/4.3	-3.59/3.91	-4/3.39	-4.07/5.61	-6.58/7.14	-7/6.56
Theta (172.5°)	-10.22/12.37	-12.78/11	-9.49/8.06	-5.56/3.89	-4.2/5.56	-9.92/9.54	-6.43/5.59	-7.19/7.99	-7.42/6.85	-7.18/6.43	-8.11/7.85	-10.01/11.63	-13.22/11.07	-9.82/8.17	-7.78/7.34	-7/6.68	-6.39/6.38	-7/6.81	-6.66/5.47	-5.06/3.87	-3.46/2.92	-3.44/4.1	-4.68/5.26	-6.5/7.33
Theta (180°)	-8.65/7.39	-6.06/5.59	-4.42/3.48	-3.07/3.96	-6.97/12.84	-15.52/12.99	-15.57/14.5	-9.51/6.72	-5.68/6.4	-6.99/8	-9.41/10.39	-10.47/10.21	-10.24/8.86	-8.37/7.35	-6.7/5.99	-6.47/6.63	-6.89/7.26	-8.97/9.38	-9.1/9.21	-8.86/9.35	-10.33/9.97	-10.38/10.88	-10.7/10.13	-9.99/10.13
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 (0°)	-2.48/2.08	-2.46/2.8	-3.28/3.43	-4.24/4.17	-5.34/8.25	-11.38/14.51	-14.94/15.44	-12.49/10.56	-8.86/7.27	-5.06/4.89	-4.05/3.6	-3.13/1.77	-1.98/1.52	-1.68/2	-1.91/2.64	-3.26/4.21	-5.03/6.75	-8.59/11.73	-15.39/14.92	-13.76/10.97	-8.42/7.33	-5.8/5.16	-3.82/3.87	-3.22/2.92
Theta (7.5°)	0.18/0.06	-0.19/0.63	-0.92/1.29	-2.25/2.23	-2.92/4.27	-6.65/9.19	-10.81/12.1	-12.26/10.15	-9.46/8.66	-7/5.94	-4.68/3.71	-3.86/2.72	-3.36/2.62	-3.29/3.04	-3.36/3.6	-4.66/5.56	-6.87/8.46	-10.29/12.66	-15.64/16.02	-14.17/10.86	-8.73/6.4	-4.83/3.54	-2.73/1.49	-1.71/1.12
Theta (15°)	0.31/0.17	0.74/0.36	0.43/0.57	-0.15/1.5	-1.98/2.82	-5.07/5.83	-6.85/9.65	-11.46/11.71	-10/9.45	-7.13/6.14	-5.43/4.92	-4.59/4.7	-4.23/4.81	-4.74/5.57	-5.39/5.15	-5.19/6.05	-7.72/9.74	-11.86/13.73	-14.69/14.7	-15.92/10.9	-6.47/4.14	-2.67/1.88	-1.27/0.36	-0.77/0.81
Theta (22.5°)	0.34/0.83	0.69/0.52	0.08/0.26	0.09/1.53	-1.08/1.9	-2.84/2.87	-3.45/4.61	-4.23/4.32	-5.09/5.97	-6.16/6.08	-7.15/7.34	-7.49/6.84	-5.62/5.73	-5.56/5.1	-4.96/5.61	-6.31/6.79	-7.68/7.48	-8.32/11.07	-11.41/11.01	-9.18/5.96	-3.81/3.27	-2.88/2.17	-1.62/0.37	0.31/0.89
Theta (30°)	0.92/2.16	2.46/3.33	2.91/97	1.91/0.63	-0.94/1.59	-0.82/0.39	-1.3/2.31	-1.44/1.69	-2.78/4	-4.19/3.06	-4.45/4.79	-5.85/5.77	-5.1/4.83	-4.52/3.67	-4.47/5.78	-5.51/6.25	-4.42/5.84	-6.85/7.28	-7.39/7	-6.5/4.54	-2.11/0.9	0.03/0.49	0.44/0.37	0.47/0.92
Theta (37.5°)	-0.23/1.4	-2.07/1.4	-0.78/1.63	-2.09/3.12	-2.87/7.27	-5.99/3.7	-3.62/4.39	-3.32/3.29	-2.83/2.25	-1.71/2.96	-2.03/2.7	-2.11/3.65	-4.11/4.47	-4.46/4.99	-5.78/4.87	-4.51/4.69	-3.61/5.57	-6.17/4.28	-4.88/5.94	-5.69/3.31	-1.89/3.02	-3.5/2.22	-0.29/0.14	0.33/0.11
Theta (45°)	-1.83/2.19	-2.63/1.64	-2.87/1.52	-1.96/2.4	-2.49/5.84	-7.57/3.49	-7.19/12.97	-9.64/5.63	-4.68/4.99	-5.31/4.96	-3.99/3.03	-3.07/5.58	-7.49/6.24	-4.83/5.35	-6.38/4.19	-3.7/6.07	-5.37/6.14	-7.02/6.12	-7.04/5.03	-4.09/2.49	-2.52/3.71	-1.38/1.24	-1.92/1.87	-1.07/1.77
Theta (52.5°)	0.84/1.04	0.88/0.88	0.51/0.54	1.38/2.07	0.8/0.71	-3.79/1.61	-1.77/2.84	-3.79/5.26	-8.44/11.67	-10.05/7.37	-6.84/6.06	-3.34/1.77	-2.48/3.23	-4.92/4.28	-3.67/4.21	-3.53/2.97	-2.14/2.81	-5.05/3.54	-4.27/5.08	-4.82/4.5	-5.21/2.06	-1.47/0.62	-0.77/1.56	-1.91/1.24
Theta (60°)	0.02/0.2	0.71/0.75	-0.24/1.58	-0.83/0.56	1.65/0.23	-3.32/0.94	0.14/0.09	1.03/0.43	-2.85/4.51	-5.34/5.98	-6.19/4.3	-2.62/0.59	0.22/0.31	-1.27/2.29	-2.59/1.83	-2.77/3.4	-4.32/3.28	-6.41/4.3	-4.95/8	-4.05/2.4	0.34/0.16	-0.49/2.6	-3.98/1.78	-1.12/0.72
Theta (67.5°)	-0.3/0.17	-1.3/1.8	-0.58/1.33	-3.46/2.41	-2.11/2.48	-4.1/3.62	-2.19/2.36	-1.79/1.8	-2.37/1.55	-0.86/1.35	-1.09/0.29	0.22/0.12	1.55/1.63	-0.18/2.14	-3.33/2.15	-2.22/1.93	-1.27/0.43	-0.09/1.91	-0.83/0.18	0.71/0.37	-2.73/4.24	-2.9/0.34	0.62/0.41	1.09/0.24
Theta (75°)	-1.64/1.36	-0.97/0.17	-0.3/0.16	-0.35/0.87	0.81/1.1	-1.95/0.93	1.7/0.8	-1.66/3.65	-4.64/4.09	-0.59/0.04	-1.32/0.96	-0.53/0.33	1.74/1.77	0.58/0.08	-2.7/2.78	-3.05/1.17	-2.57/1.88	-0.43/0.47	-1.19/3.82	-3.18/2.15	-0.54/0.31	0.66/0.97	-1.43/1.48	-3.35/3.2
Theta (82.5°)	-0.96/0.85	-0.92/1.72	0.66/0.07	-0.61/0.15	1.37/0.17	-1.58/0.5	0.51/0.76	0.78/0.34	-1.39/1.49	-1.56/3.18	-2.88/2.61	-1.19/0.3	1.93/0.25	2.21/1.32	-0.04/0.96	-0.99/1.75	-1.85/3.5	-2.29/2.62	-0.67/2.35	-2.32/0.78	-0.24/0.54	-1.96/3.21	-6.05/4.54	-1.37/0.67
Theta (90°)	0.97/0.64	-0.16/1.72	-4/6.61	-3.52/3.94	-3.3/2.84	-5.11/3.68	-1.87/0.02	-1.07/1.97	-2.31/0.96	-0.7/1.2	-0.86/1.9	-3.67/4.69	-6.19/3.61	-3.75/5.56	-4.49/4.01	-2.5/1	-1.59/1.6	-1.83/0.25	-0.63/1.29	-3.02/1.8	-2.54/5.68	-5.7/4.7	-0.32/1.15	1.61/1.25
