



# 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.<br>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

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## History of this test report

[illegible]

## 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~<br>May 22, 2024 |

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m\*6m\*6m

Characteristic: Fully Anechoic Chamber

## 6. Test Facility and Configuration

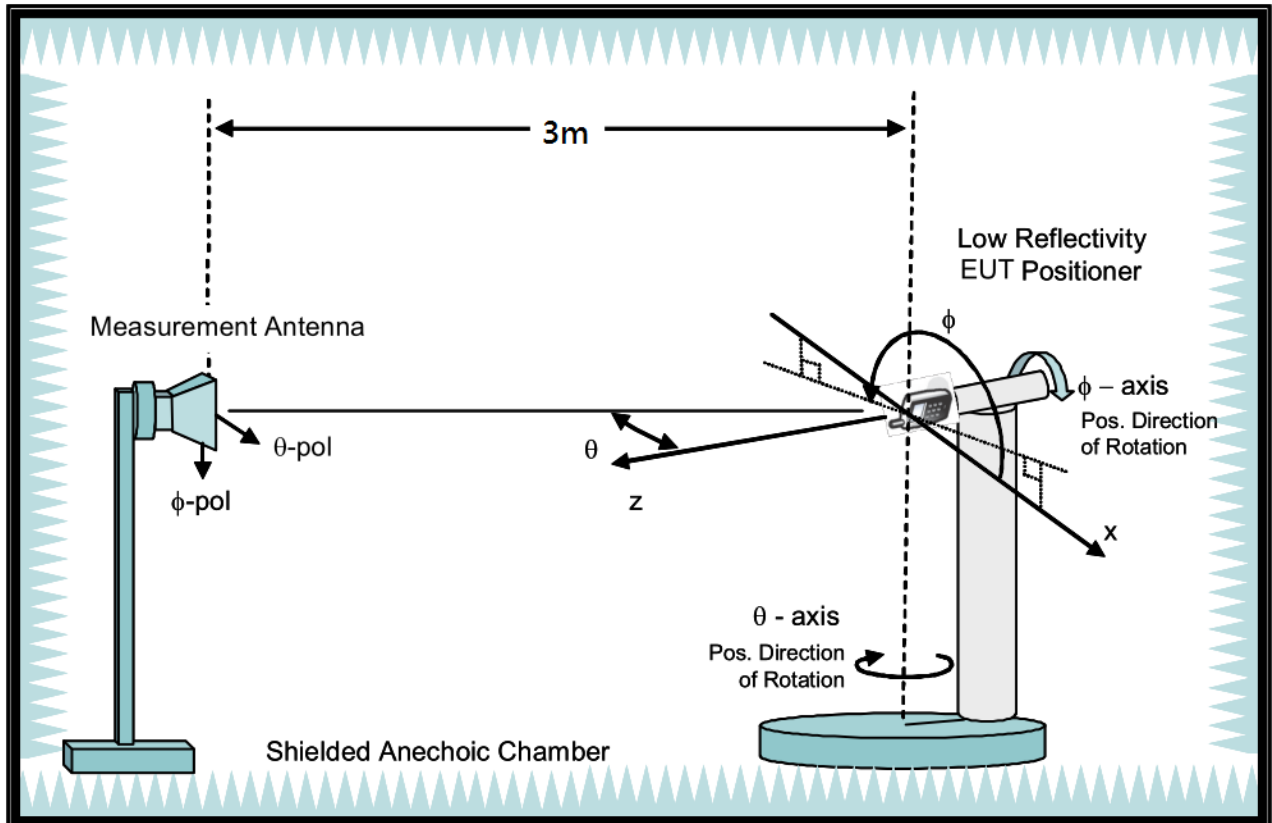
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

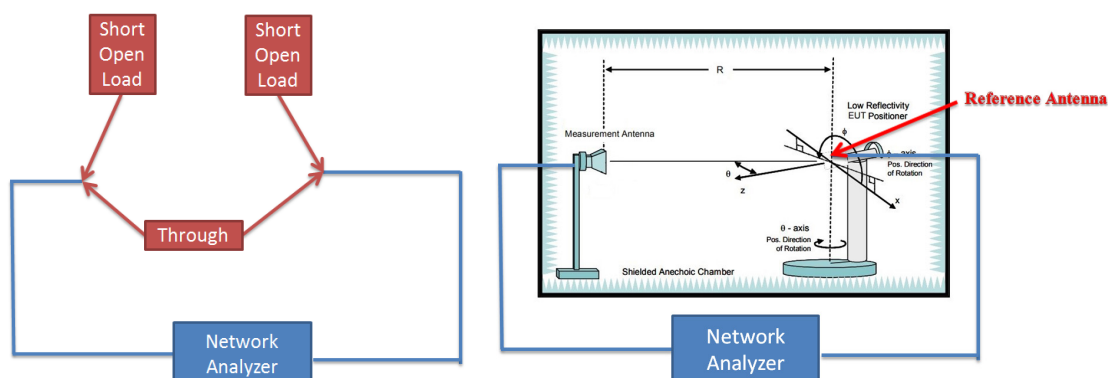
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



## 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 <sup>^(G/20)</sup> ]         | 10 <sup>^(1.23/20)</sup>  | 10 <sup>^(2.18/20)</sup>  | 10 <sup>^(2.64/20)</sup>  | 10 <sup>^(0.87/20)</sup> | 10 <sup>^(1.79/20)</sup> | 10 <sup>^(2.73/20)</sup> | 10 <sup>^(3.38/20)</sup> |
| Ant. 2 [10 <sup>^(G/20)</sup> ]         | 10 <sup>^(1.22/20)</sup>  | 10 <sup>^(1.94/20)</sup>  | 10 <sup>^(2.33/20)</sup>  | 10 <sup>^(2.33/20)</sup> | 10 <sup>^(2.47/20)</sup> | 10 <sup>^(3.4/20)</sup>  | 10 <sup>^(3.52/20)</sup> |
| Ant. 3 [10 <sup>^(G/20)</sup> ]         | 10 <sup>^(-5.17/20)</sup> | 10 <sup>^(-4.88/20)</sup> | 10 <sup>^(-7.26/20)</sup> | -                        | -                        | -                        | -                        |
| Ant. 1 [10 <sup>^(G/20)</sup> ] value   | 1.152                     | 1.285                     | 1.355                     | 1.105                    | 1.229                    | 1.369                    | 1.476                    |
| Ant. 2 [10 <sup>^(G/20)</sup> ] value   | 1.151                     | 1.25                      | 1.308                     | 1.308                    | 1.329                    | 1.479                    | 1.5                      |
| Ant. 3 [10 <sup>^(G/20)</sup> ] 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<br>[10*log(Amax <sup>2</sup> /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 <sup>^(G/20)</sup> ]         | 10 <sup>^(1.53/20)</sup>  | 10 <sup>^(1.52/20)</sup>   | 10 <sup>^(1.71/20)</sup>   | 10 <sup>^(-1.84/20)</sup> | 10 <sup>^(-10.48/20)</sup> | 10 <sup>^(1.05/20)</sup> | 10 <sup>^(1.72/20)</sup>  |
| Ant. 2 [10 <sup>^(G/20)</sup> ]         | 10 <sup>^(-7.72/20)</sup> | 10 <sup>^(-10.86/20)</sup> | 10 <sup>^(-13.13/20)</sup> | 10 <sup>^(-2.01/20)</sup> | 10 <sup>^(3.18/20)</sup>   | 10 <sup>^(0.69/20)</sup> | 10 <sup>^(-1.36/20)</sup> |
| Ant. 3 [10 <sup>^(G/20)</sup> ]         | 10 <sup>^(-0.12/20)</sup> | 10 <sup>^(2.06/20)</sup>   | 10 <sup>^(2.5/20)</sup>    | -                         | -                          | -                        | -                         |
| Ant. 1 [10 <sup>^(G/20)</sup> ] value   | 1.193                     | 1.191                      | 1.218                      | 0.809                     | 0.299                      | 1.128                    | 1.219                     |
| Ant. 2 [10 <sup>^(G/20)</sup> ] value   | 0.411                     | 0.286                      | 0.221                      | 0.793                     | 1.442                      | 1.083                    | 0.855                     |
| Ant. 3 [10 <sup>^(G/20)</sup> ] 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<br>[10*log(Amax <sup>2</sup> /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).

Directional gain (1SS) = 10\*log(10<sup>^(G<sub>ant1</sub>/20)</sup>+10<sup>^( G<sub>ant2</sub>/20)</sup>+ +10<sup>^( G<sub>ant3</sub>/20)</sup> +10<sup>^( G<sub>ant4</sub>/20)</sup>+.....)^2/Nant)

## 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             | -                | -               | -              | -               |

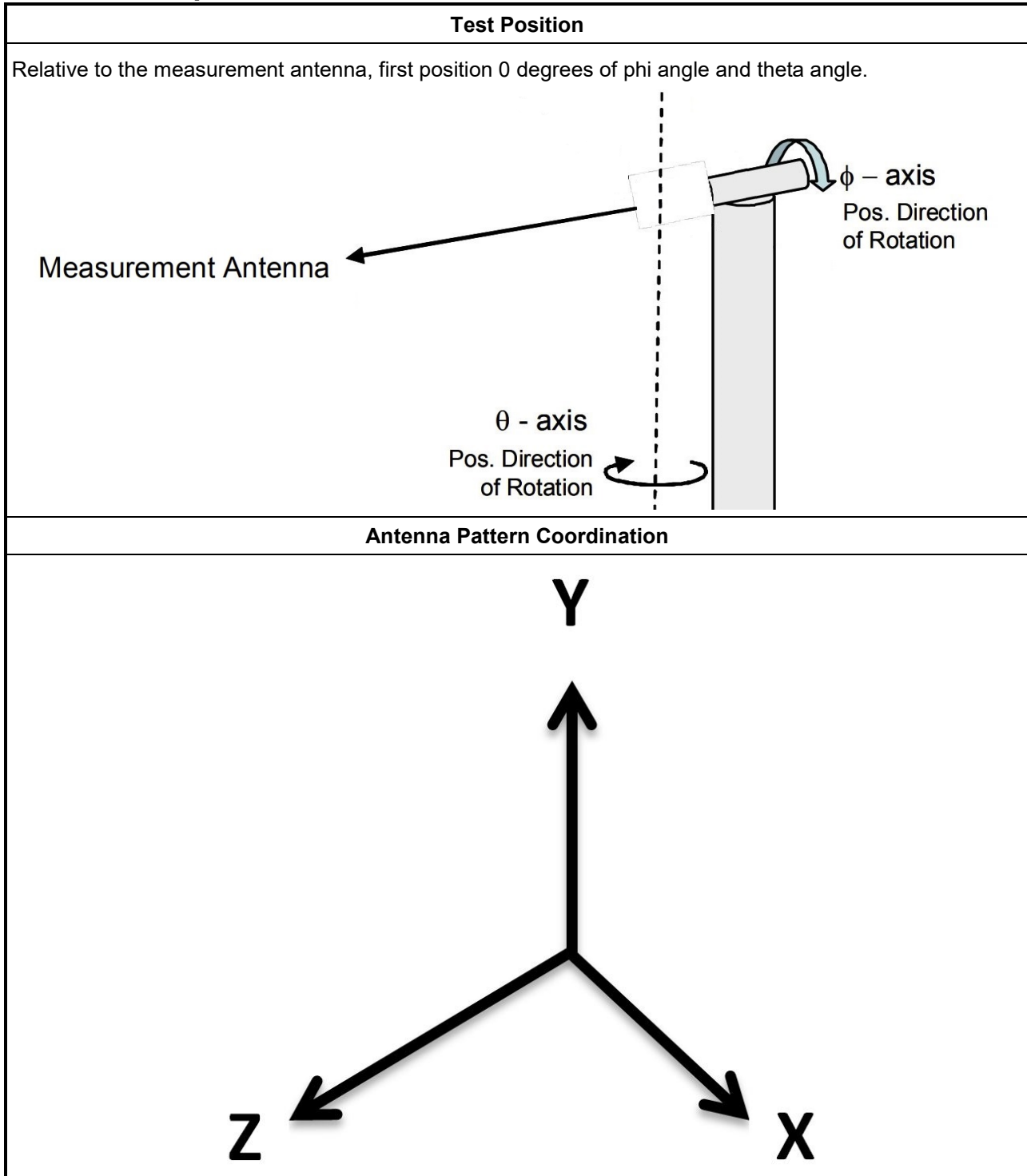
### Test Mode 2

| 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] (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            | -              | -                | -              | -                 |