Theta (97.5°)	-4.94/5.05	-4.96/2.73	-2.56/1.85	-1.76/0.45	0.17/1.47	-5.55/5.31	-2.46/2.16	-2.72/0.95	-0.55/0.97	-3.04/2.26	-2.46/1.45	-0.17/0.12	-1.92/1.33	0.54/0.86	-2.21/2.61	-5.24/6.55	-4.67/5.59	-2.71/3.61	-3.57/13.76	-6.6/1.08	-2.92/2.02	-0.29/1.3	-2.52/4.59	-5.71/4.82
Theta (105°)	-3.43/3.91	-2.53/2.2	-2.97/2.99	-3.03/3.5	-2.1/1.47	-3.34/3.38	-2.64/2.7	-3.8/2.99	-2.83/8.01	-5.38/3.35	-3.53/1.77	-3.19/0.21	-1.61/0.63	-0.47/0.85	-2.24/3.04	-2.1/1.51	-2.32/2.19	-4.89/4.29	-6.93/1.95	-2.65/1	0.5/1.61	-6.42/6.13	-2.88/3.14	-3.85/4.16
Theta (112.5°)	-0.9/2.55	-5.46/6.7	-8.49/1.75	-2.22/2.8	-3.26/4.65	-6.58/5.45	-4.1/6.84	-5.2/5.74	-3.77/3.22	-3.28/5.64	-8.7/7.67	-6.77/2.53	-4.94/4.81	-2.02/2.03	-7.14/10.81	-5.55/5.91	-2.54/3.34	-0.86/3.28	-2/5.85	-9.35/3.41	-6.79/11.03	-6.88/2.9	-2.94/2.97	-2.55/2.18
Theta (120°)	-2.19/7.1	-8.52/8	-11.3/6.46	-11.29/12.81	-6.3/6.04	-6.03/5.83	-6.48/4.59	-3.5/4.03	-1.56/2.69	-3.25/7.15	-10.24/10.37	-6.07/7.32	-10.53/3.02	-3.68/7.84	-7.38/4.1	-5.14/2.4	-6.24/6.12	-15.16/6.55	-8.94/2.8	-4.86/3.7	0.32/0.09	-0.93/1.75	-2.76/7.34	-5.71/1.76
Theta (127.5°)	-3.65/7.85	-9.48/3.7	-3.65/6.16	-8.24/6.53	-6.13/10.89	-12.36/9.25	-8.63/4.9	-4.26/6.07	-4.64/3.32	-2.42/5.95	-4/4.18	-3.94/4.87	-1.83/3.71	-3.56/5.58	-4.94/9.75	-2.7/2.67	-0.65/3.19	-2.57/4.77	-3.31/1.7	-0.4/4.23	-2.61/2.02	0.38/2.72	-8.23/7.38	-7.53/3.03
Theta (135°)	-4.66/4.28	-5.16/3.53	-3.81/3.69	-4.55/2.39	-2.39/7.31	-10.23/6.67	-7.78/8.2	-9.54/10.98	-15.39/13.24	-7.02/6.71	-5.2/4.88	-5.51/7.79	-7.3/6.34	-4.68/6.62	-13.73/4.34	-1.48/1.38	-4.13/7.28	-5.4/7.44	-6.42/6.97	-8.77/10.96	-7.07/6.06	-7.83/4.75	-4.59/6.85	-7.26/7.55
Theta (142.5°)	1.16/0.74	-1.76/4.56	-9.15/9.67	-2.14/0.82	-0.81/3.19	-4.4/3.97	-5.09/4.24	-4.62/5.14	-6.74/10.13	-10.84/9.8	-9.01/6.9	-6.8/9.34	-8.66/5.31	-7.11/12.48	-10.97/5.62	-5.04/7.47	-10.41/14.8	-15.36/9.37	-4.29/2.85	-4.33/7.62	-2.61/2.01	-1.51/2.23	-2.99/3.76	-2.39/0.16
Theta (150°)	0.13/0.4	-1.52/6.13	-6.32/2.63	-1.46/1.4	-4.72/7.5	-9.25/8.53	-12.09/15.51	-11.39/8.27	-8.99/8.83	-6.27/7.29	-9.15/7.66	-7.52/7.36	-5.21/5.44	-6.21/6.02	-7.2/5.46	-3.56/4.73	-6.39/3.82	-5/6.48	-5.46/2.92	-3.93/5.5	-3.68/2.09	-2.42/1.07	-1.38/1.8	-1.62/0.18
Theta (157.5°)	-0.27/0.53	-1.95/3.07	-4.73/3.33	-2.94/3.32	-3.34/5.88	-6.33/5.5	-5.82/8.15	-8.81/8.78	-9.73/6.9	-4.27/3.07	-4.01/4.94	-6.77/4.08	-2.93/2.32	-2.65/3.09	-3.6/5.23	-11.09/12.01	-5.43/5.29	-9.42/12.72	-9.57/5.78	-3.53/2.83	-3.18/4.57	-5.87/4.88	-3.82/2.84	-1.93/1.17
Theta (165°)	-3.01/2.25	-1.23/1.28	-0.16/0.2	0.66/0.7	-2.97/4.38	-3.56/2.67	-4.17/6.67	-5.45/4.32	-3.95/4.4	-3.61/3.63	-2.53/1.54	-0.54/0.03	-0.14/0.99	-1.99/3.01	-3.19/3.88	-4.78/4.32	-4.63/6.17	-8.77/10.84	-12.3					



Radiated Composite Gain Data

Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.2

Theta (22.5°)	-10.021-7.64	-5.511-3.86	-3.881-4.36	-3.291-1.62	-0.991-1.61	-3.111-3.89	-3.511-3.39	-3.571-4.16	-5.671-7.76	-9.411-10.55	-14.761-19.06	-15.451-12.66	-10.511-7.57	-6.051-5.33	-4.961-5.12	-5.651-6.68	-5.541-4.9	-2.351-0.55	0.411-0.85	1.021-0.66	-0.321-1.53	-2.751-4.42	-6.721-9.68	-13.211-12.3	
Theta (30°)	-11.361-7.49	-4.321-3.17	-3.151-2.7	-2.111-3	-1.331-2.59	-3.811-3.27	-2.291-3.62	-1.031-1.62	-2.781-4.23	-6.921-13.55	-19.011-18.14	-13.221-9.96	-8.271-7.57	-7.241-5.93	-4.291-3.67	-3.771-4.1	-4.651-4.95	-2.481-0.2	1.231-1.69	1.501-4.8	-0.881-3.25	-4.871-7.22	-10.391-16.26	-19.411-15.26	
Theta (37.5°)	-13.421-9.9	-4.931-3.69	-4.051-2.03	-0.931-0.77	-2.011-0.86	-3.281-2.07	-1.841-2.67	-3.231-4.04	-6.851-11	-11.511-12.65	-18.871-18	-10.011-9.93	-8.951-10.36	-13.991-13.51	-9.511-6.98	-5.911-5.22	-5.741-7.3	-4.771-1.81	-0.571-0.37	-1.041-2.07	-0.881-3.25	-4.871-7.22	-10.391-16.26	-19.411-15.26	
Theta (45°)	-14.291-12.07	-6.391-4.16	-4.331-1.53	0.5301-3.2	-1.691-3.09	-1.291-0.4	-1.111-2.4	-3.211-5.03	-7.941-13.38	-14.581-19.18	-5.831-4.92	-6.761-9.65	-10.171-11.18	-16.081-18.77	-16.461-10.04	-6.921-4.66	-3.911-5.69	-4.771-1.69	-0.431-0.54	-1.361-1.66	-2.081-3.45	-4.821-6.44	-8.951-10.94	-13.081-15.05	
Theta (52.5°)	-14.531-12.78	-8.231-5.1	-3.271-2.02	1.711-2.1	-1.231-1.71	0.261-0.1	-0.441-1.48	-1.961-4.73	-11.611-10.46	-6.911-5.52	-6.581-10.24	-11.641-10.71	-14.741-17.85	-17.861-15.55	-9.141-4.49	-2.471-3.68	-3.341-0.7	0.3401-0.3	-0.351-0.28	-1.191-2.16	-3.031-5.08	-7.491-9.18	-10.781-14.86	-18.111-15.26	
Theta (60°)	-14.871-17.03	-12.491-7.39	-4.521-1.79	-0.031-0.77	-2.011-0.87	-0.061-0.59	-2.191-3.26	-1.361-3.93	-3.771-3.93	-6.241-8.96	-15.341-11.68	-15.781-17.67	-10.911-18.72	-17.861-17.65	-18.171-9.46	-4.291-3.82	-3.391-1.7	-1.311-1.66	-1.311-0.87	-2.561-5.06	-6.931-6.93	-7.181-8.73	-10.731-12.5	-15.261-15.26	
Theta (67.5°)	-18.991-18.36	-15.581-9.19	-6.841-2.6	-1.211-1.52	-0.271-0.2	-1.091-2.31	-2.221-1.61	-2.071-5.64	-9.351-6.55	-5.631-6.8	-9.961-13.31	-13.311-12.33	-12.211-10.81	-13.651-18.44	-12.791-10.61	-12.861-13.31	-5.911-4.58	-2.61-0.59	-0.971-2.15	-1.531-0.61	-1.151-2.5	-4.781-6.71	-8.361-8.67	-10.511-12.27	
Theta (75°)	-17.091-18.42	-18.861-13.27	-8.061-3.79	-2.491-0.27	0.911-0.81	-2.051-0.78	-1.031-2.5	-3.611-4.91	-6.591-5.9	-7.791-13.27	-19.111-19.18	-18.941-18.57	-14.211-10.33	-10.911-18.72	-15.741-8.78	-8.131-14.45	-7.641-5.26	-3.211-0.57	-0.481-1.88	-2.111-1.13	-1.261-2.97	-4.831-6.33	-6.791-7.75	-9.091-12.14	
Theta (82.5°)	-11.891-15.62	-18.051-13.42	-7.041-3.03	-0.361-1.38	0.801-1.8	-2.011-0.7	-2.611-2.1	-0.931-3.99	-6.591-4.87	-8.191-17.71	-17.831-13.14	-11.921-15.03	-12.711-7.48	-7.651-10.5	-18.281-8.4	-4.891-8.95	-7.171-4.61	-2.251-0.54	0.511-1.66	0.071-0.2	-0.971-1.4	-2.941-4.39	-5.191-7.08	-8.711-10.56	
Theta (90°)	-17.031-18.36	-18.91-14.83	-10.481-4.77	-1.131-0.72	0.5401-0.77	-1.671-2.08	-2.431-2.13	-2.331-6.1	-6.821-5.19	-10.21-18.34	-19.151-15.21	-12.011-12.84	-13.211-7.46	-7.071-8.32	-12.831-16.4	-7.11-8.82	-7.791-5.48	-3.871-0.89	-0.681-2.5	-1.241-0.42	-1.681-2.36	-4.451-6.76	-8.181-10.21	-8.941-11.01	
Theta (97.5°)	-15.211-12.97	-19.051-17.17	-8.861-2.35	-3.201-7.3	1.8101-0.4	-0.621-0.42	-2.421-1.3	0.121-2.1	-4.641-5.24	-11.541-12.87	-10.551-17.1	-10.471-11.4	-12.511-6.23	-5.961-6.68	-12.511-12.83	-5.591-7.73	-6.241-3.79	-3.021-1.3	0.981-1.24	-0.381-0.6	-0.661-1.4	-3.091-6.48	-5.991-7.12	-8.841-12.16	
Theta (105°)	-11.631-15.18	-18.231-13.27	-6.121-3.54	-1.1601-5.3	1.2301-7.3	-0.391-5.5	-2.271-1.31	-1.381-6.28	-1.771-9.99	-13.141-16.73	-10.731-9.67	-9.711-12.75	-16.931-9.23	-8.191-9.52	-16.841-11.21	-5.561-7.74	-8.12-8.28	-3.631-2.14	-0.481-1.7	-1.861-0.98	-1.491-2.7	-6.771-5.69	-7.071-8.88	-8.881-9.45	
Theta (112.5°)	-121-15.09	-15.351-9.43	-7.131-3.43	0.211-3.1	1.171-0.76	-0.251-0.66	-2.991-3.25	-1.581-2.45	-2.351-1.98	-5.011-14.67	-15.731-12.03	-12.51-14.97	-14.31-9.04	-7.971-9.97	-16.071-6.8	-3.391-5	-6.511-3.72	-2.181-1.07	0.061-1.05	-0.871-0.22	-0.931-2.58	-3.581-3.42	-4.511-5.79	-6.221-7.74	
Theta (120°)	-12.351-13.98	-12.931-9.15	-4.971-1.15	0.7101-0.62	0.9601-0.58	0.911-1.57	-6.311-1.01	0.761-0.71	-2.1-2.37	-4.311-9.53	-11.611-10.46	-12.771-16.39	-16.611-15.25	-12.731-14.33	-15.081-8.73	-5.541-5.08	-3.811-2.39	-0.451-1.31	-3.321-2.84	-1.631-2.74	-5.281-6.41	-6.061-7.83	-7.761-9.42	-13.031-16.16	
Theta (127.5°)	-9.191-8.54	-6.111-3.53	-2.011-0.84	-0.1301-0.46	0.941-0.36	-2.911-1.58	-0.291-3.7	1.371-0.71	-3.451-4.35	-6.881-11.78	-10.791-9.1	-12.051-14.15	-13.421-16.73	-15.871-14.23	-8.671-4.86	-4.321-4.1	-3.271-0.91	-0.881-2.39	-0.381-0.58	-0.361-2.39	-3.231-2.76	-3.481-1.46	-4.81-5.69	-6.741-9.96	
Theta (135°)	-9.611-7.55	-5.71-4.46	-3.181-1.14	0.5901-0.74	-1.111-1.89	0.781-1.6	-0.391-2.43	-3.571-6.71	-10.091-9.09	-9.581-15.46	-18.521-16.27	-16.771-17.39	-17.911-16.91	-16.81-13.1	-7.811-4.75	-4.631-6.14	-4.811-1.93	-0.61-1.32	-1.651-1.83	-2.331-2.97	-3.481-4.45	-4.191-6.33	-10.281-13.02	-13.441-11.5	
Theta (142.5°)	-11.451-8.68	-5.61-2.56	-0.6701-0.59	0.691-0.44	-0.611-1.16	1.931-0.53	-3.191-1.11	-6.451-7.21	-6.61-5.56	-5.561-7.29	-11.421-16.38	-19.21-17.78	-18.721-16.71	-14.171-11.16	-6.851-4.07	-3.611-3.1	-2.941-1.61	-0.5101-0.1	0.9201-0.88	-0.491-5.28	-4.951-6.33	-3.761-2.46	-5.711-8.35	-13.161-12.22	
Theta (150°)	-9.531-6.48	-6.31-3.28	-0.671-0.59	-0.881-0.84	0.1801-0.1	-0.811-0.79	-5.811-7.9	-5.671-5.29	-4.751-7.79	-5.751-6.83	-9.671-15.4	-18.131-18.39	-19.241-17.11	-13.341-12.48	-10.341-7.35	-5.941-0.07	-2.891-2.33	-2.321-2.35	-0.051-0.93	-3.71-6.4	-10.641-14.21	-14.781-14.11	-13.791-11.8	-18.11-11.01	