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 |



| 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.      | PhU            | -              | -              | -              | -              | -              | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| DG(dBm)   | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -8.62/-7.28   | -5.58/-4.29    | -3.16/-2.35    | -1.76/-1.38    | -1.08/-1.05    | -0.58/-0.62    | -0.51/-0.52    | -0.54/-0.65      | -0.79/-1.09      | -1.54/-2.15      | -2.95/-3.95      | -5.08/-5.49      | -4.76/-3.89      | -3.21/-2.78      | -2.49/-2.24      | -1.94/-1.7       | -1.51/-1.3       | -1.14/-0.92      | -0.89/-0.93      | -1.12/-1.41      | -1.78/-2.42      | -3.34/-3.08      | -5.16/-6.24      | -7.47/-8.93      |
| Θ(7.5°)   | -8.05/-6.34   | -4.88/-3.82    | -2.97/-2.13    | -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      | -2.94/-4.2       | -5.64/-6.01      | -5.64/-3.4       | -3.28/-2.43      | -1.71/-1.08      | -0.58/-0.33      | -0.31/-0.44      | -0.45/-0.63      | -0.77/-0.91      | -1.24/-1.69      | -2.31/-3.04      | -3.74/-2.99      | -5.05/-6.01      | -7.21/-8.39      |
| Θ(15°)    | -6.97/-6      | -4.77/-3.71    | -2.79/-2.13    | -1.71/-1.32    | -0.85/-0.43    | -0.11/-0.7     | 0.31/-0.33     | 0.18/-0.09       | -0.52/-1.12      | -1.94/-2.7       | -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       | -2.93/-2.9       | -3.63/-3.94      | -4.37/-5.05      | -6.18/-6.9       |
| Θ(22.5°)  | -7.12/-6.92   | -5.79/-4.31    | -3.05/-2.27    | -1.91/-1.79    | -1.35/-0.8     | -0.34/-0.03    | 0.22/-0.20     | 0.30/-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/-1.2        | -0.48/-0.81      | -1.13/-1.63      | -2.38/-2.89      | -3.23/-3.33      | -3.28/-3.36      | -3.74/-4.33      | -5.21/-6.22      |
| Θ(30°)    | -8.12/-7.99   | -6.62/-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/-4.1       | -4.4/-4.58       | -3.96/-2.88      | -1.69/-0.63      | 0.21/-0.61       | 0.58/-1.4        | -0.54/-1.17      | -1.65/-2.2       | -2.91/-3.29      | -3.04/-27        | -2.55/-2.78      | -3.32/-4.13      | -5.22/-6.52      |
| Θ(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       | -4.34/-4.94      | -4.69/-3.6       | -2.35/-1.19      | -0.25/-0.29      | 0.41/-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      |
| Θ(45°)    | -4.02/-3.67   | -3.19/-2.86    | -2.62/-2.15    | -1.89/-1.4     | -0.96/-0.25    | -0.09/-0.45    | 0.17/-0.26     | 0.64/-0.87       | -2.92/-3.47      | -4.93/-5.02      | -4.52/-3.84      | -3.53/-3.63      | -4.01/-4.5       | -4.84/-4.6       | -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       | -3.69/-3.89      |
| Θ(52.5°)  | -3.6/-4       | -4.74/-5.47    | -5.73/-5.34    | -4.71/-3.44    | -2.27/-1.17    | -0.55/-0.7     | 0.97/-1.57     | 1.29/-1.8        | -0.88/-1.35      | -1.76/-2.93      | -4.72/-5.66      | -5.14/-4.46      | -4.1/-3.88       | -3.94/-0.43      | -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       | -1.51/-1.91      | -2.53/-3.11      |
| Θ(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/-4.74      | 0.13/-0.23       | -1.61/-1.89      | -6.11/-5.59      | -4.49/-3.58      | -3.15/-3.38      | -3.73/-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/-1.91      | -4.36/-5.5       |
| Θ(67.5°)  | -7.71/-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/-1.8        | -2.75/-3.41      | -2.38/-1.52      | -1.76/-3.34      | -6.08/-4         | -6.41/-7.1       | -3.85/-3.76      | -4.61/-5.66      | -6.41/-5.16      | -3.06/-1.72      | -0.87/-0.82      | -0.89/-1.3       | -0.81/-0.17      | -2.04/-0.92      | -1.96/-3.23      | -4.75/-5.95      | -7.37/-7.41      |
| Θ(75°)    | -10.85/-10.07 | -9.17/-9.07    | -9.29/-8.79    | -6.66/-5.17    | -4.33/-5.13    | -7.23/-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/-57        | -4.69/-4.19      | -4.24/-5.01      | -5.39/-3.88      | -1.66/-0.34      | 0.370/-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     |
| Θ(82.5°)  | -12.05/-10.26 | -8.2/-7.26     | -7.66/-47      | -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        | -2.25/-11        | -7.31/-7.08      | -5.84/-4.39      | -3.17/-2.32      | -2.12/-85        | -3.75/-3.42      | -1.56/-0.34      | 0.40/-0.37       | -1.06/-2.04      | -3.17/-4.28      | -5.53/-9.78      | -10.57/-11.79    | -11.59/-11.73    | -12.54/-13.18    |
| Θ(90°)    | -8.08/-6.4    | -5.55/-5.45    | -6.45/-9.31    | -4.54/-5.54    | -4.81/-4.97    | -5.34/-3.12    | -0.36/-0.72    | 0.01/-1.69       | -1.67/-1.18      | -1.1/-2.3        | -2.06/-3.75      | -4.73/-4.89      | -5.39/-5.56      | -3.85/-2.11      | -1.31/-93        | -3.33/-2.74      | -0.43/-1.01      | 1.06/-0.21       | -1.59/-2.63      | -3.5/-4.9        | -15.9/-10.9      | -9.18/-7.63      | -7.74/-8.95      | -10.32/-10.02    |
| Θ(97.5°)  | -5.95/-6.72   | -7.56/-8.17    | -8.47/-7.75    | -4.8/-2.5      | -1.52/-2.02    | -3.2/-3.11     | -1.56/-0.24    | -0.71/-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       | 0.71/-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      |
| Θ(105°)   | -5.07/-5.05   | -4.49/-3.73    | -3.61/-3.47    | -4.31/-2.36    | -0.73/-0.43    | -1.25/-0.24    | -1.3/-0.39     | -0.13/-0.87      | -0.36/-0.31      | -0.94/-1.78      | -2.68/-4.2       | -5.94/-7.84      | -9.53/-7.69      | -4.44/-22        | -2.17/-3.7       | -1.55/-0.95      | 0.170/-89        | -4.07/-1.06      | -2.15/-2.34      | -3.36/-4.78      | -6.1/-3.13       | -1.063/-1.62     | -2.89/-5.12      | -5.97/-5.46      |
| Θ(112.5°) | -4.22/-3.34   | -2.62/-1.8     | -1.32/-1.37    | -0.98/-0.45    | 1.61/-87       | 1.02/-0.5      | -2.21/-3.66    | -4.4/-3.14       | -0.69/-0.52      | 0.62/-0.3        | -1.99/-4.73      | -8.29/-11.34     | -10.97/-7.03     | -3.88/-2.21      | -1.68/-2.1       | -2.52/-2.18      | -1.8/-2.07       | -3.52/-4.77      | -2.79/-1.44      | -1.89/-3.26      | -4.39/-3.43      | -1.63/-3.81      | -6.04/-9.64      | -9.71/-6.35      |
| Θ(120°)   | -3.79/-1.77   | -0.06/-1.25    | 1.94/-95       | 1.61/-35       | 1.290/-33      | 0.250/-27      | 0.590/-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      |
| Θ(127.5°) | -0.970/-0.08  | 0.76/-1.1      | 1.01/-33       | -0.77/-2.43    | -4.61/-5.08    | -3.32/-1.84    | -0.60/-37      | 0.790/-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         | 2.222/-78        | 2.932/-41        | 0.91/-1.52       | -4.44/-2.74      | -7.2/-2.77       | -0.240/-76       | 0.780/-26        | -0.77/-2.59      | -3.71/-2.25      |
| Θ(135°)   | -2.84/-3.4    | -3.85/-4.03    | -4.41/-5.26    | -5.94/-5.24    | -3.81/-2.69    | -1.81/-35      | -1.39/-1.65    | -1.62/-2         | -2.84/-34        | -6.36/-8.65      | -10.28/-10       | -7.74/-57        | -4.52/-2.93      | -8.020/-88       | 1.72/-75         | 0.91/-0.7        | -4.14/-4.78      | -2.61/-0.66      | -0.02/-0.46      | -1.9/-63         | -3.98/-2.92      | -2.36/-2.15      | -2.27/-2.69      |                  |
| Θ(142.5°) | -5.51/-7.15   | -6.34/-5.26    | -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/-3.71      | -1.87/-0.64      | -0.06/-0.13      | -0.78/-1.65      | -1.41/-0.09      | 0.890/-94        | -0.2/-2.48       | -4.76/-3.2       | -1.17/-0.15      | 0.11/-0.33       | -1.48/-3.3       |
| Θ(150°)   | -5.67/-5.66   | -3.64/-3.22    | -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      | -5.64/-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        | -1.483/-1.3      | -5.11/-7.77      | -4.71/-1.69      | -0.21/-0.31      | 0.15/-0.55       | -1.83/-3.64      |
| Θ(157.5°) | -5.45/-3.96   | -2.59/-1.72    | -1.31/-1.32    | -1.82/-2.76    | -3.99/-5.55    | -4.54/-3.67    | -3.32/-3.01    | -2.53/-3.27      | -2.27/-2.53      | -2.91/-3.52      | -4.26/-5.1       | -6.17/-2         | -6.58/-5.5       | -4.3/-3.33       | -2.67/-2.28      | -2.08/-2.29      | -2.92/-3.72      | -4.43/-4.49      | -4.98/-3.73      | -2.13/-1.12      | -0.77/-0.96      | -1.61/-2.67      | -4.16/-6.8       |                  |
| Θ(165°)   | -5.73/-4.85   | -3.73/-3.2     | -3.14/-3.34    | -3.9/-4.68     | -5.58/-6.63    | -7.9/-7.85     | -6.21/-5.1     | -4.34/-3.48      | -2.86/-2.42      | -2.35/-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/-6.53      |
| Θ(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      | -2.44/-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       |
| Θ(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.      | PhU            | -              | -              | -              | -              | -              | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |                  |
| DG(dBm)   | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -1.8/-2.02    | -2.32/-2.54    | -3.05/-3.53    | -4.43/-5.29    | -5.68/-7.64    | -9.15/-9.84    | 9.86/-8.75     | -7.17/-5.86      | -7.73/-3.92      | -3.36/-3.08      | -3.04/-3.13      | -3.22/-3.39      | -3.42/-3.4       | -3.55/-3.68      | -3.29/-4.32      | -4.85/-5.61      | -6.75/-8.45      | -11.05/-11.25    | -10.84/-12.78    | -7.84/-6.83      | -3.177/-6.89     | -3.177/-6.89     | -2.18/-1.81      | -1.68/-1.47      |
| Θ(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      | -3.44/-3.01      | -2.71/-2.61      | -2.38/-2.38      | -2.16/-2.03      | -2.02/-1.95      | -2.02/-2.34      | -2.94/-3.76      | -4.73/-5.93      | -7.65/-8.94      | -8.98/-7.4       | -6.15/-5.19      | -4.52/-3.95      | -3.36/-2.79      | -2.29/-1.99      | -1.85/-1.98      |
| Θ(15°)    | -1.41/-1.63   | -1.88/-2.13    | -2.26/-2.67    | -3.03/-3.66    | -4.52/-5.69    | -7.04/-8.3     | -8.8/-8.1      | -6.83/-5.52      | -4.17/-3.08      | -2.24/-1.71      | -1.52/-1.53      | -1.61/-1.59      | -1.54/-1.38      | -0.93/-0.56      | -0.41/-0.54      | -0.96/-1.54      | -2.23/-3.07      | -4.25/-5.82      | -6.66/-6.26      | -5.01/-4.13      | -3.55/-3.07      | -2.73/-2.38      | -1.89/-1.46      | -1.15/-1.05      |
| Θ(22.5°)  | -0.93/-0.94   | -1.02/-1.22    | -1.45/-1.71    | -2.01/-2.44    | -2.97/-3.79    | -4.96/-2.9     | -7.47/-7.29    | -6.02/-4.61      | -3.32/-3.23      | -1.64/-1.37      | -1.02/-1.49      | -1.62/-1.48      | -1.23/-0.95      | -0.62/-0.54      | -0.30/-0.67      | -1.01/-1.5       | -2.24/-3.37      | -4.28/-4.47      | -3.74/-3.1       | -2.67/-2.45      | -2.24/-1.97      | -1.62/-1.24      | -0.92/-0.72      |                  |
| Θ(30°)    | -1.48/-1.31   | -1.34/-1.58    | -1.91/-2.21    | -2.47/-2.6     | -2.89/-3.72    | -4.71/-6.19    | -7.97/-7.79    | -5.68/-4.08      | -2.89/-2.15      | -1.76/-1.69      | -1.76/-1.84      | -1.91/-1.98      | -2.13/-2.39      | -2.71/-2.5       | -1.94/-1.43      | -0.76/-0.47      | -0.51/-0.67      | -1.1/-63         | -2.4/-2.77       | -2.7/-2.59       | -2.53/-2.44      | -2.26/-2.09      | -1.86/-1.69      | -1.59/-1.44      |
| Θ(37.5°)  | -1.71/-1.37   | -1.29/-1.4     | -1.57/-1.66    | -1.64/-1.57    | -1.84/-2.52    | -3.9/-5.85     | -6.36/-5.11    | -3.32/-2.22      | -1.71/-1.57      | -1.67/-1.9       | -2/-1.92         | -1.84/-1.87      | -2.15/-2.72      | -3.25/-3.6       | -2.83/-1.93      | -1.01/-0.4       | -0.12/-0.11      | -0.23/-0.46      | -0.8/-1.2        | -1.62/-2.06      | -2.41/-2.51      | -2.36/-2.16      | -2.03/-1.97      | -1.97/-1.81      |
| Θ(45°)    | -1.11/-0.68   | -0.29/-0.02    | 0.180/-25      | 0.260/-19      | -0.06/-0.69    | -1.88/-2.81    | -2.64/-1.39    | -0.180/-5        | 0.530/-1         | -0.49/-0.87      | -1.06/-1.08      | -1.11/-1.25      | -1.55/-2.08      | -2.9/-3.67       | -3.61/-2.6       | -1.38/-0.46      | 0.090/-17        | -0.04/-0.35      | -0.71/-1.03      | -1.52/-2.2       | -2.68/-2.6       | -2.21/-1.86      | -1.63/-1.54      | -1.49/-1.29      |
| Θ(52.5°)  | -1.5/-1.16    | -0.69/-0.21    | 0.230/-65      | 1.11/-56       | 1.71/-45       | 0.72/-0.1      | 0.090/-79      | 1.872/-55        | 2.572/-09        | 1.51/-26         | 1.31/-43         | 1.3              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                |                |                |                |                |                |                  |                   |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Θ(22.5°)  | -10.09/-11.21 | -10.41/-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/-1.7       | -2.2/-2.79       | -3.41/-4.43      | -5.78/-7.84      |
| Θ(30°)    | -10.5/-10.1   | -9.15/-8.25    | -7.06/-6.03    | -5.26/-4.7     | -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/-3.06      | -3.27/-3.2       | -2.84/-2.28      | -1.56/-0.8        | -0.18/0.1        | 0.04/-0.38       | -1.13/-1.89      | -2.1/-2.03       | -2.07/-2.09      | -2.42/-2.99      | -3.69/-4.39      | -5.32/-6.35      | -7.72/-9.32      |
| Θ(37.5°)  | -9.63/-9.34   | -7.68/-6.15    | -4.64/-3.51    | -3.02/-3.03    | -3.23/-3.79    | -2.72/-1.57    | -0.73/-0.31    | -0.26/-0.57      | -1.29/-2.26       | -2.94/-3.27      | -3.31/-3.21      | -2.99/-2.68      | -2.23/-1.53      | -0.53/-0.45      | <b>1.12/-1.26</b> | 0.86/-0.07       | -1.55/-2.97      | -3.06/-2.64      | -2.33/-2.28      | -2.44/-2.94      | -3.61/-5.08      | -4.86/-9.76      | -6.49/-9.21      |                  |
| Θ(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      | -2.5/-1.82       | -0.89/-0.16       | 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      |
| Θ(52.5°)  | -3.33/-3.47   | -3.67/-3.64    | -3.32/-2.95    | -2.71/-1.93    | -1.41/-1.39    | -2.02/-2.75    | -2.54/-2.03    | -1.64/-1.88      | -2.61/-3.46       | -3.7/-3.69       | -3.89/-3.48      | -5.3/-6.32       | -7.16/-1.02      | -5.82/-4.55      | -3.24/-1.86       | -0.71/-0.09      | -0.07/-0.76      | -2/-2.45         | -1.44/-0.29      | 0.08/-0.21       | -1.36/-3.11      | -4.66/-4.9       | -4.17/-3.59      | -3.33/-3.31      |
| Θ(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     | -0.21/-0.55       | 0.42/0.49        | -0.09/-0.55      | -0.66/-0.62      | -0.75/-1.52      | -2.79/-1.52      | -2.65/-2.74      | -3.61/-3.07      | -2.65/-2.74      | -3.22/-9.34      |
| Θ(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      | -1.5/-1.69       | -2.03/-2.42      | -3.08/-4.21      | -5.7/-7.22       |
| Θ(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       | -3.65/-5.1       | -7.04/-9.4       | -9.9/-8.67       | -7.27/-5.95      | -5.22/-4.97      | -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      |                  |
| Θ(82.5°)  | -10.93/-10.24 | -9.68/-9.67    | -10.09/-11.51  | -11.59/-8.74   | -6.8/-5.13     | -4.71/-4.51    | -1.82/-2.78    | -2.02/-1.9       | -1.82/-2.09       | -3.08/-4.86      | -7.22/-9.61      | -10.41/-8.96     | -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    |
| Θ(90°)    | -11.55/-10.39 | -8.32/-7.51    | -7.45/-9.03    | -11.68/-13.51  | -10.36/-5.64   | -3.1/-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    |
| Θ(97.5°)  | -9.72/-8.59   | -6.67/-6.06    | -5.71/-5.95    | -5.75/-6.37    | -7.37/-8.12    | -5.77/-2.69    | -1.84/-3.97    | -1.61/-2.47      | -2.3/-1.99        | -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       | -0.38/0.94       | 0.62/-1.33       | -2.76/-2.86      | -4.41/-7.54      | -10.22/-7.96     | -6.22/-5.69      | -6.65/-9.83      | -12.1/-11.16     |
| Θ(105°)   | -7.62/-7.6    | -8.08/-8.51    | -8.6/-7.57     | -6.83/-4.57    | -4.41/-5.23    | -5.02/-2.59    | -0.46/-0.75    | 0.03/-0.8        | -1.38/-1.48       | -1.54/-1.54      | -1.92/-3.18      | -5.21/-7.91      | -8.91/-9.52      | -7.03/-4.66      | -3.53/-3.39       | -1.94/-1.264     | -0.50/-83        | 0.62/-1.19       | -2.93/-3.64      | -4.51/-6.47      | -9.2/-8.98       | -3.26/-4.68      | -4.76/-8.25      | -8.58/-0.62      |
| Θ(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      | -9.7/-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      | -4.7/-3.84       | -3.14/-3.5       | -5.06/-6.72      | -7.8/-6.99       |
| Θ(120°)   | -7.38/-4.83   | -3.07/-1.88    | -1.57/-1.25    | -2.5/-1.51     | -0.51/-0.49    | -1.84/-3.97    | -5.72/-5.26    | -4.12/-3.08      | -1.91/-0.81       | -0.09/-0.21      | -1.09/-2.71      | -4.64/-6.31      | -8.67/-10.11     | -7.58/-4.78      | -4.21/-5.18       | -6.39/-5.7       | -4.23/-3.27      | -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     |
| Θ(127.5°) | -4.31/-2.37   | -0.91/-0.11    | -0.14/-1.13    | -2.86/-4.65    | -4.85/-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      | -5.26/-4.73      | -4.43/-5.01      | -5.94/-6.39      | -3.71/-1.99       | -0.07/0.69       | 0.04/-0.68       | -2.02/-3.76      | -0.64/-6.3       | -1.02/-1.69      | -2.46/-1.01      | -1.02/-1.69      | -2.83/-4.55      | -6.52/-6.17      |
| Θ(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      |
| Θ(142.5°) | -4.66/-5.65   | -6.6/-6.23     | -7/-8.89       | -8.88/-6.04    | -3.36/-1.72    | -0.83/-0.47    | -0.74/-1.89    | -3.3/-4.53       | -6.06/-6.78       | -6.28/-1.8       | -7.42/-1.79      | -6.57/-6.83      | -8.26/-0.94      | -9.25/-9         | -7.53/-6.15       | -5.11/-4.31      | -3.77/-3.64      | -2.91/-2.02      | -0.7/-0.15       | -0.57/-1.96      | -3.89/-4.63      | -3.34/-1.24      | -1.55/-1.54      | -2.21/-3.53      |
| Θ(150°)   | -5.75/-6.79   | -6.45/-5.64    | -5.42/-5.78    | -6.25/-5.49    | -3.74/-2.06    | -1.01/-0.66    | -0.63/-1       | -1.74/-2.82      | -4.45/-6.15       | -7.62/-9.37      | -11.48/-11.97    | -9.51/-77        | -6.7/-6.08       | -5.61/-4.94      | -4/-2.88          | -1.67/-0.62      | 0.08/0.2         | -0.06/-0.56      | -1.33/-2.57      | -4.6/-6.91       | -6.91/-4.31      | -2.56/-1.58      | -1.24/-1.56      | -2.49/-3.88      |
| Θ(157.5°) | -5.78/-4.44   | -3.39/-2.85    | -2.95/-3.78    | -5.21/-6.68    | -6.37/-4.84    | -3.86/-3.12    | -2.77/-2.84    | -3.03/-3.46      | -4/-3.48          | -4.98/-6.12      | -7.81/-8.88      | -10.11/-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      | -3.53/-4.16      | -5.35/-5.93      |
| Θ(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/-1.3       | -4.26/-4.85      | -5.82/-6.88      | -7.2/-6.74       | -6.01/-5.2       | -4.77/-1.77      | -5.31/-1.8       | -7.04/-7.29      | -6.92/-6.05      |
| Θ(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       | -4.74/-5.3        | -6.58/-7.95      | -9.57/-9.95      | -8.52/-7.67      | -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      | -5.75/-5.66      | -5.56/-5.47      |                  |                  |
| Θ(180°)   | -6.57/-7.14   | -7.75/-8.47    | -8.74/-7.81    | -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       | -8.87/-7.39      | -8.56/-9.82      | -10.37/-10.32    | -9.75/-9.69      | -8.25/-7.23       | -6.01/-5.23      | -4.72/-4.29      | -3.72/-3.12      | -2.73/-2.62      | -2.77/-3.16      | -3.54/-3.87      | -4.61/-5.09      | -5.48/-5.69      | -8.53/-6.28      |
| Freq(GHz) | 2.4835GPol.   | ThetaL         | +              | +              | +              | +              | +              | +                | +                 | +                | +                | +                | +                | +                | +                 | +                | +                | +                | +                | +                | +                | +                | +                | +                |
| DG(dB)    | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°)  | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°)  | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -3.31/-3.01   | -2.7/-2.37     | -2.17/-1.99    | -1.92/-2.15    | -2.44/-3.02    | -3.84/-5.45    | -5.33/-6.39    | -7.78/-9.11      | -9.04/-8.06       | -7/-6.07         | -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      | -8.66/-11.1      | -9.74/-8.31      | -6.52/-5.13      | -4.48/-3.9       | -3.66/-3.37      |
| Θ(7.5°)   | -3.49/-3.1    | -3.14/-3.06    | -3.1/-3.34     | -3.4/-3.51     | -4.08/-4.88    | -5.49/-6.44    | -7.25/-8.92    | -9.49/-8.21      | -7.03/-5.79       | -4.85/-3.68      | -3.13/-2.6       | -2.19/-1.67      | -1.36/-1.17      | -1.08/-1.12      | -1.25/-1.83       | -2.39/-3         | -3.61/-4.39      | -5.31/-6.36      | -7.69/-8.54      | -7.36/-5.94      | -4.83/-4.05      | -3.52/-3.23      | -3.15/-3.27      |                  |
| Θ(15°)    | -2.08/-2.3    | -2.59/-2.9     | -3.15/-3.54    | -3.9/-4.72     | -5.53/-6.74    | -7.84/-9.96    | -10.31/-11.34  | -10.92/-9.57     | -7.99/-6.37       | -4.98/-3.62      | -2.95/-2.16      | -1.67/-1.28      | -0.99/-0.87      | -0.82/-0.61      | -0.73/-0.71       | -1.63/-2.34      | -2.96/-3.48      | -4/-4.52         | -4.92/-4.69      | -6.32/-6.62      | -1.83/-1.36      | -1.11/-1.08      | -1.26/-1.6       |                  |
| Θ(22.5°)  | -1.35/-1.57   | -1.68/-1.8     | -1.89/-2.02    | -2.25/-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       |
| Θ(30°)    | -1.63/-1.83   | -1.81/-1.55    | -1.08/-0.55    | -0.05/0.2      | 0.02/-0.64     | -1.73/-0.39    | 4.3/-4.66      | -4.61/-6.43      | -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      |
| Θ(37.5°)  | -2.36/-2.52   | -2.55/-2.21    | -1.6/-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      | -0.26/0.05       | 0.25/0.25        | 0.05/-0.15       | -0.09/0.2         | 0.23/-0.08       | -0.15/0.18       | 0.60/0.79        | 0.66/0.34        | -0.01/-0.43      | -0.89/-1.31      | -1.68/-1.96      |                  |                  |
| Θ(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/-2.2       | 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      |
| Θ(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/-6.2        | 1.1/-0.48        | 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      |
| Θ(60°)    | 1.17/0.97     | 0.39/-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          | 3.66/0.31        | 2.18/-1.56       | 1.29/-1.19       | 1.08/0.84        | 0.44/0.01        | -0.47/-1.27       | -2.59/-2.37      | -0.78/0.1        | 0.11/-0.6        | -1.23/-0.81      | 0.03/0.41        | 0.22/-0.12       | -0.45/-0.62      | -0.67/-0.34      | 0.47/1.03        |
| Θ(67.5°)  | 1.14/0.6      | -0.16/-0.75    | -0.83/-0.25    | 0.63/-1.49     | 2.43/2.88      | 3.163/0.1      | 2.712/6.9      | 3.24/-1.2        | <b>4.885/-0.5</b> | 4.363/0.2        | 1.861/-4.9       | 2.651/-9.9       | 1.681/-2.8       | 0.62/-0.2        | -0.81/-0.4        | -0.02/-0.07      | -0.6/-1.61       | -2.77/-2.49      | -0.92/-0.03      | 0/-0.32          | -0.59/-0.6       | -0.19/0.38       | 0.73/-1.18       |                  |
| Θ(75°)    | 1.08/0.32     | -0.81/-1.27    | -1.3/-0.77     | 0.09/-1.32     | 2.31/2.9       | 3.02/2.66      | 2.21/-9.9      | 2.353/-33        | 4.389/-7.8        | 4.182/-66        | 1.210/-97        | 1.291/-55        | 1.74/-82         | 1.711/-57        | 1.591/-94         | 2.382/-61        | 2.451/-65        | 0.48/-0.39       | -0.9/-0.07       | 1.11/-4.9        | 1.15/0.44        | 0.02/0.22        | 0.69/0.83        | 0.86/-1.06       |
| Θ(82.5°)  | 1.81/-87      | 1.62/-1.21     | 0.68/0.55      | 1.11/-1.87     | 2.162/-27      | 1.951/-59      | 1.22/0.98      | 0.44/0.61        | 1.512/-06         | 1.66/0.62        | 0.23/0.62        | 1.1/-1.24        | 1.09/0.9         | 0.86/0.94        | 1.271/-96         | 2.653/-02        | 2.912            |                  |                  |                  |                  |                  |                  |                  |