Theta (157.5°)	-7.421-5.06	-2.911-2.12	-2.741-3.17	-2.321-0.85	-0.061-0.69	-2.921-5.83	-6.161-4.19	-2.891-2.74	-3.081-4.16	-6.21-8.62	-12.121-18.8	-18.181-24	-19.451-15.19	-13.021-11.57	-9.521-6.96	-4.531-2.68	-1.591-1.14	-1.281-1.69	-1.0301-0.6	0.501-0.1	-0.361-0.7	-2.441-4.69	-8.251-13.04	-11.791-8.42	
Theta (165°)	-9.111-8.82	-8.331-3.38	-7.351-4.41	-1.981-0.96	-1.611-6.39	-5.681-5.13	-5.291-3.42	-4.641-2.41	-5.781-7.91	-11.841-17.17	-18.221-18.07	-16.811-16.55	-15.981-16.11	-14.981-12.5	-10.421-8.2	-5.941-4.22	-3.171-2.55	-2.321-2.47	-2.241-1.64	-1.381-1.44	-1.471-2.42	-3.621-4.55	-5.671-5.97	-6.721-7.71	
Theta (172.5°)	-15.431-18.29	-15.041-10.16	-7.141-4.27	-3.261-3.72	-5.581-6.57	-5.021-3.46	-2.831-2.49	-3.171-8.7	-7.361-9.52	-8.571-8.15	-8.211-8.51	-9.741-12.05	-14.411-17.2	-17.091-12.32	-9.331-7.35	-6.841-4.29	-2.081-1.8	-1.511-1.04	-0.871-1.22	-1.781-2.12	-2.421-3.12	-4.511-5.91	-8.021-12.47	-13.441-11.5	
Theta (180°)	-17.751-18.39	-13.311-10.1	-7.821-6.58	-4.961-8.42	-8.021-5.33	-3.351-2.77	-3.731-3.6	-4.91-6.04	-6.641-3.99	-3.781-3.85	-4.241-5.28	-7.951-12.12	-15.381-18.56	-17.711-12.64	-9.71-4.46	-5.971-4.64	-3.541-2.78	-2.241-1.86	-1.631-1.5	-1.421-1.54	-1.841-2.3	-2.821-3.76	-5.561-7.44	-9.731-14.1	
Freq(Hz)	2.4835GPol.	ThetaAnt.1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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°)	-5.121-4.39	-4.131-3.73	-3.471-3.6	-4.191-4.98	-5.751-6.59	-7.741-9.16	-11.261-14.42	-17.961-17.94	-18.911-11.96	-8.461-7.36	-7.071-5.52	-4.151-3.6	-3.41-2.93	-2.721-2.9	-3.551-3.97	-4.211-4.51	-5.081-6.14	-7.171-9.91	-12.891-16.9	-18.011-17.74	-17.651-14.15	-11.541-9.33	-7.711-6.92	-6.491-5.5	
Theta (7.5°)	-0.771-0.2	-0.671-0.1	-1.381-1.34	-1.641-2.43	-3.461-6.17	-6.031-6.17	-9.681-12.17	-15.161-14.2	-15.721-17.73	-9.011-6.56	-5.831-5.97	-6.721-5.07	-4.711-3.94	-3.321-3.33	-4.1-2	-3.851-3.62	-3.971-4.89	-6.281-8.43	-11.651-16.71	-18.181-16.3	-12.051-9.07	-7.411-5.73	-3.451-1.93	-3.631-3.82	
Theta (15°)	-0.801-0.45	-0.931-0.01	-1.051-0.79	-0.651-1.46	-2.741-4.13	-5.681-7.61	-9.821-11.55	-11.911-21.7	-10.191-10.5	-7.331-4.99	-6.871-6.14	-7.671-5.96	-5.431-6.03	-7.791-9.14	-7.641-7.06	-4.471-4.77	-5.711-6.62	-10.611-14.57	-16.211-12.03	-8.711-6.17	-4.811-3.93	-3.051-1.78	-1.291-1.62	-1.291-1.62	
Theta (22.5°)	-3.111-2.5	-1.261-1.15	-2.51-2.91	-2.121-2.34	-3.711-5.41	-7.211-9.57	-12.111-12.98	-11.671-10.36	-9.51-8.71	-7.351-5.88	-5.111-5.17	-6.191-7.11	-7.051-7.24	-8.761-10.7	-11.861-12.62	-12.191-9.39	-7.221-6.48	-6.821-8.29	-10.881-13.41	-12.731-9.95	-7.631-5.69	-4.321-3.65	-3.181-2.32	-1.491-1.49	
Theta (30°)	-3.891-4.4	-4.491-3.95	-3.921-5.06	-4.691-3.75	-4.61-6.66	-8.111-5.3	-14.911-16.6	-11.121-9.26	-8.251-7.69	-7.381-6.96	-6.431-6.4	-7.951-10.96	-12.711-10.62	-10.091-11.2	-14.111-14.73	-16.931-14.94	-10.021-7.66	-6.921-7.1	-9.911-8.8	-10.21-7.82	-6.271-3.88	-5.551-5.07	-4.811-6.45	-4.321-3.93	
Theta (37.5°)	-4.391-4.47	-4.871-6.82	-6.231-6.79	-8.071-6.34	-6.551-8.62	-10.721-12.56	-16.231-17.05	-14.171-12.28	-11.161-10.38	-10.491-11.24	-11.561-11.04	-10.491-10.57	-11.761-11.61	-10.511-11.57	-9.241-11.78	-14.441-17.54	-14.441-11.63	-10.591-11.08	-13.431-14.81	-12.051-9.69	-8.291-7.47	-7.321-7.22	-6.761-5.51	-4.71-8.2	
Theta (45°)	-4.361-3.95	-3.631-6.05	-7.481-6.78	-9.171-9.1	-8.771-9.72	-9.371-10.69	-14.441-16.78	-15.841-15.41	-13.261-12.33	-12.321-12.58	-12.691-12.48	-12.111-11.99	-11.191-9.8	-8.551-8.07	-9.231-11.17	-16.311-18.39	-13.511-10.42	-9.911-11.52	-14.981-16.37	-13.021-10.65	-9.151-7.37	-5.991-5.44	-5.091-4.45	-4.471-8.5	
Theta (52.5°)	-5.331-5.28	-4.031-2.58	-7.411-6.12	-8.941-14.39	-9.551-8.36	-8.551-10.82	-15.121-17.36	-15.251-19.12	-9.681-9.57	-11.641-14.34	-15.951-16.16	-15.471-15.26	-15.061-13.04	-10.941-9.07	-8.241-8.1	-9.771-13.17	-13.591-9.7	-8.471-10.41	-15.161-15.4	-13.241-10.96	-8.941-6.27	-4.731-4.7	-5.281-5.38	-4.941-6.14	
Theta (60°)	-9.831-10.97	-8.241-5.88	-8.211-6.44	-9.151-17.32	-10.951-10.98	-13.131-17.7	-15.471-16.27	-13.831-8.84	-7.051-7.64	-11.731-15.3	-17.441-19.														



Radiated Composite Gain Data

Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.2

Theta	Phi	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(125)	Phi(7.5)	-13.77-12.33	-9.15-5.54	-3.07-11.19	-6.38-2.28	-1.88-4.92	-0.74-0.61	-6.19-10.73	-6.05-11.47	-7.78-5.44	-8.88-7.02	-9.21-17.52	-13.76-17.36	-11.44-14.27	-14.09-15.94	-10.92-10.07	-2.24-5.23	-13.35-5.33	-5.96-4.88	0.16-1.66	-1.63-1.37	-6.35-4.82	-5.41-6.07	-9.19-18.89	-18.89-16.02	
Theta(120)	Phi(7.5)	-12.44-11.51	-8.27-5.56	-9.39-12.89	-5.49-2.28	-2.72-3.69	-1.33-0.51	-7.14-1.65	-6.26-3.55	-14.16-7.37	-9.54-10.42	-8.31-13.35	-17.22-16.48	-11.29-14.41	-12.81-13.96	-17.58-7.92	-2.22-4.13	-12.36-6.63	-3.58-5.11	0.26-1.65	-1.38-0.95	-2.63-5.42	-4.55-8.1	-8.64-10.86	-18.21-19.31	
Theta(115)	Phi(7.5)	-13.82-11.42	-7.86-8.36	-14.77-9.96	-3.04-1.64	-4.62-3.5	-1.03-0.71	-2.63-2.54	-6.94-7.44	-14.77-14.63	-10.59-10.62	-11.67-11.93	-13.63-14.99	-17.07-15.87	-14.71-10.32	-10.81-6.15	-4.05-6.44	-9.98-5.18	-5.01-6.63	-0.97-0.2	-2.1-1.9	-1.71-10.44	-5.68-3.7	-8.51-14.58	-14.86-15.68	
Theta(110)	Phi(7.5)	-12.42-7.58	-8.76-18.98	-8.77-0.41	-4.73-1.06	-7.89-1.58	-3.61-0.07	-5.47-5.13	-3.15-3.3	-2.66-6.67	-15.45-18.25	-17.78-18.79	-18.52-13.9	-12.77-17.59	-14.15-13.83	-18.52-8.33	-5.56-5.73	-7.2-3.32	-3.71-7.77	-3.13-3.05	0.32-2.02	-1.57-13.22	-9.27-4.62	-5.65-9.33	-14.82-18.62	
Theta(105)	Phi(7.5)	-14.26-15.94	-7.1-18.99	-5.27-2.7	-1.94-4.17	-5.88-1.1	-2.34-2.46	-0.72-4.1	-3.4-6	-11.97-8.89	-8.11-9.39	-11.43-14.4	-12.86-13.51	-17.87-16.12	-15.23-16.62	-13.87-12.98	-10.89-10.61	-7.24-3.96	-6.35-5.85	-4.09-0.23	0.32-1.52	-4.13-3.22	-4.89-10.23	-13.47-12.48	-12.31-12.35	
Theta(100)	Phi(7.5)	-12.19-13.1	-7.4-6.05	-3.79-3.28	-2.8-10.98	-1.69-2.82	-2.60-0.09	0.01-2.12	-8.22-18.7	-10.21-11.98	-10.71-10.18	-11.92-12.47	-11.18-11.12	-13.42-12.48	-9.94-11.26	-13.88-15.75	-10.13-8.67	-6.62-3.35	-3.15-6.24	-4.35-1.21	0.14-0.13	-1.12-4.43	-4.55-5.54	-8.51-14.96	-11.61-18.32	
Theta(95)	Phi(7.5)	-18.88-15.23	-12.22-7.35	-5.43-8.76	-8.23-3.76	-4.37-1.35	-0.85-1.51	-2.56-4.55	-11.35-18.83	-10.27-8.81	-9.89-12.59	-14.68-18.53	-19.4-18	-19.4-17.95	-17.46-18.92	-18.98-13.17	-7.84-5.73	-5.46-4.85	-3.54-3.49	-5.35-3.97	-1.66-2.04	-2.92-2.41	-2.69-4.01	-5.81-8.07	-12.37-15.98	
Theta(90)	Phi(7.5)	-8.27-9.03	-12.23-14.15	-13.44-6.96	-4.74-3.42	-1.35-1.59	-4.3-9.14	-10.37-6.03	-8.19-12.79	-16.17-14.02	-10.16-6.93	-7.91-8.81	-12.46-14.06	-17.73-13.27	-13.59-13.11	-10.35-6.69	-4.77-4.13	-4.08-4.42	-3.56-2.99	-3.36-2.57	-1.73-2.29	-2.74-5.55	-4.61-6.69	-7.83-10.01	-9.92-9.06	
Theta(85)	Phi(7.5)	-11.39-13.53	-13.78-10.86	-8.85-7.03	-4.13-2.45	-1.43-1.69	-2.81-4.69	-12.28-13.73	-8.87-7.83	-10.73-11.26	-9.27-7.82	-8.18-7	-9.47-8.72	-11.24-13.02	-12.15-8.64	-7.34-6.44	-6.08-5.94	-5.9-5.75	-5.47-3.92	-3.55-2.1	-1.96-1.44	-2.59-2.61	-4.29-6.69	-3.28-4.47	-6.39-7.46	
Theta(80)	Phi(7.5)	-8.25-7.39	-6.37-6.8	-5.58-4.58	-3.81-4.36	-7.76-14.71	-18.84-14.39	-18.93-17.59	-10.02-6.07	-4.85-6.13	-7.37-9.31	-11.46-13.13	-12.81-11.64	-11.49-9.49	-9.64-9.08	-8.72-7.73	-8.33-8.12	-7.97-8	-9.12-9.19	-8.77-8.9	-8.38-8.95	-9.89-9.41	-10.61-11.18	-10.75-9.78	-9.47-9.57	
Theta(75)	Phi(7.5)	-1.20-5.84	-1.01-1.38	-1.71-2.17	-3.41-3.52	-4.43-7.35	-11.62-16.16	-18.38-18.84	-13.24-10.32	-8.3-5.99	-3.49-3.2	-2.41-2.28	-1.99-0.57	-1.01-0.55	-0.86-1.36	-1.42-2.28	-2.91-4.07	-5.1-7.36	-9.71-13.74	-19.29-18.19	-14.94-10.82	-7.92-6.43	-4.43-3.56	-2.13-2.26	-1.34-1.26	
Theta(70)	Phi(7.5)	1.07-0.88	0.57-0.14	-0.59-1.12	-3.1-3.78	-4.23-6.15	-10.08-15.33	-18.01-19.05	-16.41-10.99	-9.27-7.55	-5.97-4.74	-3.17-1.89	-1.89-0.77	-1.48-0.74	-1.38-1.18	-1.61-1.64	-2.97-3.99	-5.48-7.99	-10.28-13.81	-18.83-18.84	-15.99-10.82	-7.79-5.22	-3.57-2.09	-1.43-0.5	-1.15-0.36	
Theta(65)	Phi(7.5)	0.44-0.28	0.78-0.11	-0.11-0.14	-0.95-3.74	-4.42-6.07	-9.81-10.29	-11.72-16.55	-17.72-16.04	-11.23-9.36	-6.11-4.64	-4.09-3.7	-3.84-4.44	-3.67-4.21	-3.92-4.77	-4.26-3.62	-3.72-4.74	-6.74-9.24	-12.14-15.13	-17.91-17.98	-18.95-11.35	-6.74-6.4	-2.79-1.88	-1.4-0.51	-0.93-0.7	
Theta(60)	Phi(7.5)	-0.76-0.19	-0.61-0.94	-2.06-3.21	-2.57-7.31	-6.41-8.31	-8.96-8.18	-10.36-15.61	-13.39-10.6	-9.06-8.34	-7.72-6.96	-7.63-6.44	-6.63-6.34	-5.25-5.52	-5.27-4.82	-5.02-6.31	-6.81-6.66	-6.53-8.91	-12.31-18.1	-17.72-18.87	-15.93-10.02	-6.67-5.73	-4.34-2.98	-2.42-1.22	-0.65-0.16	