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| θ(75°)    | -12.18/-10.47 | -8.43/-7.58    | -10.36/-8.18   | -8.33/-10.18   | -14.4/-15.77   | -15.85/-12.84  | -11.97/-11.5   | -11.57/-10.67    | -11.82/-10.37    | -9.64/-10.29     | -9.98/-9.18      | -7.84/-9.06      | -9.51/-10.93     | -13.58/-12.84    | -14.17/-14.47    | -14.35/-13.66    | -12.31/-11.51    | -13.9/-15.84     | -14.69/-14.13    | -15.06/-13.87    | -15.55/-15.41    | -14.99/-14.25    | -13.44/-12.89    | -13.55/-13.66    |
| θ(82.5°)  | -9.87/-7.68   | -7.83/-7.09    | -6.3/-6.4      | -5.22/-6.3     | -10.14/-10.69  | -12.58/-12.31  | -10.9/-13.37   | -12.92/-10.41    | -10.7/-10.1      | -10.12/-10.35    | -7.89/-7.14      | -7.48/-7.98      | -7.45/-9.87      | -13.22/-15.35    | -15.42/-15.25    | -12.77/-14.22    | -14.77/-10.86    | -13.05/-13.15    | -16.25/-14.71    | -15.48/-14.68    | -15.04/-13.39    | -15.16/-15.15    | -15.66/-14.97    | -14.71/-12.31    |
| θ(90°)    | -7.5/-7.7     | -6.38/-6.69    | -7.54/-8.11    | -10.39/-10.82  | -10.08/-10.79  | -11.48/-11.62  | -12.77/-10.99  | -13.19/-15.57    | -14.54/-11.89    | -13.22/-15.06    | -9.57/-9.67      | -10.23/-8.34     | -7.6/-9.3        | -11.01/-15.28    | -12.61/-14.83    | -14.51/-15.72    | -12.61/-9.51     | -12.75/-12.13    | -14.85/-14.75    | -14.51/-14.7     | -13.14/-13       | -14.66/-14.14    | -13.77/-11.72    | -10.32/-9        |
| θ(97.5°)  | -8.89/-8.29   | -10.56/-12.06  | -12.62/-8.97   | -9.66/-14.62   | -13.19/-10.04  | -10.37/-12.82  | -13.14/-10.12  | -8.67/-8.45      | -13.12/-11.7     | -12.48/-11.75    | -11.34/-10.66    | -10.87/-8.13     | -7.8/-9.22       | -12.3/-15.58     | -14.37/-13.98    | -12.95/-12.35    | -12.8/-11.38     | -12.55/-13.65    | -15.39/-13.41    | -13.04/-15.19    | -16.07/-16.18    | -15.72/-13.43    | -13.52/-15.42    | -9.11/-8.37      |
| θ(105°)   | -11.02/-9.55  | -8.63/-10.38   | -9.89/-10.03   | -8.65/-10.01   | -11.37/-12.6   | -13.19/-10.63  | -10.26/-7.96   | -11.06/-12.52    | -13.56/-13.8     | -14.91/-12.25    | -11.82/-11.91    | -9.42/-8.37      | -8.91/-10.52     | -12.87/-12.42    | -15.18/-14.84    | -13.22/-14.05    | -13.07/-12.61    | -15.87/-14.29    | -14.52/-15.26    | -14.2/-14.96     | -15.53/-12.82    | -10.56/-14.99    | -14.77/-15.17    | -13.63/-11.26    |
| θ(112.5°) | -10.57/-8.55  | -8.63/-10.35   | -11.87/-9.19   | -10.57/-10.49  | -10.96/-10.43  | -10.52/-11.43  | -14.88/-12.73  | -12.28/-11.98    | -13.42/-13.18    | -10.5/-12.01     | -13.35/-14.4     | -15.94/-13.38    | -14.01/-15.18    | -14.45/-13       | -10.11/-15.08    | -11.95/-16.1     | -15.59/-12.05    | -14.69/-11.96    | -15.41/-13.52    | -14.91/-15.72    | -15.22/-13.17    | -9.66/-9.75      | -14.87/-12.69    | -13.49/-13.84    |
| θ(120°)   | -10.25/-13.16 | -12.58/-9.29   | -11.2/-9.26    | -9.39/-9.59    | -7.95/-8.46    | -13.57/-12.44  | -12.43/-13.1   | -15.72/-15.13    | -15.15/-15.34    | -13.66/-12.59    | -15.57/-15.43    | -14.73/-12.11    | -14.52/-10.22    | -10.34/-8.64     | -14.54/-10.43    | -14.89/-14.33    | -12.25/-12.79    | -15.52/-13.04    | -13.98/-12.21    | -14.38/-15.83    | -15.01/-13.82    | -12.33/-7.98     | -9.95/-12.63     | -11.29/-10.46    |
| θ(127.5°) | -13.22/-12.72 | -9.95/-7.03    | -5.8/-6.39     | -7.84/-11.39   | -11.96/-11.68  | -14.06/-16.14  | -13.12/-10.66  | -14.34/-15.26    | -14.84/-12.94    | -13.03/-13.07    | -14.22/-15.03    | -15.46/-14.46    | -13.01/-14.2     | -13.22/-14.6     | -11.52/-14.12    | -7.05/-10.61     | -15.56/-15.89    | -10.54/-10.93    | -12.8/-10.85     | -13.17/-15.37    | -15.55/-15.62    | -15.4/-12.89     | -10.65/-12.32    | -13.5/-13.07     |
| θ(135°)   | -9.95/-10.31  | -11.26/-11.91  | -9.38/-10.25   | -13.34/-12.34  | -12.73/-11.82  | -10.4/-9.48    | -10.92/-10.96  | -13.52/-15.76    | -13.48/-13.44    | -13.34/-12.85    | -13.86/-14.92    | -15.68/-15.29    | -15.44/-16.02    | -14.64/-13.18    | -13.66/-7.67     | -9.23/-15.75     | -15.66/-14.53    | -12.88/-14.93    | -16.24/-14.99    | -14.35/-15.42    | -12.79/-10.7     | -13.32/-14.84    | -14.56/-12.67    | -10.94/-9.47     |
| θ(142.5°) | -8.148.81     | -8.57/-11.25   | -15.25/-13.35  | -11.37/-11.73  | 9.51/-9.14     | -10.02/-11.62  | -14/-12.47     | -12.2/-14.38     | -12.34/-11.6     | -11.71/-13.63    | -13.39/-11.97    | -13.74/-13.36    | -13.59/-15.47    | -14.65/-11.96    | -6.44/-8.02      | -15.3/-10.25     | -12.13/-11.17    | -13.69/-14.89    | -13.16/-12.78    | -13.27/-13.46    | -10.85/-8.21     | -6.54/-10.1      | -13.84/-11.36    | -10.11/-8.74     |
| θ(150°)   | -11.69/-13.1  | -8.37/-9.31    | -11.48/-13.05  | -14.93/-14.96  | -13.39/-15.8   | -14.45/-15.51  | -15.47/-12.6   | -13.61/-15.11    | -11.56/-10.02    | -10.31/-13.01    | -10.37/-8.54     | -10.63/-12.89    | -11.26/-9.78     | -11.09/-8.9      | -7.56/-9.28      | -9.69/-10.19     | -8.36/-6.73      | -9.78/-15.29     | -15.01/-10.9     | -29.9/-9.61      | -8.71/-7.34      | -6.47/-7.12      | -8.17/-8.49      | -10.44/-10.84    |
| θ(157.5°) | -12.65/-14.71 | -15.21/-13.67  | -11.9/-11.76   | -12.43/-13.58  | -14.32/-15.24  | -13.19/-13.97  | -13.9/-12.73   | -13.62/-13.35    | -12.89/-14.52    | -14.85/-10.86    | -8.12/-7.03      | -7.6/-12.15      | -15.48/-14.55    | -15.61/-12.21    | -10.42/-10.14    | -10.33/-8.03     | -5.79/-5.84      | -9.22/-14.57     | -15.47/-13.37    | -12.09/-10.19    | -10.04/-11.14    | -10.52/-11.62    | -12.78/-13.61    | -13.79/-11.65    |
| θ(165°)   | -15.67/-14.59 | -11.08/-9.39   | -10.3/-12.09   | -12.58/-12.99  | -14.5/-13.91   | -14.77/-15.19  | -16.17/-15.02  | -15.88/-14.53    | -15.43/-15.9     | -13.4/-13.87     | -13.93/-12.65    | -14.17/-14.1     | -11.66/-12.68    | -14.59/-15.09    | -15.42/-12.92    | -10.62/-8.31     | -7.37/-8.07      | -10.61/-13.64    | -12.88/-12.36    | -14.11/-16.43    | -15.44/-15.27    | -14.73/-14.29    | -13.52/-11.74    | -12.13/-15.47    |
| θ(172.5°) | -13.91/-14.16 | -13.34/-14.13  | -11.39/-9.54   | -9.91/-11.34   | -12.64/-13.58  | -14.63/-14.91  | -15.39/-15.28  | -14.52/-14.26    | -13.76/-13.96    | -14.38/-13.88    | -13.97/-13.61    | -12.05/-10.84    | -10.9/-12.45     | -14.2/-14.43     | -13.71/-11.67    | -10.39/-9.98     | -10.62/-11.34    | -11.8/-12.12     | -12.65/-13.16    | -13.99/-15.24    | -14.61/-16.28    | -14.67/-13.77    | -14.57/-13.81    | -14.32/-14.8     |
| θ(180°)   | -12.15/-11.04 | -9.79/-9.68    | -10.05/-11.31  | -12.52/-12.98  | -12.65/-12.83  | -13.09/-14.76  | -15.35/-15.52  | -15.76/-14.39    | -13.49/-13.75    | -13.58/-12.68    | -11.39/-10.97    | -11.26/-10.68    | -10.41/-10.25    | -9.9/-9.57       | -9.78/-9.21      | -8.82/-8.99      | -9.6/-10.67      | -11.71/-11.98    | -11.57/-11.7     | -11.72/-11.74    | -11.48/-11.12    | -10.57/-11       | -11.52/-12.48    | -13.63/-13.17    |
| Freq(Hz)  | 5.3GPol.      | Theta          | -              | -              | -              | -              | -              | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| DG(dB)    | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| θ(0°)     | -14.6/-13.94  | -13.72/-12.93  | -13.83/-14.27  | -15.03/-14.63  | -13.24/-12.61  | -12.52/-12.74  | -13.63/-13.67  | -13.59/-14.53    | -15.12/-15.41    | -16.2/-15.14     | -14.19/-13.47    | -12.76/-11.66    | -10.24/-9.75     | -9.34/-8.91      | -8.99/-9.63      | -9.66/-9.42      | -9.46/-9.97      | -10.25/-10.12    | -10.19/-10.92    | -11.99/-12.32    | -12.82/-13.58    | -14.67/-13.92    | -13.83/-15.76    | -15.56/-14.92    |
| θ(7.5°)   | -8.99/-8.5    | -8.51/-8.11    | -7.72/-7.6     | -8.25/-8.56    | -8.46/-8.52    | -8.65/-9.08    | -9.72/-9.89    | -10.43/-11       | -11.11/-11.36    | -12.52/-13.93    | -14.71/-15.95    | -14.58/-16.02    | -15.47/-14.6     | -14.54/-13.74    | -14.36/-15.96    | -16.17/-14.86    | -13.66/-12.97    | -12.37/-13.05    | -13.71/-14.54    | -14.34/-14.08    | -14.15/-12.66    | -11.48/-11.79    | -11.81/-10.44    |                  |
| θ(15°)    | -5.91/-5.38   | -5.19/-5.18    | -4.79/-4.54    | -4.57/-4.75    | -4.94/-4.92    | -5.28/-5.49    | -6.03/-6.42    | -6.39/-6.23      | -6.48/-7.55      | -9.08/-10.08     | -10.51/-10.42    | -11.02/-11.85    | -13.21/-13.72    | -14.62/-15.35    | -16.16/-14.91    | -14.99/-15.7     | -14.68/-13.24    | -12.52/-13.18    | -13.34/-12.04    | -11.76/-11.23    | -10.49/-10.54    | -10.28/-8.63     | -7.25/-6.67      | -8.61/-7.01      |
| θ(22.5°)  | -6.06/-5.9    | -5.4/-5.41     | -5.47/-5.61    | -5.17/-4.33    | -4.35/-4.31    | -4.27/-4.24    | -4.68/-5.08    | -5.18/-4.98      | -5.3/-5.59       | -6.24/-6.88      | -7.44/-6.63      | -6.02/-6.18      | -6.81/-6.8       | -6.91/-8.27      | -11.49/-14.68    | -15.19/-14.17    | -12.23/-12.13    | -13/-12.22       | -11.06/-9.69     | -9.42/-8.64      | -6.84/-6.65      | -5.24/-8.88      | -4.39/-3.88      | -3.75/-5.02      |
| θ(30°)    | -4.03/-4.53   | -5.22/-5.43    | -5.89/-6.63    | -7.17/-6.34    | -5.89/-5.83    | -5.67/-6.22    | -6.11/-6.41    | -7.71/-7.33      | -5.84/-4.82      | -4.59/-4.42      | -4.78/-5.73      | -6.52/-6.25      | -6.54/-7.86      | -8.87/-8.75      | -7.3/-9.31       | -12.31/-10.48    | -8.48/-7.78      | -6.57/-5.81      | -5.58/-5.32      | -4.59/-3.86      | -3.34/-3         | -3.05/-3.5       | -3.82/-3.95      |                  |
| θ(37.5°)  | -4.29/-3.92   | -5.86/-2.23    | -2.87/-3.57    | -3.55/-4.57    | -4.71/-4.82    | -6.13/-7.14    | -7.91/-6.86    | -6.2/-6.78       | -7.45/-6.39      | -5.27/-5.29      | -4.76/-4.07      | -3.92/-4.18      | -4.03/-3.76      | -4.11/-4.86      | -5.67/-6.34      | -5.71/-6.34      | -4.79/-6.77      | -6.74/-6.85      | -5.34/-5.84      | -5.34/-4.65      | -5.58/-5.97      | -5.44/-4.74      |                  |                  |
| θ(45°)    | 0.07/-0.22    | -0.27/-0.08    | 0.68/0.53      | 0.74/-1.47     | 1.44/-1.2      | 1.12/-1.17     | 0.92/-0.13     | -1.56/-1.98      | -2.91/-5.12      | -7.08/-5.91      | -5.4/-6.3        | -3.64/-2.28      | -1.13/-0.13      | 0.18/-0.35       | -1.4/-2.08       | -2.94/-3.51      | -2.65/-1.6       | -1.53/-1.14      | -1.23/-1.47      | -1.83/-2.65      | -3.77/-4.23      | -3.09/-1.38      | -0.43/-0.61      | -0.62/-0.13      |
| θ(52.5°)  | 1.31/35       | 1.12/0.5       | 0.07/-0.22     | 0.11/-1.67     | 2.01/-1.99     | 2.18/-2.44     | 2.93/-2.51     | 2.64/-0.39       | 2.87/-1.89       | 0.48/-0.19       | 0.47/0.03        | -1.87/-2.29      | -1.22/-0.63      | -0.37/-0.13      | 1.02/0.97        | 1.45/-1.67       | 0.46/-0.72       | 0.30/76          | 1.44/-2.4        | 2.55/-1.98       | 1.02/-1.07       | -0.36/0.18       | 0.76/-1.07       |                  |
| θ(60°)    | 1.32/-1.41    | 1.62/-1.37     | 0.6/-0.01      | -0.34/-0.74    | 0.73/-1.4      | -0.13/-0.84    | -0.81/-1.31    | 0.41/-2.11       | 2.56/-2.74       | 2.19/-1.99       | 2.69/-2.2        | 0.35/-0.74       | -1.23/-1.18      | -0.75/-0.53      | -0.01/-1.14      | 2.52/-3.55       | 3.11/-82         | 2.72/-99         | 2.69/-0.55       | 2.57/-1.34       | -0.88/-1.59      | 2.03/-1.96       | 1.97/-1.73       |                  |
| θ(67.5°)  | 1.89/-2.48    | 2.9/-2.7       | 3.1/-2.48      | 1.23/-0.17     | 2.18/-2.45     | 1.01/-1.4      | -0.52/-0.51    | -0.13/-0.37      | 0.07/-1.12       | -1.61/-0.17      | 0.51/0.45        | 1.57/-1.91       | 1.81/-88         | 1.97/-1.63       | 1.35/0.97        | -0.15/-0.37      | 1.29/-1.06       | -0.43/-0.7       | -0.23/-0.09      | 0.16/-2.26       | 3.35/-2.94       | 2.68/-2.58       | 2.09/-1.5        | 0.95/-1.47       |
| θ(75°)    | 2.63/-2.62    | 3.4/-3.88      | 4.03/-6.5      | 1.78/-4.3      | 4.84/-2.5      | 3.13/-8.4      | 4.45/-0.41     | 2.43/-3.9        | 2.79/-1.3        | 0.99/-0.88       | -0.22/-0.26      | 1.24/-1.65       | 2.64/-5          | 3.25/-2.84       | 2.89/-2.98       | 2.46/-0.88       | 1.42/-2.74       | 1.85/-156        | 1.84/-1.78       | -0.11/-1.4       | 1.68/-1.33       | 0.95/-1.51       | 2.46/-2.74       | 2.72/-78         |
| θ(82.5°)  | 1.98/-1.28    | 1.81/-2.45     | 2.12/08        | 0.96/-1.38     | 2.31/-2.1      | 2.08/-2.1      | 3.26/-2.3      | 3.39/-2.1        | 2.84/4           | 3.88/-0.36       | 2.88/-1.77       | 0.7/-0.34        | 1.08/-1.58       | 1.1/-6           | 1.08/-1.42       | 2.53/-38         | 4.22/-86         | 3.09/-22         | 2.62/-42         | 2.37/-35         | 1.42/-2.72       | 3.12/-41         | 1.71/-88         |                  |
| θ(90°)    | 1.72/0.66     | 0.61/-1.31     | 1.28/-1.4      | 1.78/-1.6      | 2.24/-2.78     | 1.04/-1.51     | -1.23/-2.67    | 0.66/-1.76       | 1.15/0.46        | -0.08/-1.47      | 1.97/-2.34       | 3.49/-7.9        | 4.73/-94         | 1.81/0.52        | 0.5/-0.01        | -1.38/-0.83      | -0.41/0.5        | 0.14/-1.15       | 0.18/-1.89       | 0.61/-23         | 0.50/-26         | 1.76/-20.5       | 0.98/-39         | 0.11/-1.45       |
| θ(97.5°)  | 0.98/0.34     | 0.36/-1.39     | 0.97/-1.96     | 0.42/0.36      | 3.02/-0.5      | 1.12/-1.22     | 2.44/-1.21     | 3.42/-3.38       | 1.62/-1.29       | -1.7/-0.71       | -3.37/-0.41      | -0.01/-1.55      | 3.37/-3.71       | 2.77/-1.37       | 0.61/-1.49       | 1.22/0.8         | 3.21/-4.74       | 3.21/-0.11       | 0.71/2           | 2.22/-64         | 2.31/-1.64       | 1.62/0.58        | 0.82/0.88        | 0.38/0.4         |
| θ(105°)   | -2.06/-3.58   | -3.04/-0.06    | -0.86/0.4      | -0.25/-0.33    | 1.21/-49       | -0.42/-0.98    | 0.95/-0.48     | 2.79/-3.6        | 1.31/-1.06       | 0.32/-0.43       | -0.62/-0.38      | 0.22/-0.27       | 1.32/0.87        | -0.55/-0.38      | 0.58/-1.29       | 2.71/-83         | 4.43/0.65        | 3.38/-1.03       | 2.93/-11         | 0.54/-2.41       | -0.06/-2.06      | 0.24/-0.4        | -1.32/-1.82      |                  |
| θ(112.5°) | -0.52/-1.7    | -2.75/-0.26    | -1.78/-1.13    | -1.79/-6.14    | -1.57/-1.38    | -3.33/-2.74    | -1.17/-2.59    | 0.51/-1.87       | 0.13/-3.07       | -1.77/-1.98      | -1.3/-0.37       | -3.27/-0.95      | 0.54/-1.27       | -3.26/-2.29      | 0.68/-2.62       | 0.09/-1.85       | -2.43/0.48       | -6.79/-3.51      | -5/-3.34         | -0.82/-0.21      | -0.13/0.39       | -0.67/-0.31      | -0.11/-2.36      | -3.91/-1.98      |
| θ(120°)   | -0.83/-2.04   | -4.04/-1.3     | -1.42/-6.79    | -5.64/-4.3     | -3.31/-3.72    | -10.63/-8.21   | -7.91/-8.5     | -7.58/-7.34      | -5.86/-8.63      | -4.8/-4.22       | -6.04/-1.24      | -4.24/-2.22      | -0.03/-1.34      | -4.94/-3.58      | -0.68/-1.66      | -1.18/-1.52      | 3.42/-28         | 3.27/-108        | 1.61/-2.45       | 1.85/-1.15       | 0.84/-0.93       | -0.87/-1.29      | -2.6/-3.41       |                  |



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

Appendix A.1

|            |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ (112.5°) | -15.57/-12.44 | -10.84/-11.52   | -9.5/-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      | -10.2/-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     |
| Θ (120°)   | -11.74/-13.26 | -13.11/-11.15   | -11.07/-8.15    | -7.02/-7.59     | -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      | -9.8/-10.8        | -9.03/-11.64      | -9.23/-8.43       | -10.27/-5.51      | -5.71/-6.25       | -10.9/-12.32      |
| Θ (127.5°) | -10.7/-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      | -13.8/-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       |
| Θ (135°)   | -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       | -11.12/-14.55     | -15.71/-13.58     | -14.04/-11.19     | -11.79/-10.03     | -10.7/-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      | -13/-13.13        |
| Θ (142.5°) | -8.14/-8.99   | -7.8/-7.28      | -9.7/-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     | -14.3/-12.76      | -8.89/-5.52       | -6.96/-10.51      | -15.49/-12.97     | -13.16/-8.8       |
| Θ (150°)   | -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       | -6.5/-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      |
| Θ (157.5°) | -9.3/-13.11   | -15.19/-14.95   | -14.5/-15.23    | -14.73/-15.01   | -14.78/-14.45   | -13.4/-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      | -10.2/-9.35       | -9.8/-7.41        | -7.64/-8.61       | -5.78/-5.49       | -6.91/-6.88       | -6.64/-7.09       |
| Θ (165°)   | -13.7/-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   | -13.8/-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     |
| Θ (172.5°) | -11.41/-11.52 | -10.9/-10.16    | -9.99/-8.61     | -8.3/-8.87      | -9.47/-11.69    | -13.8/-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     | -10.4/-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      |
| Θ (180°)   | -9.07/-8.76   | -8.39/-7.04     | -6.79/-7.65     | -8.53/-9        | -11/-12.87      | -14.18/-14.87   | -15.7/-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      | -12.5/-11.5       | -11.02/-11.82     | -11.21/-10.29     |
| Freq(Hz)   | 5.785GPol.    | Theta/-         | -/-             | -/-             | -/-             | -/-             | -/-             | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               |
| DG(dB)     | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ (0°)     | -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     | -11.2/-11.24      | -10.94/-10.67     | -10.55/-10.65     | -11.1/-11.32      | -11.66/-11.65     | -11.86/-13.23     | -13.9/-15.55      | -15.56/-15.31     | -15.15/-14.94     | -15.15/-14.77     |
| Θ (7.5°)   | -12.35/-11.98 | -12.65/-12.9    | -11.98/-10.65   | -9.53/-9.66     | -10.13/-11.27   | -11.5/-11       | -10.4/-10.72    | -12.16/-13.33     | -14.21/-16.21     | -16.14/-15.73     | -15.3/-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     | -10.6/-9.99       | -10.51/-11.84     | -14/-13.98        | -13.28/-14.45     | -14.72/-15.27     | -13.57/-12.07     |
| Θ (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     | -15.6/-15.9       | -14.95/-15.56     | -15.1/-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      |
| Θ (22.5°)  | -7.4/-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/-7.98       | -7.45/-7.84       | -8.79/-9.35       | -8.79/-8.1        |
| Θ (30°)    | -4.5/-3.68    | -3.63/-3.31     | -2.77/-1.97     | -1.74/-1.58     | -1.95/-2.47     | -2.6/-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      | -8.6/-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/-8.1        |
| Θ (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       | -6.08/-6.63       | -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       |
| Θ (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       | -3.1/-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       | -2.3/-1.07        | -1.51/-1.27       | -0.21/-1.02       | 1.38/-0.29        | -1.18/-1.58       |
| Θ (52.5°)  | -1.69/-1.44   | -0.63/-0.4      | 0.17/-0.19      | -0.55/-1.13     | -1.02/-1.05     | -1.77/-3.99     | -5.36/-4.71     | -5.12/-3.57       | -3.3/-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       | -3.6/-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       |
| Θ (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/-49          | 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       |
| Θ (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        |
| Θ (75°)    | 2.2/-2.25     | 2.17/-2.69      | 2.38/-2.68      | 2.32/-2.79      | 1.69/-3.51      | 1.5/-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        | 1.70/-45          | 1.05/-0.27        | -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/-77          |                   |
| Θ (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/-62        | 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        |
| Θ (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/-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/-5.05        |
| Θ (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/-97          | 3.87/-4.75        | 5.88/-67          | 4.13/-252         | 2.1/-1.13         | -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/-99          |                   |
| Θ (105°)   | 1.69/-0.64    | -0.88/-0.02     | -2.96/-2.77     | -3.02/-1.34     | 1.74/-3.99      | 1.79/-0.06      | -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        | 3.79/-3.5         | 1.72/-1.5         | 0.52/-1.41        | 0.24/-0.86        |
| Θ (112.5°) | -2.72/-5.39   | -4.4/-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/-52          | 1.64/-2.12        | -4.65/-6          | -0.31/-1.01       | -2.49/-2.87       | -1.9/-0.52        |
| Θ (120°)   | -1.74/-5.06   | -2.65/-3.94     | -3.9/-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       |
| Θ (127.5°) | -0.93/-1.35   | -0.88/-1.31     | -2.76/-4.09     | -5.58/-6.65     | -5.34/-5.16     | -6.5/-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       |
| Θ (135°)   | -8.79/-9.27   | -8.44/-5.8      | -3.74/-2.71     | -3.9/-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        | -3.4/-7.23        | -11.18/-9.95      | -6.81/-5.05       | -2.09/-3.46       | -6.03/-5.44       | -6.47/-7.71       | -7.19/-7.11       | -7.96/-8.79       |
| Θ (142.5°) | -6.52/-4.57   | -5.41/-9.3      | -8.83/-7.7      | -5.7/-4.05      | -2.9/-1.92      | -2.1/-4.57      | -6.78/-4.54     | -2.76/-2.4        | -1.38/-1.86       | -3.94/-8.38       | -8.33/-7.72       | -8.43/-5.66       | -7.65/-10.12      | -9.28/-12.11      | -11.59/-10.15     | -10.97/-8.5       | -7.32/-8.41       | -10.13/-10.62     | -8.7/-4.27        | -3.56/-8.77       | -7.64/-5.05       | -3.29/-2.84       | -3.85/-4.98       | -7.84/-9.06       |
| Θ (150°)   | -2.34/-2.75   | -3.87/-3.64     | -3.49/-4.11     | -3.31/-3.19     | -3.87/-4.04     | -5.79/-10.6     | -11.9/-9.48     | -8.32/-8.03       | -6.4/-5.54        | -6.85/-9.05       | -7.55/-9.17       | -11.1/-7.86       | -5.49/-4.48       | -5.79/-8.03       | -5.87/-3          | -1.36/-0.25       | -0.43/-1.84       | -3.68/-5.96       | -6.45/-4.3        | -2.41/-1.78       | -1.18/-0.88       | -1.01/-1.29       | -1.79/-1.66       | -1.95/-2.71       |
| Θ (157.5°) | -2.49/-3.16   | -3.93/-4.41     | -4.88/-3.51     | -2.14/-1.79     | -1.62/-1.36     | -2.05/-3.22     | -4.66/-6.48     | -7.17/-8.5        | -9.72/-8.98       | -8.42/-10.08      | -7.89/-5.55       | -4.59/-3.87       | -3.49/-3.34       | -3.4/-2.78        | -1.84/-1.36       | -2.02/-4.2        | -7.39/-8.36       | -6.97/-4.71       | -3.15/-1.71       | -1.11/-1.96       | -3.44/-3.79       | -2.89/-1.57       | -1.04/-1.38       | -2.48/-2.84       |
| Θ (165°)   | -4.82/-4      | -2.9/-2.73      | -2.95/-3.68     | -3.28/-2.54     | -2.7/-2.91      | -2.74/-2.67     | -3.69           |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |



## Gain Result

Sporton International Inc. Hsinchu Laboratory



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(22.5°)  | -10.49/-12.22 | -15.19/-17.22   | -16.67/-14.34   | -12.99/-12.34   | -12.25/-12.48   | -13.83/-14.64   | -14.29/-13.21   | -12.18/-11.64     | -11.52/-11.24     | -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     | -16.4/-18.13      | -18.09/-18.85     | -19/-18.38        | -17.18/-16.24     | -15.44/-14.22     | -12.52/-10.95     | -9.98/-9.8        |
| Θ(30°)    | -11.74/-12.98 | -15.25/-17.28   | -16.59/-14.42   | -13.05/-12.05   | -11.76/-12.42   | -13.91/-15.51   | -16.01/-15.28   | -14.64/-14.6      | -15.31/-16.72     | -18.39/-17.43     | -13.74/-11.02     | -9.45/-8.72       | -8.65/-8.78       | -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/-15.42     | -13.82/-12.63     | -11.74/-11.39     |
| Θ(37.5°)  | -13.78/-14.24 | -14.44/-13.9    | -13.09/-12.45   | -11.96/-11.67   | -11.96/-13.44   | -16.31/-18.61   | -18.29/-18.07   | -17.58/-18.69     | -19.16/-18.88     | -18.56/-17.44     | -13.16/-10.49     | -8.78/-7.84       | -7.43/-7.27       | -7.23/-7.12       | -6.58/-5.58       | -6.56/-7.15       | -8.58/-11.09      | -14.99/-19.09     | -18.3/-17.68      | -18.81/-19        | -16.83/-15.58     | -14.65/-13.81     | -13.29/-12.97     | -12.91/-13.07     |
| Θ(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     | -13.1/-13.11      |
| Θ(52.5°)  | -12.89/-12.2  | -11.7/-10.3     | -10.61/-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/-10.2      | -8.68/-8.5        | -8.96/-9.73       | -10.39/-18.3      | -10.72/-9.88      | -8.61/-7.33       | -6.39/-6.15       | -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     |
| Θ(60°)    | -12.03/-11.66 | -10.83/-10.3    | -10.36/-10.99   | -11.87/-12.29   | -12.22/-12.57   | -13.91/-16.29   | -17.08/-15.22   | -14.4/-16         | -19.01/-18.26     | -13.07/-9.61      | -8.03/-7.84       | -8.95/-11.14      | -13.99/-16.4      | -17.77/-17.4      | -14.06/-10.39     | -7.86/-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     | -12.31/-12.09     |
| Θ(67.5°)  | -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     |
| Θ(75°)    | -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/-9.86       | -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     |
| Θ(82.5°)  | -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      | -9.11/-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     |
| Θ(90°)    | -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/-9.85          | -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     |
| Θ(97.5°)  | -14.28/-13.41 | -12.61/-12.48   | -14.7/-19.14    | -18.35/-16.71   | -14.88/-15.61   | -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/-17.99     | -18.91/-16.43     |                   |
| Θ(105°)   | -11.09/-10.42 | -10.89/-12.09   | -14.88/-18.51   | -18.19/-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     | -12.82/-16.03     | -17.61/-13.83     | -18.01/-14.84     | -9.6/-8.83        | -5.94/-6.55       | -8.44/-10.48      | -9.99/-8.18       | -7.58/-8.68       | -11.57/-15.42     | -15.65/-14.23     | -14.59/-16.59     | -14.49/-18.02     | -17.42/-18.82     | -16.09/-12.69     |
| Θ(112.5°) | -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     | -12.7/-13.39      | -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     |
| Θ(120°)   | -15.69/-11.7  | -10.18/-10.27   | -10.99/-18.05   | -8.61/-8.33     | -8.14/-9.81     | -14.35/-18.4    | -8.61/-14.41    | -14.74/-18.69     | -16.89/-10.59     | -7.49/-6.76       | -7.92/-10.81      | -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       | -8.87/-10.58      | -10.26/-8.94      | -8.95/-10.75      | -13.34/-16.45     | -18.16/-16.48     | -18.82/-18.42     |
| Θ(127.5°) | -11.26/-8.75  | -7.56/-7.61     | -8.56/-9.88     | -11.87/-11.89   | -13.84/-18.5    | -18.31/-12.5    | -8.61/-7.17     | -7.61/-10.11      | -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      | -9.38/-8.13       | -8.85/-10.82      | -13.14/-14.75     | -13.91/-12.18     | -11.47/-11.95     | -12.75/-13.06     | -13.35/-13.89     | -14.22/-13.15     |                   |
| Θ(135°)   | -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      | -13.4/-18.82      | -15.54/-10.29     | -8.3/-7.5         | -7.1/-8.84        | -7.18/-8.51       | -11.09/-12.56     | -11.3/-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      |
| Θ(142.5°) | -11.19/-11.54 | -13.5/-13.68    | -13.06/-12.11   | -11.41/-11.42   | -12.11/-11.97   | -9.66/-7.06     | -5.5/-5.03      | -5.97/-8.49       | -13.85/-16.58     | -14.07/-14.44     | -18.85/-18.21     | -12.69/-9.36      | -11.08/-8.71      | -9.19/-9.19       | -9.09/-9.36       | -9.92/-9.95       | -8.51/-9.62       | -10.87/-13.22     | -15.97/-14.03     | -16.28/-15.01     | -13.88/-12.9      | -12.17/-11.47     | -10.68/-9.91      | -9.55/-9          |
| Θ(150°)   | -9.19/-10.24  | -12.76/-13.35   | -12.82/-11.93   | -11.46/-11.46   | -11.22/-9.99    | -8.16/-7.24     | -7.43/-9.83     | -14.41/-18.27     | -19.02/-18.79     | -18.06/-17.79     | -13.89/-11.57     | -11.48/-11.61     | -12.58/-13.26     | -13.63/-13.36     | -12.92/-10.51     | -9.25/-8.96       | -9.78/-11.31      | -13.59/-14.71     | -14.48/-13.37     | -11.99/-10.39     | -8.87/-7.6        | -6.68/-6.27       | -6.48/-7.37       |                   |
| Θ(157.5°) | -7.98/-8.96   | -9.32/-9.18     | -9.07/-9.25     | -9.72/-10.23    | -10.33/-9.83    | -9.12/-8.71     | -8.96/-10.01    | -11.95/-14.8      | -17.1/-18.37      | -18.41/-18.47     | -19.39/-15.38     | -13.25/-12.12     | -11.8/-12.2       | -13.26/-14.99     | -16.41/-15.57     | -13.16/-11.05     | -9.78/-9.55       | -10.41/-12.22     | -14.42/-15.74     | -15.3/-13.7       | -11.8/-9.84       | -8.08/-6.7        | -5.83/-5.57       | -5.84/-6.61       |
| Θ(165°)   | -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   | -17.92/-17.82     | -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       | -7.4/-7.7         |
| Θ(172.5°) | -10.53/-10.66 | -11.1/-12.31    | -14.38/-16.72   | -17.73/-16.67   | -15.17/-14.05   | -13.63/-13.78   | -14.64/-16.39   | -19.32/-17.89     | -17.33/-19.04     | -18.5/-19.8       | -18.47/-17.15     | -16.37/-15.39     | -14.41/-13.49     | -12.87/-12.25     | -11.61/-10.98     | -10.42/-10.99     | -11.81/-12.74     | -13.8/-14.87      | -15.59/-15.72     | -15.1/-13.67      | -12.26/-11.33     | -10.75/-10.23     | -10.31/-10.35     |                   |
| Θ(180°)   | -16.01/-15.71 | -15.87/-16.16   | -15.9/-14.78    | -13.57/-12.69   | -12.22/-12.11   | -12.34/-12.94   | -13.63/-15.72   | -18.43/-17.66     | -17.83/-17.63     | -18.33/-18.45     | -17.93/-18.61     | -16.28/-14.11     | -12.28/-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     |
| Freq(Hz)  | 2.4835GPol.   | ThetaAnt.1      | +               | +               | +               | +               | +               | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -18.17/-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     | -18.9/-18.62      | -18.91/-18.18     | -18.56/-16.55     | -14.11/-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     |
| Θ(7.5°)   | -19.37/-17.17 | -19.04/-13.87   | -17.63/-12.92   | -15.57/-14.05   | -13.04/-12.16   | -11.7/-11.35    | -11.38/-11.84   | -12.7/-13.39      | -15.2/-16.31      | -17.28/-18.71     | -19.02/-18.31     | -18.26/-18.91     | -13.4/-15.11      | -13.21/-11.75     | -10.78/-10.35     | -11.01/-9.98      | -9.78/-9.58       | -9.55/-9.6        | -9.69/-9.66       | -9.93/-9.78       | -10.89/-11.96     | -13.35/-14.83     | -16.35/-17.48     | -18.25/-18.97     |
| Θ(15°)    | -14.77/-15.85 | -17.35/-18.26   | -17.72/-18.14   | -17.46/-18.71   | -17.52/-18.12   | -16.58/-17.01   | -17.81/-18.13   | -17.29/-15.63     | -16.16/-12.97     | -12.17/-11.84     | -11.86/-11.77     | -11.38/-10.66     | -9.91/-9.23       | -8.69/-8.41       | -8.32/-8.48       | -8.69/-9          | -9.36/-9.62       | -9.61/-9.33       | -9.7/-10.17       | -9.94/-10.7       | -9.13/-9.74       | -13.14/-14.6      | -16.31/-17.42     | -12.73/-14.27     |
| Θ(22.5°)  | -13.03/-14.12 | -14.45/-14.49   | -14.55/-14.84   | -15.46/-16.32   | -17.71/-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/-11.9      |
| Θ(30°)    | -10.27/-12.05 | -13.31/-13.04   | -11.74/-13.03   | -9.27/-8.67     | -8.61/-9.09     | -9.96/-11.23    | -12.78/-14.56   | -16.59/-18.44     | -19.01/-18.92     | -17.8/-17.99      | -17.72/-17.77     | -18.25/-19.74     | -16.67/-13.85     | -11.42/-9.57      | -8.22/-7.26       | -6.55/-6.22       | -6.22/-6.51       | -7.05/-7.53       | -7.59/-7.14       | -6.54/-6.12       | -5.98/-6.07       | -6.3/-6.62        | -7.01/-7.49       | -8.21/-9.34       |
| Θ(37.5°)  | -7.92/-9.48   | -10.89/-10.51   | -8.72/-6.83     | -5.34/-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     | -11.15/-10.08     | -8.93/-8.49       | -7.29/-6.75       | -6.3/-5.91        | -5.57/-5.45       | -5.62/-5.8        | -5.7/-5.25        | -4.78/-4.49       | -4.46/-4.62       | -4.85/-5.12       | -6.45/-5.8        | -6.26/-6.99       |
| Θ(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       | -6.15/-6.61       | -7.1/-7.37        | -7.2/-6.54        | -5.63/-4.83       | -4.36/-4.3        | -4.43/-4.57       | -4.46/-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       | -5.05/-5.44       |
| Θ(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/-3.12       | -4.71/-6.05       | -6.72/-7.09       | -7.36/-7.39       | -6.85/-5.91       | -4.98/-4.42       | -4.27/-4.42       | -4.66/-4.84       | -4.96/-4.82       | -4.06/-3.02       | -2.22/-1.9        | -2.01/-2.47       | -3.15/-3.81       | -4.17/-4.2        | -4.05/-3.89       |
| Θ(60°)    | -2.4/-3.07    | -4.31/-5.5      | -5.27/-3.7      | -2.09/-0.97     | -0.33/-0.04     | -0.2/-0.88      | -1.73/-1.72     | -0.510.84         | 1.75/-1.98        | 1.470/-19         | -1.34/-2.21       | -2.38/-2.58       | -3.18/-4.29       | -6.75/-7.07       | -7.43/-6.78       | -6/-5.71          | -                 |                   |                   |                   |                   |                   |                   |                   |