Theta(55)	Phi(7.5)	-1.20-66	0.63-7.12	0.63-4.11	-1.41-6.22	-6.92-9.7	-7.17-6.56	-10.91-18.04	-12.34-10.83	-11.12-11.05	-8.82-8.28	-6.79-5.59	-5.01-4.17	-3.64-3.88	-4.18-7.35	-5.61-8.24	-7.32-6.85	-6.99-11.9	-14.35-14.52	-18.21-19.28	-16.78-11.1	-6.24-3.94	-2.15-1.01	-0.69-0.81	-0.66-0.42	
Theta(50)	Phi(7.5)	-3.33-4.16	-4.05-2.33	-1.15-2.37	-3.65-5.56	-5.14-15.96	-11.36-7.56	-9.83-15.34	-12.29-15.59	-14.41-10.66	-7.79-10.6	-6.89-5.76	-6.12-6.47	-6.84-7.64	-8.09-7.14	-7.12-11.38	-7.66-10.51	-14.58-16.63	-16.46-17.97	-19.9-7.7	-5.57-6.43	-6.54-6.02	-3.18-3.02	-2.78-3.18		
Theta(45)	Phi(7.5)	-4.15-5.16	-6.55-4.24	-6.47-3.76	-3.51-3.64	-3.78-10.16	-15.81-5.01	-8.42-16.97	-15.7-9.52	-8.97-12.8	-18.71-19.24	-16.06-12.37	-11.19-17.54	-18.5-10.72	-7.51-8.22	-12.44-6.64	-7.85-12.46	-9.64-12.12	-16.33-11.71	-18.76-18.92	-15.4-8.82	-6.91-10.44	-6.79-5.94	-6.1-6.18	-5.27-5.56	
Theta(40)	Phi(7.5)	-2.78-7.31	-4.44-6.44	-9.4-8.41	-7.19-4.18	-6.31-8.79	-18.13-7.91	-8.42-13.71	-11.84-10.52	-13.07-18.19	-18.2-13.37	-17.74-19.01	-10.42-6.56	-9.19-12.27	-16.66-11.73	-11.14-13.34	-13.72-11.95	-9.88-7.93	-18.54-14.72	-17.41-17.71	-11.93-9.03	-8.41-6.41	-7.18-1.77	-5.76-4.41		
Theta(35)	Phi(7.5)	-7.77-5.53	-4.44-4.41	-6.12-10.84	-6.86-8.01	-5.41-9.64	-5.62-8.54	-6.79-11.35	-6.82-9.42	-5.74-9.74	-3.1-2.33	-2.23-3.89	-8.15-12	-17.85-11.5	-10.62-12.56	-9.81-7.82	-17.73-17.81	-11.74-18.82	-11.74-18.82	-12.55-11.79	-8.57-9.2	-7.21-5.44	-6.28-9.39			
Theta(30)	Phi(7.5)	-14.09-13.13	-15.41-11.64	-6.2-7.98	-15.25-11.72	-9.11-9.32	-18.09-10.43	-6.35-10.13	-10.61-10.87	-17.18-18.63	-13.21-17.83	-10.47-7.04	-5.21-3.09	-0.54-1.03	-4.55-10.05	-18.75-12.68	-15.52-12.45	-11.71-12.39	-15.53-18.55	-18.84-14.56	-12.34-18.94	-17.16-12.2	-12.34-9.31	-12.54-18.38	-14.11-17.25	
Theta(25)	Phi(7.5)	-16.91-16.7	-14.31-14.41	-10.21-9.3	-12.09-18.35	-6.66-7.17	-14.74-13.55	-4.85-5.32	-8.17-9.67	-14.74-18.87	-11.56-9.86	-13.12-11.02	-8.69-7.82	-3.35-2.51	-3.19-5.29	-15.19-18.16	-16.44-11.56	-11.58-10.37	-9.34-13.62	-16.26-14.73	-14.17-16.63	-13.84-14.94	-18.96-15.81	-17.54-16.37		
Theta(20)	Phi(7.5)	-17.47-19.14	-16.13-17.49	-11.51-13.19	-18.95-16.09	-10.93-12.41	-11.47-9.95	-8.3-8.96	-13.78-15.09	-8.96-11.22	-4.93-8.4	-6.32-10.74	-14.85-10.84	-13.78-14.28	-18.01-17.66	-13.78-14.28	-18.01-17.66	-13.78-14.28	-18.01-17.66	-13.78-14.28	-18.01-17.66	-13.78-14.28	-18.01-17.66	-13.78-14.28	-18.01-17.66	-13.78-14.28
Theta(15)	Phi(7.5)	-15.67-19.55	-18.83-17.32	-14.48-17.43	-15.61-19.02	-14.84-10.11	-18.99-15.68	-15.64-9.03	-9.95-9.63	-10.64-11.18	-13.78-12.84	-11.69-10.39	-14.56-14.56	-17.85-8.5	-8.78-14.06	-17.49-19	-15.77-11.89	-10.5-11.27	-10.79-10.51	-11.63-19	-17.8-13.2	-16.12-16.56	-11.27-16.54	-15.04-19.28	-19.1-18.89	
Theta(10)	Phi(7.5)	-18.76-16.87	-18.98-18.07	-15.63-15.55	-11.84-14.79	-12.85-13.95	-18.69-13.99	-10.84-10.33	-12.07-5.67	-6.47-10.91	-18.54-15.33	-18.82-12.18	-8.34-9.37	-18.37-15.23	-5.83-6.76	-17.1-15.83	-17.83-12.82	-10.45-9.24	-11.18-12.2	-12.69-18.91	-16.57-9.38	-15.44-18.05	-14.77-13.27	-11.68-13.19	-18.3-19	
Theta(5)	Phi(7.5)	-18.13-17.5	-12.34-12.31	-18.47-13.67	-9.91-18.99	-17.33-16.57	-16.84-11.26	-9.99-14.15	-17.83-8.96	-6.44-12.26	-11.63-12.9	-17.87-9.88	-16.71-15.55	-9.83-7.53	-8.26-9.33	-16.49-17.47	-12.43-12.45	-12.17-12.52	-15.87-18.21	-19.42-18.12	-16.56-8.74	-15.41-18.51	-9.02-11.25	-13.41-9.91		
Theta(0)	Phi(7.5)	-12.09-11.86	-15.62-18	-17.48-8.56	-12.35-17.84	-10.47-12.56	-15.85-13.47	-12.67-15.74	-10.75-13.22	-9.48-11.08	-13.01-19.1	-18.62-15.65	-12.08-3.57	-11.41-12.03	-7.14-5.9	-10.88-18.06	-11.59-12.95	-9.65-9.75	-13.58-11.89	-11.74-15.26	-18.64-7.96	-8.81-14.29	-18.68-10.94	-10.64-11.23	-12.35-18.81	
Theta(-5)	Phi(7.5)	-10.06-11.62	-15.75-12.42	-11.35-6.28	-10.93-18.12	-8.66-4.07	-13.15-11.62	-10.55-13.2	-6.53-6.16	-6.92-14.24	-17.93-16.26	-13.78-12.95	-16.33-6.46	-5.08-12.85	-17.43-18.29	-12.14-7.26	-7.87-9.96	-18.62-14.9	-9.92-7.62	-13.57-8	-5.27-9.08	-12.58-14.05	-8.69-10.98	-9.14-9.31		
Theta(-10)	Phi(7.5)	-7.19-7.7	-9.11-6.55	-6.72-7.25	-13.22-9.26	-7.36-11.08	-13.44-11.34	-14.1-8.82	-8.42-15.2	-9.16-7.07	-6.62-10.36	-9.01-13.73	-9.79-14.15	-6.5-12.4	-12.82-15.47	-11.47-14.19	-6.55-5.59	-7.39-12.89	-17.72-18.62	-13.14-7.63	-13.63-18.45	-4.98-9.4	-15.62-8.05	-14.66-7.03	-8.54-6.93	
Theta(-15)	Phi(7.5)	-8.16-5.84	-9.01-3.83	-5.04-8.02	-18.43-6.69	-4.49-12.36	-18.49-12.77	-16.29-10.47	-9.09-11.44	-16.57-16.32	-8.73-11.57	-10.41-11.32	-11.99-18.61	-18.53-18.18	-10.76-12.45	-19.34-6.35	-3.18-2.55	-8.03-18.88	-15.59-18.58	-13.91-11.43	-13.89-14.59	-7.19-6.61	-7.46-5.63	-6.09-5.68	-6.09-7.83	