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(75°)    | -16.93/-16.09 | -11.67/-11.03   | -16.5/-13.47    | -12.03/-14.46   | -16.18/-19.06   | -18.61/-15.32   | -15.39/-12.91   | -13.34/-11.33     | -12.66/-10.83     | -10.31/-10.02     | -9.7/-8.45        | -6.84/-8.2        | -9.3/-10.89       | -16.32/-17.56     | -19.38/-17.39     | -16.48/-17.77     | -18.61/-16.98     | -16.84/-18.44     | -17.2/-15.44      | -17.27/-15.05     | -19.09/-18.67     | -18.11/-16.68     | -15.06/-17.26     | -18.88/-18.5      |
| Θ(82.5°)  | -14.57/-14.39 | -13.29/-10.43   | -9.77/-14.67    | -13.44/-13.36   | -15.99/-14.71   | -18.17/-17.07   | -19.26/-18.4    | -19.3/-16.24      | -11.9/-9.83       | -10.56/-11.36     | -7.89/-6.63       | -6.88/-8.25       | -8.15/-9.94       | -14.24/-18.82     | -18.99/-18.01     | -14.39/-16.17     | -16.94/-12.67     | -16.2/-15.17      | -19.18/-17.74     | -18.47/-18.49     | -18.62/-17.3      | -18.28/-18.87     | -19.23/-18.39     | -17.6/-17.97      |
| Θ(90°)    | -17.8/-13.59  | -12.12/-11.15   | -8.84/-8.93     | -12.03/-10.99   | -9.95/-11.18    | -14.19/-11.89   | -13.41/-11.58   | -14.49/-17.95     | -17.57/-15.85     | -14.16/-18.13     | -10.82/-8.96      | -10.04/-9.99      | -9.9/-11.47       | -11.71/-18.4      | -18.9/-18.91      | -14.5/-18.87      | -15.17/-10.17     | -13.39/-12.69     | -17.35/-15.36     | -18.82/-16.65     | -16.97/-17.48     | -18.3/-17.83      | -16.56/-15.53     | -16.75/-17.89     |
| Θ(97.5°)  | -19.41/-14.79 | -12.83/-13.02   | -16.16/-13.27   | -11.95/-16.97   | -14.67/-13.43   | -11.96/-14.06   | -18.82/-16.05   | -13.18/-10.89     | -13.87/-11.89     | -13.52/-12.47     | -11.89/-10.25     | -12.93/-9.68      | -10.16/-11.44     | -13.12/-18.51     | -18.06/-17.18     | -14.06/-13.05     | -18.5/-15.43      | -14.43/-14.87     | -18.45/-16.52     | -17.32/-17.81     | -19.28/-19.09     | -18.35/-15.04     | -15.22/-18.46     | -18.44/-17.78     |
| Θ(105°)   | -17.58/-15.09 | -11.94/-12.14   | -11.74/-13.58   | -11.46/-10.73   | -11.54/-14.78   | -14.99/-11.92   | -15.22/-13.23   | -16.42/-18.02     | -18.22/-16.07     | -18.9/-10.7       | -16.69/-13.41     | -10.52/-9.46      | -8.88/-10.82      | -14.02/-13.62     | -18.68/-18.14     | -14.26/-16.14     | -14.81/-14.7      | -19.07/-16.38     | -18.41/-17.3      | -17.77/-17.89     | -18.67/-17.82     | -18.08/-17.83     | -17.15/-17.26     | -17.84/-17.95     |
| Θ(112.5°) | -13.54/-11.54 | -9.99/-10.18    | -12.29/-10.62   | -8.07/-9.14     | -10.84/-10.28   | -11.73/-11.68   | -17.09/-13.82   | -13.37/-14.9      | -18.76/-17.91     | -12.97/-18.86     | -18.96/-19.26     | -18.8/-18.9       | -15.95/-17.76     | -18.37/-15.14     | -11.13/-18.06     | -12.57/-19.09     | -19.32/-15.84     | -17.45/-12.78     | -19.27/-14.96     | -17.18/-18.9      | -18.11/-16.1      | -15.13/-13.75     | -18.42/-17.87     | -18.9/-18.33      |
| Θ(120°)   | -13.89/-18.73 | -13.61/-9.83    | -11.35/-12.01   | -10.88/-9.5     | -9.02/-12.9     | -18.19/-13.81   | -13.63/-17.67   | -18.35/-18.26     | -18.43/-17.54     | -15/-13.66        | -19.03/-18.04     | -18.11/-12.47     | -17.88/-15.35     | -17.68/-9.93      | -16.19/-13.9      | -18.75/-16.29     | -14.98/-17.42     | -18.03/-14.72     | -19.13/-16.14     | -18.95/-19.09     | -17.77/-18.99     | -13.1/-12.81      | -15.63/-18.98     | -14.51/-11.8      |
| Θ(127.5°) | -16.96/-13.3  | -11.22/-9.81    | -11.17/-13.64   | -13.67/-17.5    | -16.84/-14.32   | -16.53/-19.6    | -18.46/-17.27   | -19.24/-18.19     | -17.71/-18.53     | -18.29/-17.18     | -17.7/-17.89      | -18.06/-16.69     | -14.03/-18.04     | -18.62/-16.39     | -12.09/-16.79     | -9.77/-13.3       | -18.29/-18.79     | -14.06/-14.02     | -14.1/-13.32      | -19.02/-17.44     | -18.58/-18.64     | -19.24/-18.41     | -15.64/-16.86     | -18.36/-18.12     |
| Θ(135°)   | -16.74/-14.62 | -13.4/-12.83    | -11.62/-14.15   | -17.97/-12.69   | -13.82/-17.74   | -15.69/-12.52   | -13.35/-11.58   | -14.71/-19.08     | -14.3/-15.5       | -17.84/-16.03     | -16.93/-18.16     | -18.54/-18.19     | -19.17/-19.01     | -17.91/-17.58     | -16.04/-8.64      | -10.3/-19.29      | -18.76/-18.92     | -17.6/-18.8       | -17.61/-18.8      | -17.65/-18.04     | -18.05/-17.51     | -17.08/-14.76     | -19.44/-17.75     |                   |
| Θ(142.5°) | -12.75/-13.27 | -12.63/-13.02   | -17.86/-16.77   | -13.99/-12.13   | -12.18/-14.94   | -14.84/-15.08   | -17.03/-13.97   | -14.47/-18.57     | -13.54/-12.16     | -11.99/-16.06     | -14.56/-12.41     | -14.93/-14.78     | -15.64/-17.99     | -17.5/-14.35      | -7.66/-10.24      | -18.63/-15.57     | -18.73/-11.64     | -14.78/-17.95     | -19.71/-17.76     | -14.61/-15.78     | -10.46/-10.19     | -11.24/-15.63     | -18.37/-16.3      | -18.62/-15        |
| Θ(150°)   | -12.17/-13.42 | -13.11/-13.15   | -11.56/-13.38   | -18.22/-17.54   | -18.48/-18.39   | -16.24/-18.12   | -18.13/-13.13   | -14.56/-17.74     | -11.75/-19.06     | -15.11/-11.09     | -11.02/-14.68     | -17.21/-17.61     | -18.04/-10.81     | -10.93/-16.84     | -18.28/-17.67     | -8.45/-7.24       | -14.08/-18.79     | -17.38/-13.63     | -9.51/-9.11       | -7.95/-8.78       | -12.15/-14.1      | -13.21/-11.81     | -10.32/-10.94     |                   |
| Θ(157.5°) | -14.34/-17.23 | -18.54/-18.27   | -18.1/-15.62    | -14.34/-15.42   | -16.43/-18.78   | -18.1/-19.05    | -15.09/-14.05   | -15.08/-14.99     | -14.03/-16.75     | -17.91/-13.88     | -11.25/-9.64      | -9.3/-14.1        | -18.97/-15.58     | -18.99/-17.19     | -17.8/-18.66      | -18.51/-11.08     | -17.29/-7.38      | -18.59/-16.13     | -12.11/-10.17     | -18.88/-11.17     | -13.71/-15        | -15.22/-17.24     | -18.56/-14.64     |                   |
| Θ(165°)   | -18.89/-18.94 | -17.97/-15.7    | -16.63/-18.38   | -18.53/-16.26   | -16.37/-16.37   | -16.48/-17.84   | -19.4/-18.22    | -19.05/-17.29     | -19.1/-19.39      | -14.66/-16.89     | -17.78/-14.75     | -15.58/-16.24     | -12.49/-13.16     | -17.54/-17.82     | -17.73/-13.74     | -11.1/-9.69       | -9.19/-10.19      | -13.42/-17.48     | -17.71/-17.64     | -18.94/-19.01     | -18.74/-17.73     | -17.59/-18.06     | -18.15/-16.72     | -16.09/-19.05     |
| Θ(172.5°) | -15.6/-16.67  | -15.51/-16.78   | -14.61/-13.36   | -13.72/-13.95   | -14.3/-15.16    | -16.61/-17.6    | -18.98/-18.79   | -17.31/-15.9      | -15.93/-16.73     | -18.84/-18.83     | -19.25/-16.62     | -14.74/-11.19     | -11.08/-12.96     | -15.56/-16.52     | -14.48/-12.76     | -12.55/-12.94     | -14.34/-15.13     | -15.02/-15        | -15.16/-14.93     | -15.9/-18.23      | -17.94/-19.09     | -19.2/-17.92      | -19.42/-18.44     | -18.77/-17.38     |
| Θ(180°)   | -14.53/-14.65 | -16.02/-16.94   | -17.06/-17.58   | -17.31/-18.32   | -18.34/-18.27   | -17.39/-19.02   | -18.52/-18.74   | -19.02/-16.23     | -14.95/-15.92     | -17.73/-17.84     | -18.06/-16.38     | -18.78/-17.79     | -17.68/-18.71     | -18.37/-18.1      | -19.42/-16.62     | -14.37/-13.23     | -12.63/-12.67     | -12.15/-12.21     | -12.08/-12.23     | -12.63/-12.74     | -13.05/-13.87     | -14.3/-15.24      | -15.9/-17.45      | -17.96/-15.49     |
| Freq(Hz)  | 5.3GPol.      | ThetaAnt.1      | -               | -               | -               | -               | -               | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -18.18/-19.04 | -16.58/-17.65   | -17.28/-17.32   | -18.29/-17.7    | -16.41/-11.17   | -16.41/-16.99   | -17.38/-16.68   | -16.3/-16.99      | -17.92/-17.97     | -18.99/-17.62     | -17.36/-18.29     | -18.43/-17.38     | -15.44/-14.96     | -14.65/-13.82     | -13.45/-14.02     | -14.37/-13.74     | -13.13/-12.81     | -12.37/-12.08     | -11.86/-11.88     | -12.04/-13.17     | -14.3/-15.08      | -16.43/-15.85     | -15.96/-19.24     | -18.36/-17.51     |
| Θ(7.5°)   | -12.76/-12.42 | -13.71/-12.33   | -11.04/-10.31   | -11.06/-11.31   | -11.41/-16.19   | -11.59/-11.51   | -11.24/-10.61   | -10.63/-11.07     | -11.49/-12.03     | -13.39/-15.78     | -18.35/-18.93     | -17.22/-18.86     | -18.19/-17.14     | -18.51/-17.91     | -17.98/-19.34     | -18.82/-17.88     | -17.96/-16.64     | -16.45/-16.96     | -17.07/-16.68     | -16.61/-16.13     | -16.61/-18.77     | -18.44/-15.96     | -14.52/-15.74     | -16.57/-14.15     |
| Θ(15°)    | -9.62/-8.78   | -8.32/-8.35     | -8.07/-7.39     | -6.89/-6.13     | -6.03/-6.4      | -6.72/-6.75     | -7/-7.1         | -6.84/-6.61       | -6.93/-7.94       | -9.5/-10.76       | -11.47/-11.1      | -11.6/-12.85      | -14.79/-15.97     | -19.47/-17.13     | -17.94/-18.85     | -18.27/-18.18     | -17.71/-18        | -16.15/-14.06     | -13.33/-11.8      | -10.86/-11.25     | -11.85/-10.85     | -9.7/-9.73        | -10.63/-10.65     |                   |
| Θ(22.5°)  | -7.91/-6.36   | -6.77/-7.15     | -7.58/-7.47     | -6.44/-4.83     | -4.43/-4.59     | -4.65/-4.89     | -5.51/-5.75     | -5.59/-5.59       | -5.94/-6.18       | -6.64/-7.64       | -8.51/-7.28       | -6.55/-7.4        | -8.75/-8.86       | -8.76/-10.18      | -13.83/-18.74     | -18.33/-16.46     | -13.87/-14        | -15.77/-13.91     | -11.18/-9.36      | -8.76/-8          | -7.2/-7.03        | -7.42/-7.67       | -6.92/-6          | -5.75/-6.86       |
| Θ(30°)    | -7.08/-7.77   | -8.38/-7.55     | -7.23/-7.66     | -8.25/-7.86     | -7.63/-7.53     | -7.41/-8.29     | -9.11/-9.68     | -10.34/-9.07      | -7.15/-6.07       | -5.41/-5.11       | -5.79/-7.6        | -9.01/-8.44       | -8.69/-10.6       | -12.09/-9.56      | -7.47/-7.37       | -8.61/-14.4       | -14.35/-9.84      | -7.74/-7.27       | -6.19/-5.54       | -6.01/-6.75       | -6.56/-5.91       | -5.53/-5.23       | -5.32/-5.76       | -6.24/-6.42       |
| Θ(37.5°)  | -7.33/-7.14   | -6.05/-5.24     | -5.89/-6.97     | -8.49/-9.14     | -8.46/-9.14     | -11.51/-11.18   | -10.25/-9.77    | -9.47/-6.31       | -8.93/-8.95       | -9.27/-7.88       | -7.32/-6.36       | -6.37/-5.05       | -6.97/-6.31       | -6.27/-7.11       | -6.84/-6.75       | -6.24/-3.99       | -5.62/-10.35      | -6.23/-11.64      | -11.34/-10.94     | -12.03/-14.51     | -14.26/-11.55     | -9.56/-8.26       | -8.69/-10.04      | -10.09/-8.6       |
| Θ(45°)    | -4.31/-4.14   | -3.6/-3.55      | -2.98/-3.45     | -3.88/-3.15     | -3.43/-4.16     | -3.9/-2.93      | -2.58/-3.61     | -5.29/-5.48       | -5.92/-7.8        | -9.9/-8.58        | -7.67/-7.01       | -5.73/-4.35       | -3.14/-1.92       | -1.54/-2.66       | -4.58/-5.23       | -6.35/-6.98       | -4.88/-4.12       | -5.61/-5.52       | -5.79/-6.33       | -6.47/-7.2        | -8.36/-8.24       | -6.8/-5.24        | -4.34/-4.55       | -4.67/-4.39       |
| Θ(52.5°)  | -1.76/-1.93   | -2.03/-2.22     | -2.72/-3.32     | -2.83/-1.56     | -1.15/-1.1      | -1.03/-0.6      | -0.03/-0.7      | -0.420/36         | 0.3/-0.63         | -1.69/-2.35       | -1.53/-1.88       | -4.5/-5.28        | -4.11/-3.35       | -2.76/-2.37       | -2.54/-2.12       | -2.23/-2.12       | -1.9/-1.81        | -3.64/-5.35       | -2.92/-2.62       | -2.69/-2.46       | -1.45/-2          | -2.08/-2.12       | -1.76/-1.69       | -1.74/-1.68       |
| Θ(60°)    | -3.8/-3.25    | -2.51/-3.22     | -4.26/-3.86     | -3.1/-3.3       | -2.58/-2.03     | -3.55/-3.76     | -2.67/-3.93     | -2.74/-1.23       | -0.01/-0.11       | -0.78/-0.63       | 0.48/-0.47        | -0.32/-0.54       | -0.29/-1.32       | -0.406/-3.4       | 0.32/-1.69        | -0.410/-5.6       | 0.32/-1.69        | -0.410/-5.6       | 0.32/-1.69        | -0.410/-5.6       | -0.410/-5.6       | -0.410/-5.6       | -0.410/-5.6       | -0.410/-5.6       |
| Θ(67.5°)  | -1.14/-1.27   | -0.27/0.26      | 0.29/-0.68      | -2.21/-2.26     | -1.27/-2.06     | -4.15/-4.61     | -5.08/-5.07     | -3.45/-3.11       | -4.17/-5.84       | -5.12/-2.65       | -1.94/-2.37       | -1.14/-1.59       | -1.72/-0.84       | -0.49/-0.95       | -0.94/-1.59       | -3.55/-4.33       | -1.84/-1.14       | -2.28/-2.38       | -1.98/-2.46       | -2.64/-0.43       | -0.12/-2.26       | -2.98/-2.11       | -1.63/-2.68       | -2.58/-1.61       |
| Θ(75°)    | -0.7/-0.55    | -0.46/0.46      | 0.74/-0.7       | -3.78/-1.5      | 1.53/0.61       | -1.07/0.27      | 1.48/0.28       | 0.94/-1.96        | -0.11/-1.59       | -2.48/-2.49       | -3.72/-2.68       | -2.09/-1.97       | -0.57/0.45        | 0.14/-0.72        | -0.28/0.65        | -0.34/-2.12       | -2.18/0.73        | -0.82/-3.31       | -3.44/-3.34       | -5.94/-4.18       | -1.52/-2.21       | -2.45/-1.3        | 0.32/0.41         | -0.47/-0.94       |
| Θ(82.5°)  | -2.84/-4.03   | -4.23/-2.46     | -2.36/-3.43     | -3.67/-1.6      | -0.78/-2.32     | -1.68/-0.6      | -0.31/-1.75     | 1.21/-1.79        | -0.09/-0.41       | 0.66/-1.54        | 1.08/-0.41        | -0.11/-1.45       | -3.52/-5.54       | -2.32/-1.39       | -2.55/-2.06       | -1.94/-2.18       | -1.5/-0.01        | -0.62/-1.52       | 0.2/-0.97         | -0.07/-0.57       | -0.2/-0.98        | -0.93/0.62        | 0.84/-0.61        | -2.77/-1.37       |
| Θ(90°)    | -4.34/-3.31   | -3.34/-1.52     | -0.25/-0.8      | -1.97/-2.77     | -1.28/-0.58     | -2.89/-4.75     | -3.98/-6        | -3.59/-3.89       | -3.74/-3.92       | -3.58/-9.09       | -1.43/-1.74       | 0.33/0.45         | 2.28/-1.58        | -2.06/-4.7        | -2.72/-2.41       | -4.06/-9.39       | -3.6/-3.8         | -4.68/-5.28       | -2.58/-5.01       | -2.98/-1.35       | -3.72/-4.93       | -4.61/-3.74       | -3.16/-3.32       | -5.1/-6.07        |
| Θ(97.5°)  | -4.99/-4.35   | -3.34/-4.65     | -3.67/-3.14     | -5.33/-4.25     | -0.96/-1.2      | -4.05/-2.91     | -0.66/-1.41     | 1.43/0.91         | -1.55/-3.87       | -4.63/-3.79       | -10.2/-2.95       | -3.52/-1.34       | 1.29/0.99         | -0.89/-2.82       | -2.0/-47          | -1.1/-3.53        | -0.38/-1.44       | -0.58/-5.28       | -3.72/-3.55       | -4.39/-2.26       | -1.97/-3.65       | -1.79/-1.22       | -1.95/-2.79       | -3.1/-4.42        |
| Θ(105°)   | -18.9/-16.7   | -10.84/-9.38    | -8.31/-7.56     | -7.99/-5.02     | -3.07/-3.16     | -5.53/-4.83     | -2.26/-4.65     | 0.28/0.96         | -0.56/-2.88       | -1.47/0.75        | -4.13/-2.79       | -6.78/-3.16       | -3.61/-4.86       | -3.2/-2.2         | -2.69/-1.5        | -2.03/-5.42       | -1.53/-1.54       | -0.47/-2.25       | -0.21/-1.97       | -0.21/-1.97       | -0.91/-4.34       | -4.88/-2.19       | -4.89/-6.13       | -7.75/-12.7       |
| Θ(112.5°) | -5.96/-4.45   | -3.58/-3.57     | -3.16/-4.17     | -6.08/-4.89     | -4.27/-4.27     | -6.81/-7.06     | -5.98/-8.11     | -3.31/-3.59       | -5.24/-8.03       | -5.09/0.07        | -5.45/-3.68       | -13.01/-2.38      | -1.06/-6.09       | -8.4/-5.46        | -2.28/-0.07       | -1.53/-8.23       | -5.67/-3.72       | -9.56/-9.12       | -9.55/-10.57      | -8.31/-5.39       | -6.07/-6.75       | -14.12/-16.08     | -9.44/-6.1        | -5.53/-6.42       |
| Θ(120°)   | -5.59/-5.35   | -4.57/-9.33     | -3.62/-6.06     | -10.01/-7.54    | -5.35/-6.39     | -18.59/-8.75</  |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |



# Radiated Composite Gain Data

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

# Appendix A.1

|            |               |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Θ (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/-18.28    | -9.92/-18.17     | -14.29/-15.05    | -12.64/-12.7     | -18.86/-18.43    | -13.56/-18.91    | -18.2/-15.53     | -14.01/-16.73    | -14.06/-18.36    | -14.01/-18.22    |                  |
| Θ (120°)   | -15.02/-19.16 | -14.69/-11.1   | -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/-14.69    | -16.78/-15.96    | -18.85/-18.25    | -19.03/-18.36    | -15.79/-5.83     | -5.83/-17.95     | -17.61/-13.31    | -14.88/-17.58    | -16.46/-11.06    | -18.69/-17.69    | -15.36/-17.05    | -15.88/-13.81    | -10.22/-7.36     | -7.58/-12.21     | -15.22/-13       |
| Θ (120.5°) | -16.51/-18.63 | -13.45/-8.65   | -13.13/-11.19  | -17.71/-8.48   | -12.66/-18.49  | -17.17/-8.48   | -16.97/-19.18  | -15.75/-18.06    | -15.22/-18.69    | -13.69/-11.59    | -17.96/-18.67    | -19.18/-13.88    | -11.94/-18.54    | -13.11/-17.97    | -18.26/-13.89    | -9.68/-14.93     | -19.05/-11.9     | -11.68/-17.43    | -17.44/-16.57    | -17.78/-11.74    | -17.38/-10.31    | -18.16/-17.31    | -18.61/-6.29     | -5.02/-8.52      |
| Θ (135°)   | -11.66/-7.48  | -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    |
| Θ (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/-15.44  | -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/-14.67    | -9.21/-7.74      | -12.41/-17.96    | -13.81/-9.79     | -12.69/-18.56    | -19.01/-18.24    | -19.18/-19.09    | -14.3/-11.2      | -15.82/-17.18    | -18.16/-14.34    | -18.31/-18.47    |
| Θ (150°)   | -9.74/-10.69  | -11.52/-15.71  | -17.38/-12.23  | -18.01/-15.69  | -13.26/-13.61  | -16.98/-18.07  | -17.17/-18.38  | -17.58/-16.68    | -10.74/-8.79     | -11.86/-16.77    | -17.17/-10.2     | -8.79/-12.67     | -11.71/-12.79    | -17.29/-8.91     | -4.56/-5.8       | -12.88/-11.7     | -9.42/-8.99      | -12.06/-18.97    | -18.65/-17.47    | -14.37/-11.12    | -10.33/-7.88     | -17.38/-11.95    | -11.08/-11.95    | -11.13/-8.75     |
| Θ (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  | -12.9/-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    | -12.7/-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      | -11.3/-11.67     |
| Θ (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/-13.1     | -11.43/-14.06    | -16.8/-16.14     | -14.29/-12.9     | -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    |
| Θ (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      | -10.02/-11.91    | -13.89/-14.11    | -12.78/-11.64    | -11.29/-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    |
| Θ (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    |
| Freq(Hz)   | 5.785GPol.    | ThetaAnt. 1    | +              | +              | +              | +              | +              | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |
| Gain       | Φ(7°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ (0°)     | -17/-17.39    | -18.37/-18.77  | -17.63/-19.08  | -17.9/-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/-16.51    | -18.6/-19.18     | -17.9/-18.89     | -18.19/-19.01    | -18.16/-17.37    | -16.02/-15.17    | -15.7/-16.39     | -16.95/-16.99    | -17.65/-18.69    | -18.88/-19.39    | -18.8/-18.87     | -17.69/-18.65    | -18.49/-17.3     |
| Θ (7.5°)   | -18.15/-17.78 | -18.26/-19     | -18.71/-18.61  | -18.28/-17.23  | -17.5/-18.32   | -16.09/-14.26  | -13.83/-14.64  | -17.22/-19.11    | -17.95/-19.07    | -19.09/-18.77    | -19.13/-17.19    | -18.5/-18.75     | -17.26/-17.72    | -16.01/-15.98    | -16.03/-15.48    | -16.17/-16.22    | -14.41/-16.22    | -12.99/-14.12    | -15.47/-15.38    | -14.93/-16.13    | -12.72/-17.2     | -14.93/-16.13    | -16.05/-16.63    | -16.05/-16.63    |
| Θ (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    | -18.71/-17.56    | -18.68/-18.7     | -16.53/-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    | -13.56/-13.74    | -14.27/-18.01    | -14.27/-18.01    |
| Θ (22.5°)  | -18.08/-18.79 | -14.96/-15.25  | -14.7/-11.06   | -9.86/-12.22   | -16.05/-18.77  | -14.02/-11.63  | -10.42/-10.45  | -13.2/-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    | -15.8/-15.57     | -15.53/-15.58    | -17.17/-17.45    | -16.9/-17.48     |
| Θ (30°)    | -12.01/-11.06 | -11.06/-10.74  | -10.81/-10.14  | -8.51/-7.44    | -6.57/-8.41    | -5.12/-8.62    | -6.77/-6.92    | -7.93/-7.64      | -6.72/-6.14      | -6.44/-7.5       | -8.99/-10.1      | -14.10/-13.02    | -13.64/-13.41    | -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/-19.1     | -11.29/-17.7     | -11.89/-12.58    | -15.32/-17.42    | -15.38/-13.1     |
| Θ (37.5°)  | -6.58/-5.92   | -6.57/-7.52    | -9.11/-7.76    | -7.03/-5       | -3.96/-4.31    | -5.12/-4.05    | -2.86/-3.35    | -3.97/-4.5       | -5.81/-6.37      | -5.72/-5.75      | -8.26/-8.49      | -11.41/-10.64    | -9.14/-10.93     | -11.62/-8.56     | -6.66/-7.67      | -8.36/-6.51      | -7.1/-7.75       | -8.68/-11.96     | -15.22/-8.85     | -4.57/-3.99      | -6.22/-7.94      | -8.21/-6.85      | -6.11/-6.77      | -6.11/-6.77      |
| Θ (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      |
| Θ (52.5°)  | -8.07/-6.38   | -7.11/-7.49    | -4.38/-2.79    | -3.87/-6.55    | -7.01/-6.46    | -5.25/-9.8     | -12.71/-7.88   | -8.02/-7.29      | -7.15/-10.44     | -9.93/-6.84      | -5.58/-1.47      | -3.81/-4.39      | -3.81/-3.7       | -3.78/-5.48      | -5.98/-5.21      | -4.72/-7.08      | -6.83/-4.14      | -4.87/-4.48      | -5.17/-6.45      | -3.08/-4.39      | -4.37/-5.08      | -5.67/-5.37      | -5.77/-7         | -5.77/-7         |
| Θ (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    | -0.44/-1.05    | -1.95/-0.68      | -0.36/-0.45      | -2.91/-4.2       | -4.75/-4.32      | -5.38/-3.47      | -1.26/-2.53      | -0.88/-1.96      | -2.45/-3.78      | -0.38/-2.9       | -4.16/-3.46      | -5.01/-4.25      | -8.01/-7.2       | -3.73/-8.49      | -9.02/-4.93      | -5.83/-3.61      | -5.17/-4.76      | -3.54/-3.24      |
| Θ (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    | -1.54/-0.42      | 0.89/-0.51       | -1.08/-0.48      | 0.46/-0.24       | -1.77/-2.33      | -4.93/-6.35      | -3.61/-0.69      | -0.41/-1.25      | -0.93/-0.49      | 0.63/-0.74       | -0.44/-1.48      | -1.27/-2.75      | 0.83/-0.66       | -0.77/-0.38      | -1.04/-0.21      | -0.27/-0.17      | -0.9/-2.28       |
| Θ (75°)    | -1.33/-1.39   | -0.53/-0.19    | -0.37/-1.59    | -0.68/-0.21    | -2.18/-1.3     | -1.89/-1.39    | -1.39/-64      | -5.76/-2.07      | -1.59/-1.86      | -1.32/-2.94      | 0.05/-0.81       | 0.53/-0.52       | -1.59/-0.46      | -2.65/-0.42      | -1.48/-2.77      | -5.13/-1.81      | -1.28/-0.5       | -2.05/-0.52      | 0.10/-55         | 0.19/-19         | -0.97/-0.34      | -1.25/-1.53      | -1.83/-1.66      | -1.1/-1.06       |
| Θ (82.5°)  | 0.73/-0.65    | 0.45/-0.3      | 2.31/-2.04     | 0.24/-1.58     | 2.21/-23       | -0.48/-1.07    | 1.11/-31       | 0.89/-2.14       | 1.12/-20.8       | 2.85/-1.91       | 3.05/-5.04       | -1.44/-0.03      | 1.12/-1.32       | 0.2/-2.38        | -1.51/-0.04      | -1.99/-3.73      | 2.14/-1.31       | -3.86/-3.36      | 5.26/-7.79       | -6.4/-3.57       | -4.67/-1.7       | -1.18/-1.43      | -0.67/-8.07      | -0.85/-0.46      |
| Θ (90°)    | -0.73/-1.42   | -2.42/-3.38    | -3.33/-4.22    | -5.35/-2.22    | 0.1/-1.64      | -2.16/-0.43    | -0.9/-2.13     | 0.26/-3.29       | 1.26/-0.37       | 1.06/-1.67       | 0.31/-1.04       | 0.12/-1.23       | -1.68/-1.48      | -1.39/-2.54      | -0.81/-0.59      | -3.46/-2.72      | 0.39/-1.39       | -0.29/-0.74      | 1.02/-0.53       | 2.0/-2           | 0.55/-0.02       | 0.87/-0.16       | -0.19/-0.11      | 0.31/-0.01       |
| Θ (97.5°)  | -0.82/-0.73   | -0.340         | -0.29/-1.91    | -0.61/-0.34    | -3.43/-0.76    | 0.27/-3.96     | -4.12/-4.24    | -4.8/-3.76       | -3.07/-2.17      | -3.05/-2.23      | -1.45/-2.98      | -0.58/-1.9       | <b>3.78/-2.3</b> | -0.73/-2.39      | -1.39/-1.09      | -2.62/-3.77      | -1.22/-1.92      | -3.9/-3.13       | -2.23/-2.13      | 0.09/-0.72       | -4.86/-2.38      | -4.44/-4.68      | -2.87/-1.64      | -1.19/-0.94      |
| Θ (105°)   | -1.84/-2.03   | -3.36/-3.31    | -5.71/-10.15   | -6.57/-4.94    | -4.39/-2.31    | -4.09/-2.58    | -1.9/-1.4      | -0.38/-2.19      | -0.51/-4.36      | -6.25/-2.76      | -7.11/-6.42      | -3.13/-2.7       | 2.26/-1.64       | -0.67/-1.54      | -0.812/-6.3      | 1.5/-1.69        | 0.38/-3.8        | -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       |
| Θ (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    | -1.40/-34        | -5.73/-1.86      | -6.78/-0.31      | -2.96/-1.94      | -8.42/-5.11      | -1.67/-3.74      | -6.48/-3.78      | -1.67/-3.38      | -6.51/-4.39      | -0.08/-1.16      | -1.15/-1.16      | 1.89/-0.48       | 1.31/-0.59       | -4.19/-4.7       | -3.39/-7.49      | -5.23/-8.36      | -8.29/-15.1      |
| Θ (120°)   | -9.48/-6.7    | -6.26/-6.57    | -5.1/-3.3      | -3.53/-3.66    | -5.02/-3.52    | -4.4/-14.21    | -10.38/-11.6   | -5.11/-4.29      | -4.63/-4.3       | -12.23/-2.36     | -4.46/-4         | -5.39/-7.95      | -1.01/-4.94      | -13.14/-9.81     | -3.55/-1.45      | -0.59/-7.96      | -2.59/-0.73      | -5.37/-6.39      | -8.23/-16.57     | -5.73/-5.99      | -5.65/-6.99      | -7.17/-8.66      | -12.86/-8.96     | -7.89/-10.76     |
| Θ (127.5°) | -5.22/-3.18   | -3.07/-3.01    | -1.79/-2.37    | -4.25/-6.35    | -6.04/-4.65    | -6.97/-14.92   | -7.46/-9.92    | -13.26/-18.65    | -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      | 0.73/-1.53       | -3.56/-4         | -7.09/-6.73      | -9.82/-10.54     | -8.28/-5.91      | -4.89/-3         | -3.57/-5.32      | -3.57/-5.32      |
| Θ (135°)   | -9.39/-11.52  | -9.41/-8.23    | -8.19/-8.4     | -12.12/-18.53  | -13.8/-8.94    | -12.17/-19.05  | -14.02/-15.97  | -1.708/-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      | -5.57/-6.61      | -8.79/-11.18     | -10.12/-9.99     | -10.12/-9.99     |
| Θ (142.5°) | -12.46/-10.77 | -9.37/-9.04    | -9.83/-10.85   | -11.73/-10.16  | -8.63/-7.41    | -7.05/-8.9     | -12.56/-9.69   | -6.3/-5.27       | -3.85/-3.83      | -5.85/-11.9      | -11.06/-13.15    | -19.2/-8.72      | -10.81/-17.42    | -14.41/-17.64    | -18.24/-17.77    | -15.23/-9.99     | -8.17/-11.33     | -17.73/-17.78    | -18.04/-15.17    | -9.08/-11.27     | -10.16/-0.2      | -16.68/-14.2     | -17.32/-14.11    | -12.9/-12.26     |
| Θ (150°)   | -8.51/-8.01   | -6.39/-5.29    | -5.06/-5.91    | -6.37/-6.31    | -6.1/-5.57     | -7.26/-13.52   | -13.75/-10.38  | -15.61/-15.19    | -10.8/-10.48     | -13.38/-18.12    | -11.4/-12.58     | -11.92/-6.95     | -6.26/-6.47      | -7.53/-8.65      | -7.25/-4.23      | -3.97/-4.51      | -4.95/-7.47      | -10.32/-11.96    | -12.93/-12.91    | -8.08/-6.72      | -5.71/-7.09      | -8.21/-7.88      | -6.18/-5.12      | -5.61/-7.56      |
| Θ (157.5°) | -3.83/-4.82   | -5.39/-4.47    | -3.19/-1.98    | -1.6/-1.54     | -1.44/-1.81    | -3.83/-6.14    | -7.06/-7.95    | -8.57/-8.35      | -9.42/-11.13     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(165°)   | -17.17/-14.91 | -13.51/-13.06   | -13.43/-14.27   | -15.2/-16.01    | -16.56/-16.81   | -16.99/-16.81   | -16.16/-15.16   | -13.95/-12.95     | -12.05/-11.23     | -10.38/-9.58      | -9.11/-8.93       | -8.98/-9.18       | -9.65/-10.31      | -11.07/-11.65     | -11.62/-11.19     | -10.81/-10.61     | -10.63/-10.47     | -10.07/-9.34      | -8.65/-8.17       | -7.88/-7.85       | -8.09/-8.75       | -9.78/-11.08      | -12.87/-15.31     | -18.9/-18.17      |
| Θ(172.5°) | -18.29/-18.69 | -18.71/-17.89   | -17.71/-17.34   | -16.78/-15.94   | -14.94/-13.65   | -12.47/-11.57   | -10.96/-10.46   | -10.03/-9.87      | -9.85/-9.78       | -9.53/-9.22       | -8.93/-8.93       | -8.93/-9.05       | -9.55/-10.64      | -12.39/-15.15     | -18.96/-17.61     | -18.41/-16.8      | -13.54/-11.32     | -9.74/-8.71       | -8.2/-7.95        | -7.96/-8.14       | -8.59/-9.46       | -10.7/-11.11      | -13.75/-15.63     | -18.02/-17.69     |
| Θ(180°)   | -17.78/-17.96 | -19.09/-18.77   | -19.1/-18.02    | -18.72/-16.35   | -14.14/-12.02   | -10.24/-8.95    | -8.16/-7.7      | -10.56/-9.87      | -8.31/-8.88       | -9.45/-9.27       | -10.59/-11.28     | -12.13/-13.28     | -17.63/-16.55     | -18.16/-18.7      | -18.25/-18.55     | -17.68/-15.23     | -13.52/-12.11     | -11.18/-10.55     | -10.25/-10.16     | -10.09/-10.12     | -10.34/-10.89     | -11.69/-12.59     | -13.63/-14.78     | -18.01/-18.79     |
| Freq(Hz)  | 2.45GPol.     | Theta/Ant.2     | +               | +               | +               | +               | +               | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -16.68/-18.52 | -17.97/-18.25   | -18.48/-19.29   | -18.79/-18.31   | -18.06/-18.04   | -17.43/-13.77   | -15.99/-15.98   | -14.82/-12.23     | -11.76/-11.65     | -11.88/-12.33     | -12.8/-13.4       | -14.16/-15.23     | -16.72/-18.63     | -18.6/-18.13      | -19.01/-18.18     | -17.81/-19.66     | -19.28/-19.31     | -18.87/-18.86     | -18.6/-18.92      | -17.68/-18.32     | -19.05/-18.89     | -19.31/-18.59     | -18.04/-18.87     | -19.07/-18.62     |
| Θ(7.5°)   | -13.22/-13.86 | -14.8/-15.7     | -16.44/-17.37   | -18.74/-17.8    | -18.97/-19.25   | -17.47/-18.39   | -17.47/-18.83   | -19.21/-17.98     | -18.95/-18.4      | -17.39/-18.29     | -18.66/-18.12     | -19.07/-18.25     | -18.27/-19.12     | -17.97/-18.67     | -18.79/-17.44     | -15.7/-14.45      | -13.55/-12.97     | -12.58/-12.27     | -12.01/-11.79     | -11.63/-11.45     | -11.35/-11.34     | -11.45/-11.68     | -12.04/-12.4      | -12.65/-12.92     |
| Θ(15°)    | -8.9/-9.44    | -10.13/-10.69   | -10.97/-11.03   | -11.11/-11.21   | -11.23/-11.36   | -11.71/-12.22   | -12.86/-13.67   | -14.64/-15.86     | -17.07/-17.87     | -18.08/-18.39     | -18.62/-19.12     | -18.33/-19.25     | -19.08/-18.67     | -17.69/-16.33     | -14.82/-13.17     | -11.7/-10.53      | -9.52/-8.65       | -7.85/-7.31       | -6.9/-6.66        | -6.5/-6.42        | -6.39/-6.47       | -6.66/-6.99       | -7.42/-7.85       | -8.2/-8.54        |
| Θ(22.5°)  | -7.14/-7.51   | -7.95/-8.24     | -8.29/-8.14     | -7.84/-7.45     | -7.21/-7.08     | -7.14/-7.38     | -7.81/-8.35     | -9.05/-9.9        | -10.81/-11.44     | -11.8/-12.21      | -12.67/-12.83     | -12.98/-12.98     | -12.73/-12.24     | -11.62/-11.08     | -10.49/-9.68      | -8.67/-7.66       | -6.73/-5.84       | -5.4/-3.1         | -3.86/-3.64       | -3.58/-3.64       | -3.84/-4.11       | -4.54/-5.07       | -5.66/-6.16       | -6.55/-6.83       |
| Θ(30°)    | -6.8/-7.03    | -7.48/-7.99     | -8.53/-8.79     | -8.44/-7.65     | -6.93/-6.4      | -6.11/-6.05     | -6.19/-6.46     | -6.86/-7.44       | -8.09/-8.54       | -8.7/-8.81        | -8.93/-9          | -8.96/-8.72       | -8.32/-7.85       | -7.32/-6.88       | -6.62/-6.43       | -6.03/-5.36       | -4.58/-3.84       | -3.04/-2.28       | -1.75/-1.58       | -1.67/-1.92       | -2.34/-2.97       | -3.78/-4.63       | -5.38/-5.93       | -6.29/-6.53       |
| Θ(37.5°)  | -5.21/-5.19   | -5.37/-5.76     | -6.51/-7.62     | -6.79/-9.36     | -9.07/-8.35     | -7.65/-7.13     | -6.81/-6.61     | -6.5/-5.9         | -6.88/-6.98       | -6.89/-6.72       | -6.78/-6.74       | -6.65/-6.46       | -6.11/-5.71       | -5.33/-5          | -4.63/-4.15       | -3.51/-2.81       | -2.01/-1.18       | -0.63/-0.47       | -0.67/-1.18       | -1.95/-3.03       | -4.24/-5.18       | -5.64/-6.57       | -6.46/-5.27       |                   |
| Θ(45°)    | -2.26/-2.05   | -1.88/-1.8      | -1.89/-2.23     | -2.86/-3.68     | -4.43/-5.02     | -5.37/-5.56     | -6.02/-5.61     | -5.51/-5.36       | -5.23/-5.08       | -4.84/-4.63       | -4.52/-4.57       | -4.73/-4.96       | -5.23/-5.51       | -5.63/-5.57       | -5.39/-5.07       | -4.62/-3.88       | -3.26/-2.68       | -1.99/-1.22       | -0.6/-0.43        | -0.75/-1.56       | -2.74/-4.03       | -4.9/-4.96        | -4.47/-3.77       | -3.09/-2.61       |
| Θ(52.5°)  | -0.63/-0.5    | -0.42/-0.37     | -0.34/-0.33     | -0.41/-0.65     | -1.03/-1.48     | -1.95/-2.43     | -2.86/-3.2      | -3.35/-3.3        | -3.04/-2.62       | -2.33/-2.23       | -2.16/-2.16       | -2.2/-2.32        | -2.55/-2.93       | -3.41/-3.95       | -4.42/-4.74       | -4.79/-4.67       | -4.46/-4.15       | -3.83/-2.93       | -2.34/-2.28       | -2.89/-3.93       | -4.84/-5.08       | -4.51/-3.64       | -2.75/-1.98       | -1.38/-0.98       |
| Θ(60°)    | -0.96/-1.13   | -1.51/-2        | -2.29/-2.13     | -1.55/-0.89     | -0.4/-0.2       | 0.060/0.4       | -0.15/-0.39     | -0.54/-0.59       | -0.41/-0.25       | -0.35/-0.74       | -1.21/-1.39       | -1.25/-0.9        | -0.61/-0.57       | -0.9/-1.56        | -2.5/-3.77        | -5.37/-7.03       | -8.41/-8.93       | -8.58/-7.72       | -7.06/-6.95       | -6.8/-6.35        | -5.68/-4.96       | -4.23/-3.45       | -2.66/-1.98       | -1.49/-1.17       |
| Θ(67.5°)  | -0.95/-1.58   | -2.43/-3.49     | -4.59/-4.89     | -4.03/-2.54     | -1.18/-0.24     | 0.410/0.1       | 0.940/0.98      | 1.081/3.2         | 1.711/9.4         | 1.560/63          | -0.51/-1.25       | -1.35/-1.03       | -0.71/-0.7        | -1.1/-1.41        | -1.88/-2.36       | -2.95/-3.62       | -4.48/-5.75       | -7.2/-8.13        | -7.74/-6.09       | -4.66/-3.88       | -3.71/-3.81       | -2.73/-3.17       | -2.24/-1.45       | -0.98/-0.86       |
| Θ(75°)    | -2.25/-2.45   | -2.76/-3.32     | -4.28/-5.06     | -4.65/-3.31     | -1.88/-0.92     | -0.5/-0.39      | -0.46/-0.43     | -0.210/-1.6       | 0.79/1.27         | 1.190/57          | -0.14/-0.51       | -0.55/-0.52       | -0.69/-1.08       | -1.41/-1.42       | -1.03/-0.49       | -0.11/-0.01       | -0.45/-1.52       | -2.77/-3.02       | -2.18/-1.49       | -1.37/-1.69       | -2.1/-2.31        | -2.19/-1.96       | -1.79/-1.71       | -1.83/-2.01       |
| Θ(82.5°)  | -1.41/-0.93   | -0.83/-1.4      | -2.87/-4.18     | -5.37/-4.22     | -2.87/-1.86     | -1.5/-1.71      | -2.17/-2.14     | -1.58/-1.22       | -1.14/-1.32       | -1.18/-2.48       | -2.51/-1.87       | -1.13/-0.74       | -1.02/-1.54       | -1.85/-1.71       | -1.22/-0.67       | -0.210/-11        | -0.15/-0.87       | -1.52/-1.12       | -0.37/-0.18       | -0.51/-1.03       | -1.16/-0.87       | -0.61/-0.76       | -1.22/-1.53       | -1.58/-1.72       |
| Θ(90°)    | -0.87/-0.43   | 0.020/0.3       | -0.8/-2.53      | -4.13/-3.92     | -3.18/-2.83     | -2.75/-3.22     | -2.25/-0.54     | -4.08/-2.66       | -1.49/-1.05       | -1.19/-1.61       | -1.76/-1.5        | -1.06/-0.82       | -1.1/-1.31        | -1.44/-1.29       | -1.09/-0.84       | -0.41/-0.19       | -0.4/-1.01        | -1.41/-0.92       | -0.330/-0.1       | 0.060/0.1         | 0.050/-0.07       | -0.46/-0.89       | -1.16/-1.14       | -0.89/-0.59       |