Theta(-20)	Phi(7.5)	-2.35-2.56	-3.42-4.37	-9.54-16.08	-4.12-3.79	-3.61-1.69	-8.27-7.95	-10.52-9.02	-11.65-11.28	-10.8-13.7	-14.62-14.5	-17.68-15.94	-													



Radiated Composite Gain Data

Test Mode 2_For 2.4GHz and 5GHz U-NII 1 ~ U-NII 3

Appendix A.2

Theta (°)	-10.14/9.47	-9.44/9.96	-11.3/13.58	-16.67/17.96	-19.31/18.98	-17.4/18.88	-18.07/17.7	-16.57/13.24	-10.62/8.71	-7.3/6.3	-5.69/5.41	-5.28/5.3	-5.44/5.74	-6.14/6.63	-7.21/8.01	-9.25/11.07	-13.73/16.09	-18.18/16.37	-14.27/13.12	-12.73/12.71	-13.41/14.6	-16.17/17.54	-17.89/16.44	-14.22/12.15	
Theta (172.5°)	-10.85/-11.29	-12.6/15.04	-18.99/19.28	-18.33/18.2	-17.06/-16.48	-16.46/-16.2	-15.42/-14.56	-13.69/-12.4	-11.56/-10.72	-10.09/-9.48	-9.06/-8.66	-8.31/-7.91	-7.99/-7.46	-7.51/7.3	-8.17/-8.91	-9.9/11.02	-12.55/14.08	-15.36/16.37	-17.36/16.87	-18.23/17.27	-19.31/19.12	-17.09/15.22	-13.75/-12.7	-11.84/-11.31	
Theta (180°)	-11.29/12.44	-14.16/16.15	-17.53/17	-15.15/14.72	-14.16/14.66	-14.58/15.55	-14.99/14.54	-13.61/13.21	-12.94/13	-13.52/14.31	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48	-15.14/15.48
Freq(Hz)	2450Ppl	ThetaAnt.2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
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°)	-17.45/-18.49	-18.43/17.11	-15.54/14.07	-13.01/12.21	-11.67/11.15	-10.62/10.16	-9.91/9.83	-9.99/10.3	-10.71/11.32	-12.02/12.95	-14.01/15.19	-16.49/17.54	-18.35/17.22	-17.71/17.65	-17.87/19.36	-15.74/13.11	-11.29/10.16	-9.54/9.29	-9.46/9.84	-10.41/11.15	-11.76/12.1	-12.45/13.14	-14.36/15.56	-16.49/17.44	
Theta (7.5°)	-16.04/16.46	-16.3/15.93	-15.63/15.03	-14.74/14.52	-14.39/14.03	-13.53/13.13	-12.95/12.93	-12.88/13.26	-12.93/13.26	-14.05/15.08	-16.54/18.69	-18.14/18.55	-18.15/18.15	-18.78/19.11	-16.84/14.44	-12.26/10.54	-9.23/8.43	-8.03/7.89	-7.96/8.2	-8.73/9.41	-9.96/10.37	-10.95/11.95	-13.21/14.27	-15/15.8	
Theta (15°)	-11.61/11.41	-10.99/10.72	-10.42/10.12	-9.97/9.89	-9.87/9.82	-9.78/9.86	-10.2/10.65	-11.22/11.73	-12.48/13.39	-14.75/16.53	-18.83/18.92	-17.85/17.59	-18.68/18.12	-15.25/13.21	-11.59/10.26	-9.21/8.28	-7.58/7.17	-7.05/6.96	-6.91/7.04	-7.37/7.78	-8.09/8.33	-8.83/9.65	-10.61/11.2	-11.51/11.97	
Theta (22.5°)	-8.88	-8.48/8.16	-7.74/7.21	-6.79/6.5	-6.24/6.09	-6.06/6.21	-6.57/7.09	-7.78/8.6	-9.64/10.73	-11.86/13.14	-14.4/15.44	-15.9/15.64	-14.17/12.26	-10.42/8.85	-7.59/6.69	-6.12/5.74	-5.57/5.59	-5.62/5.7	-5.62/5.7	-5.62/5.7	-5.62/5.7	-5.62/5.7	-5.62/5.7	-5.62/5.7	-5.62/5.7
Theta (30°)	-6.46/6.62	-6.78/6.85	-6.72/6.31	-5.78/5.35	-4.94/4.6	-4.35/4.29	-4.45/4.88	-5.55/6.53	-7.64/8.7	-9.67/10.78	-12.09/13.46	-14.31/14.14	-12.95/11.35	-9.5/7.78	-6.2/4.97	-4.22/3.8	-3.73/3.85	-3.99/4.09	-4.13/4.14	-4.15/4.3	-4.63/5.08	-5.63/6.19	-6.54/6.67	-6.69/6.7	
Theta (37.5°)	-4.48/4.73	-5/5.29	-5.61/5.9	-6.04/5.86	-5.37/4.72	-4.08/3.53	-3.19/3.15	-3.52/4.31	-5.46/6.75	-8.18/9.78	-11.56/13.43	-14.68/14.51	-13.37/11.68	-9.91/8.09	-6.29/4.77	-3.68/3.17	-2.98/3.02	-3.03/2.94	-2.76/2.55	-2.53/2.75	-3.19/3.68	-4.08/4.38	-4.56/4.51	-4.45/4.5	
Theta (45°)	-4.28/4.16	-4.04/3.83	-3.66/3.78	-4.27/5.02	-5.6/5.72	-6.38/2.58	-6.18/2.21	-6.32/3.53	-4.84/6.41	-8.12/9.8	-11.04/11.77	-12.58/12.11	-11.44/10.15	-8.47/6.76	-5.35/4.2	-3.52/3.07	-2.77/1.57	-2.53/2.07	-2.64/2.17	-1.77/1.57	-1.75/2.32	-3.16/3.84	-4.31/4.67	-4.88/4.79	
Theta (52.5°)	-1.21/1.32	-1.55/1.63	-1.54/1.33	-1.21/1.48	-2.14/3.06	-3.96/4.54	-4.36/3.56	-2.64/1.95	-1.51/1.55	-2.13/3.01	-3.81/4.52	-4.93/5.23	-5.6/6.09	-6.57/7.02	-7.18/6.9	-6.06/5.04	-4.15/3.51	-2.93/2.58	-2.56/2.92	-3.88/5.07	-5.73/5.41	-4.76/4.09	-3.27/2.54	-1.99/1.6	
Theta (60°)	0.130	-0.25/0.54	-0.76/0.65	-0.210/2.2	0.21/0.07	-0.46/0.92	-1.28/1.35	-1.12/1.75	-0.33/1.3	-0.36/0.97	-1.71/3.23	-2.63/2.66	-2.6/2.57	-2.76/3.25	-3.93/4.66	-5.23/5.79	-6.48/7.15	-7.46/7.48	-7.46/7.35	-6.71/5.3	-3.8/2.8	-2.14/1.45	-0.78/2.29	-0.030/1.1	
Theta (67.5°)	-1.65/1.67	-1.65/1.77	-2.04/2.22	-1.92/1.13	-0.51/0.27	-0.13/0.11	-0.16/0.22	-0.2/0.03	0.360/68	0.760/6	0.26/0.09	-0.33/0.46	-0.53/0.75	-1.24/1.91	-2.59/2.99	-3.13/3.52	-4.12/4.45	-4.39/4.45	-4.54/4.3	-3.78/3.3	-3.06/2.94	-2.49/1.78	-1.26/1.06	-1.13/1.3	
Theta (75°)	-1.74/2.04	-2.28/2.46	-2.65/2.92	-3.3/3.29	-2.64/2.1	-1.68/1.13	-0.84/0.31	-0.19/0.26	-0.32/0.46	-0.71/0.97	-1.03/0.84	-0.48/0.07	0.1/0.14	-0.65/1.08	-1.18/0.79	-0.49/0.51	-0.7/0.89	-1.23/1.71	-1.86/1.83	-1.77/1.66	-1.42/1	-0.61/0.43	-0.48/0.72	-1.12/1.46	
Theta (82.5°)	-2.7/2.71	-3.03/3.54	-4.19/4.58	-4.81/5.32	-5.36/4.7	-4.26/3.81	-3.03/2.08	-1.17/0.63	-0.42/0.62	-1.11/1.54	-1.67/1.33	-0.83/0.48	-0.54/0.84	-1.04/0.96	-0.64/0.36	-0.2/0.01	0.130/2	0.170/2.24	0.17/0.27	-0.69/0.91	-0.81/0.62	-0.75/1.38	-2.23/2.77	-2.96/2.86	
Theta (90°)	-2.25/2.28	-2.3/2.44	-2.85/3.36	-3.47/3.44	-3.66/3.42	-2.74/2.34	-1.66/1.14	-1.14/1.41	-2.13/2.89	-3.32/3.32	-3.04/2.83	-2.17/2.45	-2.02/1.63	-1.41/1.21	-0.75/0.43	-0.51/0.88	-1.27/1.55	-2.29/2.68	-2.51/1.96	-1.33/0.94	-0.92/1.16	-1.49/1.68	-1.84/2.06		
Theta (97.5°)	-5.14/4.62	-3.69/2.75	-2.18/2.27	-2.65/2.8	-3.02/3.55	-3.74/3.63	-3.7/3.87	-3.99/3.67	-2.65/1.74	-1.26/1.08	-1.05/1.18	-1.41/1.55	-1.71/1.99	-2.36/2.79	-2.9/2.5	-2.25/2.46	-2.81/2.96	-2.75/2.27	-2.26/1.57	-1.43/1.59	-2.21/3.28	-4.3/4.73	-4.94/5.19	-5.35/5.27	
Theta (105°)	-4.86/4.58	-4.25/3.61	-2.94/2.75	-3.17/3.67	-4.72/3.71	-3.63/3.18	-2.65/2.27	-2.22/2.77	-3.51/3.68	-3.68/3.53	-3.14/2.74	-2.52/2.59	-3.21/4.21	-5.2/5.76	-6.53/5.55	-6.09/5.96	-5.08/4.06	-3.23/2.59	-2.02/2.38	-3.64/2.23	-6.8/7.11	-6.21/5.56	-5.37/4.59	-5.59/5.36	
Theta (112.5°)	-4.47/4.07	-3.93/3.87	-3.73/3.41	-3.37/3.67	-4.44/3.34	-4.32/3.07	-3.05/3.57	-1.37/1.59	-5.27/4.66	-2.74/1.78	-1.39/1.65	-2.15/2.28	-2.14/1.96	-2.52/2.59	-3.37/4.01	-5.33/5.57	-5.33/5.57	-5.33/5.57	-5.33/5.57	-5.33/5.57	-5.33/5.57	-5.33/5.57	-5.33/5.57	-5.33/5.57	
Theta (120°)	-10.92/10.54	-10.2/10.27	-10.57/10.38	-9.17/9.79	-7.33/7.05	-6.66/5.81	-4.48/3.18	-2.02/1.31	-1.35/2	-2.73/3.63	-5.03/6.95	-8.79/9.98	-9.48/8.14	-7.25/7.12	-7.78/8.72	-9.85/11.57	-12.09/10.49	-8.84/8.23	-8.41/7.64	-5.85/4.44	-3.51/3.11	-3.44/4.44	-5.88/7.31	-8.67/9.88	
Theta (127.5°)	-11.52/11.53	-10.92/10.69	-8.62/7	-7.56/7.06	-5.98/5.47	-5.82/6.97	-6.65/10.26	-10.37/8.47	-6.86/6.01	-5.61/5.37	-5.4/5.66	-6.05/6.52	-6.99/7.67	-8.18/8.32	-8.03/7.42	-6.5/5.44	-4.56/4.46	-4.56/4.46	-4.56/4.46	-4.56/4.46	-4.56/4.46	-4.56/4.46	-4.56/4.46	-4.56/4.46	
Theta (135°)	-14.73/18.15	-15.07/12.11	-11.33/12.54	-15.52/14.97	-16.04/8.15	-7.29/6.89	-8.86/8.48	-9.86/9.27	-9.12/9.07	-8.59/7.57	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95	-8.26/7.95
Theta (142.5°)	-12.77/14.6	-13.85/11.75	-10.04/9.07	-8.82/9.5	-10.88/12.98	-15.53/18.93	-18.9/18.71	-18.75/19.4	-18.1/13.44	-10.22/8.01	-6.67/5.84	-5.42/5.29	-5.51/5.94	-6.07/5.93	-6.59/5.66	-6.16/7.19	-8.5/9.45	-10.29/11.42	-13.11/15.24	-16.75/15.64	-12.85/10.17	-8.34/7.55	-7.52/7.93	-8.72/10.17	
Theta (150°)	-18.93/17.66	-13.48/10.58	-8.45/6.99	-6.19/5.98	-6.21/6.72	-7.34/7.97	-8.57/8.88	-9.29/10.49	-13.09/15.55	-18.82/18.28	-13.34/11.06	-10.02/9.8	-10.35/11.66	-13.34/15.17	-16.83/18.72	-19.03/18.76	-14.94/12.54	-11.07/10.12	-9.28/8.58	-7.96/7.5	-7.13/6.82	-6.73/7.33	-8.74/10.88	-14/18.36	
Theta (157.5°)	-16.03/17.88	-19.16/22	-12.16/8.62	-8.39/7.58	-7.28/7.31	-7.53/7.82	-7.92/7.77	-7.16/7.9	-13.71/18.15	-19.1/18.7	-15.96/14.17	-13.92/13.51	-12.72/11.21	-9.55/8.26	-8.31/7.51	-6.83/6.56	-6.89/7.39	-7.57/7.23	-6.57/6.06	-5.97/6.28	-6.95/7.87	-8.89/7.75	-8.89/7.75	-10.01/11.84	
Theta (165°)	-9.93/10.41	-10.52/10.28	-9.83/9.41	-9.14/9.04	-9.2/9.6	-10.1/10.48	-10.62/10.31	-9.77/9.59	-9.92/10.9	-12.51/14.8	-17.08/18	-16.64/14.51	-12.64/11.24	-10.26/9.61	-8.88/8.21	-7.58/7.15	-6.95/6.97	-7.24/7.66	-8.06/8.53	-9.01/9.41	-9.22/8.64	-8.1/7.84	-7.8/7.94	-8.34/8.87	
Theta (172.5°)	-9.79/9.22	-8.77/8.56	-8.59/8.85	-9.27/9.89	-10.8/11.99	-13.27/14.38	-14.91/14.78	-14.26/14	-14.3/15.35	-17.13/19.11	-18.56/17.06	-16.89/18.45	-19.01/16.01	-13.98/12.56	-11.4/10.64	-10.16/9.97	-9.98/10.5	-10.46/10.59	-10.57/10.59	-10.76/10.93	-10.8/10.51	-10.33/10.33	-10.41/10.64	-10.32/10.01	
Theta (180°)	-11.7/11.12	-10.79/10.9	-11.41/12.16	-13/14.17	-15.55/16.88	-17.75/17.3	-16.27/15.31	-14.33/13.68	-13.29/13.18	-13.03/12.91	-12.78/12.78	-13.06/13.8	-14.76/15.92	-17.25/18.9	-18.44/17.71	-17.79/18.88	-18.31/17.77	-17.29/16.41	-15.88/15.62	-15.18/14.79	-14.47/14.12	-13.8/13.61	-13.16/12.41		
Freq(Hz)	24835GPpl	PhiAnt.2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
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°)	-8.3/8.21	-8.27/8.51	-8.98/9.73	-10.88/12.17	-13.24/14.12	-15.52/17.89	-19.1/18.09	-18.14/19.05	-16.85/15.74	-14.13/12.55	-11.93/9.28	-8.24/7.46	-6.89/6.59	-5.67/6.8	-7.24/9.6	-8.87/9.77	-11.4/13.44	-16.33/18.36	-1						