| Θ(97.5°)  | -2.67/-2.78   | -2.25/-1.74     | -1.94/-3.14     | -4.57/-3.89     | -2.33/-1.48     | -1.12/-1.05     | -1.27/-1.55     | -1.35/-0.95       | -0.96/-1.34       | -1.82/-2.08       | -1.84/-1.52       | -1.22/-1.05       | -1.06/-1.12       | -0.99/-0.64       | -0.320/-0.6       | 0.270/0.5         | -0.51/-1.49       | -2.11/-2.16       | -2.1/-1.88        | -1.89/-1.81       | -1.68/-1.73       | -1.59/-1.23       | -1.17/-1.47       | -1.89/-2.32       |
| Θ(105°)   | -7.38/-5.82   | -4.22/-2.63     | -1.61/-1.59     | -2.49/-3.09     | -2.67/-2.44     | -2.88/-3.56     | -4.21/-4.47     | -3.79/-2.9        | -2.6/-2.84        | -2.97/-2.3        | -1.16/-0.48       | -0.54/-1.21       | -2.15/-2.93       | -3.05/-2.82       | -2.63/-2.72       | -3.24/-3.59       | -3.56/-3.56       | -3.27/-3.07       | -3.01/-3.28       | -4.12/-4.81       | -5.46/-6.28       | -6.79/-7.17       | -7.92/-8.84       | -9.14/-8.28       |
| Θ(112.5°) | -3.03/-2.59   | -2.25/-1.27     | -2.33/-2.47     | -2.38/-1.87     | -1.28/-1.1      | -1.4/-1.82      | -2.05/-2.13     | -1.94/-1.88       | -2.4/-3.2         | -3.89/-4.08       | -3.48/-2.91       | -2.77/-3.22       | -3.46/-5.38       | -6.74/-8.37       | -8.39/-7.15       | -6.83/-73         | -8.26/-9.66       | -11.16/-12.07     | -9.96/-7.53       | -6.41/-5.75       | -5.24/-7.46       | -4.22/-3.63       | -3.31/-3.26       |                   |
| Θ(120°)   | -7.04/-6.7    | -6.38/-6.94     | -8.83/-11.45    | -11.49/-8.88    | -6.62/-5.39     | -5.2/-5.66      | -5.97/-5.31     | -3.75/-2.46       | -1.94/-2          | -2.28/-2.74       | -3.33/-3.82       | -4.04/-4.18       | -4.31/-4.55       | -5.26/-6.14       | -6.01/-4.41       | -2.86/-2.44       | -3.06/-4.01       | -5.03/-6.19       | -7.22/-6.9        | -5.54/-4.55       | -4.27/-4.32       | -4.4/-4.35        | -4.38/-4.67       | -5.35/-6.28       |
| Θ(127.5°) | -9.34/-7.75   | -6.18/-5.51     | -6.03/-7.71     | -8.3/-5.91      | -3.5/-2.06      | -1.72/-2.18     | -3.07/-3.9      | -4/-3.65          | -3.75/-4.54       | -5.71/-6.86       | -7.64/-8.25       | -8.69/-9.16       | -10.06/-11.46     | -12.56/-11.16     | -8.24/-5.94       | -4.81/-4.73       | -5.22/-6.23       | -7.71/-8.77       | -7.24/-4.89       | -3.41/-2.69       | -2.37/-2.21       | -2.14/-2.29       | -3/-4.3           | -6.67/-9.96       |
| Θ(135°)   | -18.71/-17.72 | -14.92/-11.77   | -11.25/-13.62   | -19.18/-14.13   | -9.07/-6.56     | -5.72/-5.81     | -6.3/-6.61      | -6.39/-5.92       | -5.78/-5.99       | -6.04/-5.68       | -5.14/-4.89       | -5.13/-5.93       | -6.96/-7.57       | 7.06/-5.95        | -5.11/-4.78       | -4.73/-4.84       | -5.21/-5.92       | -6.4/-6.05        | -4.92/-3.93       | -3.67/-3.94       | -4.59/-4.67       | -6.43/-7.37       | -8.44/-9.86       | -11.97/-15.42     |
| Θ(142.5°) | -12.27/-12.85 | -10.79/-9       | -8.44/-9.1      | -11.27/-15.28   | -18.86/-18.03   | -17.23/-17.77   | -19.32/-17.41   | -18.53/-18.54     | -18.79/-14.2      | -9.94/-7.57       | -6.7/-6.89        | -7.8/-9.27        | -10.56/-11.25     | -11.19/-10.81     | -10.45/-10.03     | -9.72/-9.88       | -10.41/-10.63     | -10.24/-9.44      | -8.6/-8.08        | -7.89/-7.67       | -7.5/-7.29        | -6.87/-6.48       | -6.41/-6.78       | -7.18/-9.47       |
| Θ(150°)   | -14.04/-12.17 | -10.55/-9.44    | -8.76/-8.37     | -8.33/-6.68     | -9.35/-10.34    | -11.57/-13.03   | -14.32/-15.32   | -16.99/-18.46     | -15.72/-16.12     | -8.2/-6.82        | -4.5/-4.03        | -4.22/-4.82       | -5.45/-5.81       | -5.74/-5.4        | -5.18/-5.05       | -5.16/-5.6        | -6.21/-6.59       | -6.75/-6.72       | -6.61/-6.55       | -6.56/-6.6        | -6.78/-7.12       | -7.62/-8.45       | -9.79/-11.56      | -13.48/-14.58     |
| Θ(157.5°) | -18.2/-18.59  | -18.12/-15.85   | -12.18/-9.77    | -8.3/-7.66      | -7.61/-7.95     | -8.68/-9.65     | -10.49/-11.5    | -12.23/-14.33     | -18.19/-17.24     | -15.75/-11.39     | -8.72/-7.23       | -6.57/-6.5        | -6.81/-7.4        | -8.21/-9.36       | -11.16/-13.61     | -16.66/-18.31     | -15.62/-12.35     | -10.39/-9.4       | -8.97/-9.3        | -9.28/-10         | -11.12/-12.5      | -14.18/-16.42     | -19.33/-18.96     | -18.32/-18.4      |
| Θ(165°)   | -19.58/-18.96 | -18.11/-18.65   | -15.54/-13.17   | -11.56/-10.64   | -10.32/-10.4    | -10.62/-10.89   | -10.97/-10.72   | -10.64/-11.01     | -12.11/-13.78     | -16.2/-18.45      | -17.21/-14.26     | -11.95/-10.4      | -9.56/-9.07       | -8.86/-8.55       | -8.12/-7.7        | -7.09/-6.46       | -5.84/-5.54       | -5.62/-5.96       | -6.48/-7.18       | -8.29/-9.76       | -11.67/-13.69     | -15.95/-17.32     | -17.41/-18.98     | -17.96/-17.72     |
| Θ(172.5°) | -18.24/-17.91 | -17.9/-18.18    | -18.8/-19.26    | -18.49/-17.41   | -17.82/-19.12   | -17.84/-18.85   | -16.85/-15.06   | -13.57/-12.61     | -12.13/-11.9      | -11.74/-11.42     | -10.65/-9.69      | -8.64/-7.63       | -6.83/-6.08       | -5.46/-4.94       | -4.54/-4.26       | -4.07/-4          | -4.15/-4.56       | -5.28/-6.28       | -7.39/-6.68       | -10.34/-12.58     | -15.54/-16.66     | -19.23/-18.33     | -18.2/-19.3       | -17.36/-18.79     |
| Θ(180°)   | -11.65/-11.67 | -11.77/-11.9    | -12.01/-12.13   | -12.44/-12.87   | -13.32/-13.76   | -14.59/-16.09   | -18.76/-17.99   | -18.61/-17.39     | -18/-16.86        | -14.93/-13.53     | -12.41/-11.28     | -10.25/-9.41      | -8.82/-8.33       | -7.87/-7.53       | -7.47/-7.52       | -7.71/-7.94       | -8.36/-9.06       | -10.21/-11.81     | -13.83/-16.19     | -17.86/-17.73     | -18.02/-17.85     | -18.74/-16.45     | -14.6/-13.29      | -12.34/-11.87     |
| Freq(Hz)  | 2.4835GPol.   | Phi/Ant.2       | +               | +               | +               | +               | +               | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -18.62/-19.22 | -19.36/-17.55   | -19.18/-18.83   | -18.02/-19.05   | -18.53/-18.41   | -19.2/-17.92    | -19.28/-17.92   | -16.56/-15.86     | -15.37/-14.83     | -13.99/-13.73     | -12.94/-12.78     | -12.68/-12.71     | -13.05/-13.65     | -14.27/-15        | -15.76/-16.15     | -16.13/-16.23     | -16.33/-16.3      | -16.19/-16.28     | -16.82/-17.46     | -17.97/-18.5      | -18.91/-19.43     | -18.81/-19.2      | -18.54/-18.92     | -17.42/-18.8      |
| Θ(7.5°)   | -18.04/-18.07 | -18.1/-18.79    | -17.66/-18.73   | -19/-19.17      | -18.07/-18.81   | -17.69/-17.02   | -16.35/-15.83   | -15.74/-15.98     | -14.81/-13.73     | -13.21/-12.79     | -12.5/-12.46      | -12.73/-13.4      | -13.75/-14.21     | -14.58/-14.56     | -14.37/-14.25     | -14.18/-14.01     | -14.75/-15.43     | -16.15/-16.91     | -17.85/-17.93     | -17.96/-17.98     | -18.39/-18.56     | -18.9/-18.67      | -18.28/-18.7      |                   |
| Θ(15°)    | -18.94/-18.69 | -19.38/-18.91   | -18.04/-17.76   | -16.33/-16.15   | -14.32/-13.24   | -12.84/-        |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(7.5°)   | -13.25/-13.23 | -13.64/-13.1    | -11.6/-10.01    | -9.43/-9.51     | -10.39/-11.19   | -11.77/-12.39   | -12.11/-12.5    | -13.5/-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     | -14.2/-13.21      | -13.64/-14.43     | -15.3/-16.71      | -17.8/-18.22      | -19.09/-18.01     | -19.15/-17.84     | -15.97/-14.67     |
| Θ(15°)    | -8.7/-8.19    | -8.37/-9.38     | -11.34/-12.05   | -11.02/-9.82    | -10.31/-11.55   | -13.08/-14.39   | -15.18/-13.78   | -12.48/-11.76     | -11.64/-11.83     | -11.18/-11.42     | -12.14/-13.5      | -15.28/-16.56     | -17.94/-18.45     | -18.35/-19.14     | -18.97/-17.75     | -18.97/-18.43     | -18.57/-19.37     | -19.07/-18.58     | -17.07/-16.47     | -17.1/-18.06      | -17.79/-18.83     | -18.51/-17        | -15.47/-14.98     | -12.63/-10.39     |
| Θ(22.5°)  | -10.9/-9.74   | -9.08/-9.34     | -11.03/-14.69   | -16.95/-4.5     | -12.61/-11.74   | -12.02/-12.88   | -14.64/-13.19   | -11.35/-10.25     | -9.83/-9.67       | -10.05/-10.18     | -10.46/-10.71     | -11.02/-12.46     | -14.47/-16.69     | -18.33/-18.71     | -18.35/-19.03     | -18.83/-18.56     | -17.79/-19.28     | -18.16/-18.37     | -17.74/-18.91     | -18.73/-18.01     | -15.99/-17.46     | -16.80/-13.69     | -14.38/-15.91     | -15.28/-13.24     |
| Θ(30°)    | -16.83/-16.22 | -14.98/-13.33   | -11.2/-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     | -12.8/-12.53      | -12.17/-10.44     | -8.19/-6.75       | -6.92/-8.23       | -9.76/-10.81      | -11.46/-12.33     | -14.56/-16.64     |
| Θ(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/-7.2      | -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/-8.99       | -8.19/-7.75       | -7.04/-6.19       | -5.77/-5.82       | -5.78/-5.73       | -5.61/-5.77       | -6.35/-6.24       | -5.9/-5.69        | -5.31/-5          |
| Θ(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/-3.82       | -5.09/-5.83       | -6.68/-7.27       | -8/-8.81          | -8.69/-7.88       | -7.38/-6.52       | -5.73/-5.43       | -5.49/-4.82       | -3.32/-2.68       | -3.19/-3.61       | -3.63/-3.66       | -3.64/-3.71       | -3.63/-3.07       | -3.59/-3.83       | -3.39/-3.23       | -3.59/-3.94       | -3.61/-3.45       |
| Θ(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       | -0.090.24         | -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       | -2.3/-1.82        | -1.96/-1.91       | -0.440.4          | 0.04/-1.44        | -3.6/-3.75        | -2.93/-2.61       | -2.4/-2.17        |
| Θ(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       | -1.37/-0.92       | -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       | -2.58/-4.45       | -1.250.79         | 1.270.5           | -0.6/-1.11        |
| Θ(67.5°)  | -1.97/-0.96   | -0.81/-1.82     | 0.051.05        | -0.56/-0.16     | -0.520.99       | 0.3/-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       | -2.050.01         | 0.490.4           | 0.941.04          | 0.19/-0.88        | -0.85/-1.29       |
| Θ(75°)    | -0.14/-1.23   | -0.440.09       | 1.152.85        | 2.181.67        | 1.832.6         | 2.331.44        | 1.250.91        | -0.200.37         | 1.590.33          | -0.550.28         | 0.18/-0.71        | -1.49/-1.77       | -0.97/-0.12       | 0.861.79          | 1.320.06          | -1.72/-1.72       | 0.61/-0.03        | -1.5/-0.53        | -0.070.44         | 1.011.08          | 0/-1.36           | -1.53/-1.9        | -2.33/-1.3        | -0.340.15         |
| Θ(82.5°)  | 2.1110.9      | 0.45/-0.86      | -2.28/-0.17     | -0.089.74       | -0.180.18       | -0.54/-1.65     | 0.461.03        | 0.61/-0.4         | 1.620.06          | -0.231.1          | 1.891.7           | 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       | -0.48/-0.38       | -2.49/-2.53       | -0.350.32         | 1.131.64          | 2.232.83          |
| Θ(90°)    | 1.19/-1.9     | -1.18/-0.61     | -2.350.15       | -0.121.58       | 0.322.25        | 0.912.81        | -0.441.39       | -2.440.34         | -0.2/-1.88        | -0.661.09         | -0.33/-0.49       | -0.260.52         | -0.05/-0.51       | -0.090.27         | -0.42/-1.64       | -4.01/-2.66       | -1.93/-0.79       | -3.17/-2.69       | -2.1/-3.42        | -0.360.7          | 0.97/-3.7         | 2.391.31          | -1.3/-2.39        | -1/-1.2           |
| Θ(97.5°)  | 0.85/-0.7     | -2.50.85        | -0.381.76       | 1.25/-1.12      | 0.932.84        | 1.670.44        | -0.07/-0.55     | -1.51/-2.5        | 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         | <b>2.913.22</b>   | 2.111.54          | 0.45/-1.93        | -1.73/-1.03       | -2.08/-1.17       |
| Θ(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/-4.9        | -5.75/-4.2        | -2.24/-3.26       | -3.13/-3.11       | -1.69/-3.77       | 0.911.98          | 1.62/-1.32        | 0.38/-3.68        | -1.231.34         | -3/-4.8           | -0.20.81          | -0.47/-1.02       | -1.28/-0.35       |
| Θ(112.5°) | -0.11/-2.98   | -7.79/-2.76     | -6.38/-6.88     | -3.58/-10.56    | -3.15/-1.95     | -4.61/-7.27     | -2.3/-2.39      | -2.630.38         | -1.31/-5.06       | -4.56/-2.49       | -2.98/-1.64       | -2.39/-5.83       | -2.88/-2.52       | -3.92/-3.35       | 0.06/-0.1         | -4.03/-3.34       | -4.08/-0.91       | -9.67/-2.8        | -3.86/-1.77       | 1.150.32          | -0.840.77         | 1.872.27          | 0.97/-3.7         | -5.47/-1.92       |
| Θ(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       |
| Θ(127.5°) | -5.59/-0.75   | -8.85/-1.41     | -4.16/-6.99     | -7.35/-5.43     | -2.87/-2.92     | -3.06/-3.66     | -3.56/-6.91     | -11.82/-10.2      | -9.63/-9.53       | -17.67/-18.95     | -12.06/-8.54      | -8.66/-9.5        | -8.5/-8.6         | -4.99/-6.82       | -9.95/-13.07      | -8.5/-5.17        | -4.54/-3.3        | -9.08/-9.9        | -11.98/-12.9      | -10.73/-7.51      | -16.69/-15.07     | -12.27/-8.7       | -8.99/-15.88      | -12.51/-9.96      |
| Θ(135°)   | -5.9/-8.29    | -15.42/-13.24   | -15.89/-12.69   | -7.62/-5.63     | -5.94/-8.58     | -7.33/-6.76     | -8.61/-8.53     | -9.12/-8.47       | -7.14/-6.98       | -9.41/-13.1       | -17.76/-17.63     | -11.43/-10.58     | -10.76/-8.5       | -9.15/-14.12      | -17.78/-15.68     | -12.69/-11.57     | -15.4/-9.42       | -7.02/-7.05       | -4.36/-5.04       | -9.11/-3.74       | -5.57/-5.1        | -5.18/-6.17       | -7.69/-7.8        | -6.97/-6.42       |
| Θ(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      |
| Θ(150°)   | -6.42/-5.07   | -7.42/-15.29    | -17.34/-16.6    | -18.03/-15.39   | -13.63/-15.46   | -16.32/-13.72   | -11.46/-14.92   | -13.37/-11.63     | -12.67/-17.46     | -16.19/-11.8      | -10.43/-11.85     | -12.44/-10.26     | -8.47/-1.44       | -6.94/-6.87       | -11.35/-11.8      | -5.06/-6.21       | -6.6/-6.26        | -9.08/-11.31      | -7.83/-4.27       | -2.45/-3.3        | -5.79/-8          | -7.81/-7.03       | -8.05/-13.2       | -15.87/-11.05     |
| Θ(157.5°) | -7.88/-9.9    | -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/-9.49       | -8.49/-9.1        | -8.59/-8.07       | -8.06/-8.52       | -9.91/-11.18      | -11.03/-10.94     | -10.22/-12.32     | -10.28/-9.85      | -11.13/-11.5      | -10.12/-8.08      | -8.62/-7.04       | -7.87/-9.01       | -9.66/-7.55       | -6.28/-6.3        | -7.35/-7.58       |
| Θ(165°)   | -18.19/-18.75 | -19.23/-17.81   | -14.75/-13.75   | -14.39/-15.05   | -14.17/-16.16   | -17.7/-18.45    | -17.64/-15.18   | -11.63/-10.75     | -9.53/-8.53       | -7.58/-6.79       | -6.37/-5.93       | -5.58/-5.34       | -5.55/-5.83       | -6.29/-6.84       | -7.91/-9.51       | -11.16/-12.98     | -13.58/-13.5      | -13.3/-12.82      | -11.65/-11.01     | -10.63/-11.03     | -14.65/-13.11     | -12.13/-13.3      | -17.42/-18.15     |                   |
| Θ(172.5°) | -15.59/-16.22 | -17.59/-18.91   | -18.89/-18.42   | -18.25/-17.69   | -18.5/-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/-17.92     | -19.07/-16.89     | -14.46/-13.86     | -14.42/-13.93     | -12.96/-11.85     | -10.9/-10.57      | -11.72/-14.28     | -17.6/-18.58      | -17.88/-18.45     | -16.64/-14.97     |
| Θ(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/-13.22     | -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/-10.79     | -10.71/-10.08     | -9.65/-9.21       | -9.29/-10.05      | -11.89/-14.53     | -16.22/-17.91     | -19.16/-18.67     | -18.39/-16.74     |
| Freq(Hz)  | 5.3GPol       | PhiAnt 2        | -               | -               | -               | -               | -               | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -17.65/-18.7  | -17.13/-16.25   | -17.1/-17.46    | -16.58/-18.78   | -16.19/-16.54   | -16.16/-15.02   | -13.08/-12.7    | -18.1/-10.75      | -10.32/-10.02     | -12.22/-13.16     | -17.49/-16.21     | -17.45/-18.74     | -18.06/-17.28     | -17.31/-16.44     | -16.89/-17.1      | -12.99/-12.02     | -11.43/-11.82     | -12.97/-13.63     | -13.76/-13.85     | -14.43/-15.81     | -18.29/-18.29     |                   |                   |                   |
| Θ(7.5°)   | -16.84/-17.79 | -17.71/-17.78   | -18.35/-18.05   | -17.38/-18.33   | -18.24/-17.91   | -16.66/-15.81   | -14.1/-13.21    | -13.54/-13.21     | -13.77/-14.02     | -14.27/-16.41     | -17.9/-13.65      | -18.54/-18.95     | -18.92/-18.45     | -18.99/-18.74     | -16.92/-19.42     | -18.22/-18.2      | -17.08/-14.79     | -13.9/-14.17      | -14.11/-12.93     | -12.34/-11.98     | -11.73/-11.22     | -10.7/-10.8       | -11.25/-12.66     | -14.77/-14.72     |
| Θ(15°)    | -13.93/-17.4  | -18.3/-17.33    | -17.86/-16.93   | -18.01/-18.64   | -18.24/-19.28   | -18.75/-10.78   | -16.09/-17.3    | -17.24/-16.4      | -14.98/-13.48     | -12.24/-12.35     | -13.35/-13.41     | -14.61/-14.9      | -15.04/-16.52     | -18.86/-19.3      | -18.92/-18.47     | -17.95/-16.66     | -16.69/-18.26     | -18.86/-16.15     | -14.77/-12.53     | -11.34/-10.52     | -10.9/-8.4        | -9.98/-10.55      | -11.2/-12.46      | -12.74/-12.33     |
| Θ(22.5°)  | -14.83/-17.6  | -18.14/-18.36   | -17.18/-19.58   | -16.69/-18.82   | -18.19/-18.28   | -18.94/-18.94   | -17.73/-17.63   | -18.35/-18.16     | -18.64/-17.7      | -15.33/-14.99     | -15.79/-16.55     | -15.73/-14.36     | -14.19/-13.67     | -17.98/-19.03     | -17.66/-16.87     | -14.78/-16.15     | -17.95/-18.57     | -18.29/-18.13     | -18.53/-16.14     | -13.5/-10.87      | -9.79/-9.88       | -10.96/-12.77     | -13.78/-14.24     | -14.45/-14.21     |
| Θ(30°)    | -17.83/-18.06 | -16.07/-15.9    | -15.71/-15.01   | -14.33/-13.49   | -12.43/-12.85   | -12.77/-13.85   | -16.04/-16.78   | -17.12/-17.59     | -18.61/-17.14     | -17.03/-17.2      | -18.44/-18.55     | -17.41/-16.48     | -16.69/-16.94     | -16.28/-14.95     | -15.05/-15.65     | -15.93/-18.66     | -18.62/-18.18     | -17.53/-18.56     | -17.65/-13.1      | -11.87/-11.18     | -10.2/-10.48      | -13.26/-18.81     | -16.16/-16.96     | -14.71/-15.41     |
| Θ(37.5°)  | -17.28/-18.65 | -16.97/-16.57   | -14.82/-12.84   | -11.09/-10.7    | -10.66/-11.1    | -12.27/-14.91   | -15.05/-15.91   | -15.39/-16.08     | -17.2/-18.37      | -19.05/-17.46     | -18.47/-18.21     | -19.28/-15.83     | -14.13/-13.71     | -13.31/-12.56     | -13.37/-15.25     | -17.75/-17.46     | -14.73/-14.31     | -16.25/-18.81     | -18.18/-13.42     | -13.79/-18.1      | -18.72/-18.16     | -18.01/-16.98     | -15.22/-15.42     | -16.71/-18.64     |
| Θ(45°)    | -15.24/-16.23 | -13.1/-12.62    | -14.05/-17.95   | -18.55/-18.09   | -15.62/-14.07   | -13.53/-14.26   | -15.15/-16.21   | -17.35/-18.92     | -19.42/-17.24     | -15.62/-14.16     | -12.4/-12.78      | -14.99/-15.52     | -13.78/-16.73     | -17.77/-17.76     | -18.41/-17.46     | -18.54/-15.66     | -15.99/-18.1      | -17.95/-18.35     | -18.67/-18.35     | -18.4/-17.67      | -19.12/-18.53     | -18.93/-16.79     | -17.06/-14.51     |                   |
| Θ(52.5°)  | -13.51/-11.31 | -9.74/-9.34     | -9.87/-13.31    | -14.49/-14.94   | -13.53/-15.08   | -17.64/-18.06   | -15.55/-18.86   | -17.75/-13.63     | -14.08/-12.51     | -10.23/-10.57     | -12.12/-9.97      | -14.32/-16.54     | -19.58/-18.9      | -17.45/-19.02     | -15.52/-14.1      | -15.45/-18.03     | -17.96/-18.64</   |                   |                   |                   |                   |                   |                   |                   |

# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                    |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(60°)    | -0.39/0.4     | 0.67/-1.34      | -1.13/-1.9      | -2.83/-0.81     | 0.14/0.61       | 0.24/0.89       | 1.07/0.85       | 0.97/2.1          | 2.42/1.58         | 0.53/0.03         | -1.2/-3.55        | -5.59/-7.11       | -6.78/-4.98       | -3.88/-2.99       | -1.87/-1.79       | -1.12/-1.38        | -0.11/0.79        | 0.22/-1.18        | -0.68/0.37        | 2.41/3.35         | 1.68/-0.56        | -3.08/-3.97       | -1.05/-1.03       | 1.83/0.85         |
| Θ(67.5°)  | 1.4/-0.34     | -0.81/-1.71     | -2.38/-1.52     | -2.43/-2.23     | -1.36/-1.89     | -4.68/-5.18     | -4.38/-5.21     | -3.52/-1.41       | -1.25/-0.6        | -0.14/0.42        | 1.27/0.46         | -0.77/-0.48       | -0.9/-1.45        | -1.17/-1.04       | -1.91/-2.74       | -3.37/-2.95        | 0.23/0.5          | 0.83/0.51         | 0.31/-0.54        | 0.02/-1.66        | -4.51/-4.14       | -0.13/-0.25       | 2.72/2.33         | 1.64/-1.73        |
| Θ(75°)    | -1.36/0.24    | -0.04/-0.28     | 0.14/0.96       | 2.13/0.99       | 1.81/2.47       | 1.72/0.06       | 0.47/-0.43      | 1.08/0.36         | -1.11/-1.5        | -7.36/-4.68       | -2.08/-0.97       | 0.72/0.78         | -0.63/-0.52       | -0.21/-0.73       | -1.71/-1.07       | -1.4/-3.02         | -1.62/-2.85       | -4.71/-8.74       | -4.57/-4.53       | -1.71/2.4         | 3.22/1.85         | 1.88/2.06         | -0.12/-0.96       | -0.09/-1.04       |
| Θ(82.5°)  | -0.12/-0.89   | 0.27/-0.63      | 1.66/1.61       | 1.76/1.39       | 2.82/3          | 1.84/0.52       | 1.45/1.27       | 1.63/1.72         | 1.13/0.39         | 0.69/0.22         | -2.48/-3.72       | -2.12/-0.95       | -0.09/1.53        | 1.12/0.51         | -0.53/-1.47       | -0.03/-0.43        | 1.01/1.93         | 0.87/1.17         | 1.0/67            | 0.73/1.3          | 0.1/-2.61         | -5.43/-8.44       | -5.46/-1.53       | 0.53/0.64         |
| Θ(90°)    | 2.5/0.58      | 0.83/-0.88      | -3.14/-2.07     | -7.42/-6.4      | -3.54/-1.69     | -2.4/-2.99      | -2.36/-1.27     | 1.3/0.98          | -1.74/-1.11       | -1.13/-0.6        | -0.6/-0.36        | -0.14/-0.85       | -0.01/0.7         | -0.11/-1.96       | -4.17/-4.71       | -5.69/-2.73        | -0.79/-0.33       | 0.94/-2.73        | -4.43/-2.37       | -4.45/-0.22       | -2.26/-5.17       | 0.04/-1.7         | 1.82/1.11         | 1.34/2.92         |
| Θ(97.5°)  | -0.5/-4.62    | -2.58/-1.77     | -3.08/-1.06     | -2.07/-1.05     | 0.95/1.1        | -2.49/-6.02     | -5.61/-7.5      | -2.44/-1.74       | -5.6/-5.09        | -4.36/-6.24       | -5.43/-2.14       | -2.21/2.99        | 1.95/0.92         | -0.47/-1.93       | -1.71/-2.28       | -6.39/-1.44        | -2.64/-4.89       | -5.76/-3.44       | 0.91/57           | 1.93/1.96         | 2.37/0.85         | -3.82/-7.34       | -5.62/-13.3       |                   |
| Θ(105°)   | -3.74/-4.89   | -8.36/-5.33     | -7.57/-2.6      | -4.04/-5        | -2.06/-2        | -3.72/-3.24     | -2.08/-3.26     | -1.57/-2.81       | -6.01/-6.07       | -8.04/-7.45       | -7.24/-5.52       | -3.48/-5.23       | -4.18/-1.69       | -1.98/-0.98       | -6.15/-8.6        | -6.82/-0.22        | -0.89/3.4         | <b>3.82/1.5</b>   | -1.21/2.26        | 1.33/1.84         | 1.72/-1.81        | -8.53/-6.72       | -1.42/0.05        | -1.17/-3.29       |
| Θ(112.5°) | -5.29/-13     | -5.96/-4.03     | -7.11/-5.59     | -12.01/-3.48    | -2.15/-2.33     | -3.2/-2.57      | -2.49/-2.76     | -0.96/-1.47       | -8.17/-9.66       | -7.94/-7.77       | -10.77/-14.9      | -10.38/-2.63      | -7.79/-7.16       | -6.68/-17.67      | -16.12/-7.6       | -5.39/-18.43       | 1.99/-7.32        | -9.69/-5.72       | -1.86/-5.38       | -7.57/-4.82       | -1.35/-1.62       | -3.33/-7.9        | -4.59/-3.44       |                   |
| Θ(120°)   | -3.31/-12.06  | -12.55/-12.82   | -12.06/-10.11   | -14.01/-12.95   | -13.31/-10.07   | -6.96/-9.52     | -10.56/-4.71    | -1.86/-3.61       | -10.52/-16.85     | -11.94/-7.27      | -8.92/-9.42       | -12.24/-12.49     | -7.09/-5.95       | -9.71/-7          | -10.29/-8.73      | -13.3/-8.5         | -4.55/-0.89       | -6.79/-3.93       | -2.82/2.32        | 3.04/-2.09        | -1.36/2.16        | 0.94/-1.1         | -1.66/-9.36       | -5.47/-2.48       |
| Θ(127.5°) | -7.33/-12.63  | -16.36/-13.54   | -12.53/-14.25   | -10.69/-6.49    | -5.81/-7.55     | -11.11/-15.08   | -10.46/-16.48   | -18.05/-13.18     | -6.84/-5.58       | -4.74/-25         | 4.13/-4.38        | -6.09/-8.47       | -12.96/-13.27     | -7.47/-8.63       | -14.82/-14.39     | -6.67/-5.06        | -2.85/-4.35       | -0.01/-2.63       | -5.35/0.32        | 0.46/-5.29        | -15.53/-8.8       | -7.88/-12.91      | -7.81/-14.36      | -18.55/-8.58      |
| Θ(135°)   | -19.2/-15.37  | -13.56/-13.14   | -7.59/-6.04     | -2.89/-3.3      | -4.62/-5.38     | -5.65/-6.46     | -6.8/-9.98      | -15.71/-14.77     | -13.2/-18.52      | -18.04/-18.05     | -10.43/-10.82     | -16.17/-18.4      | -16.18/-18.27     | -8.34/-7.83       | -7.08/-4.97       | -8.31/-15.16       | -13.09/-9.54      | -6.4/-5.52        | -8.46/-6.73       | -9.19/-10.4       | -11.53/-15.24     | -8.91/-8.96       | -11.23/-15.08     |                   |
| Θ(142.5°) | -4.9/-3.22    | -5.81/-14.62    | -18.48/-13.32   | -4.71/-4.74     | -3.73/-4.6      | -4.17/-6.3      | -4.36/-5.19     | -5.53/-6.49       | -8.11/-9.37       | -12.16/-17.13     | -15.72/-14.3      | -17.38/-17.54     | -18.94/-19.67     | -9.33/-7.53       | -6.26/-7.11       | -17.25/-10.92      | -6.64/-3.23       | -4.35/-9.26       | -7.85/-4.5        | -1.96/-1.8        | -3.02/-5.73       | -9.42/-9.55       |                   |                   |
| Θ(150°)   | -4.79/-5.51   | -9.16/-13.96    | -16.39/-17.45   | -9.66/-7.32     | -8.68/-10.59    | -11.67/-11.01   | -10.19/-9.21    | -8.71/-11.94      | -13.96/-9.47      | -9.22/-10.66      | -11.7/-14.93      | -18.86/-16.46     | -18.1/-18.04      | -18.28/-14.99     | -10.93/-8.95      | -5.64/-4.49        | -5.49/-5.56       | -6.4/-7.9         | -5.58/-2.87       | -1.27/-1.15       | -1.33/-2          | -2.22/-2.42       | -4.06/-5.63       | -6.15/-5.87       |
| Θ(157.5°) | -7.78/-8.14   | -10.51/-16.76   | -18.94/-18.78   | -17.43/-16.15   | -15.23/-12.27   | -9.04/-7.36     | -7.73/-10.23    | -12.02/-17.5      | -19.09/-10.68     | -9.61/-9.72       | -8.92/-8.49       | -7.86/-5.75       | -4.06/-3.06       | -2.89/-3.9        | -5.41/-6.35       | -7.03/-7.37        | -5.99/-2.47       | -3.56/-3.45       | -3.66/-3.97       | -4.69/-5.9        | -7.12/-12.63      | -6.81/-5.58       | -6.23/-8.7        | -10.72/-9.15      |
| Θ(165°)   | -12.53/-14.2  | -15.13/-12.9    | -10.8/-9.01     | -7.46/-6.69     | -7.64/-9.5      | -10.8/-9.89     | -9.31/-9.29     | -8.52/-7.41       | -5.77/-4.17       | -3.57/-3.58       | -3.59/-3.04       | -2.68/-2.56       | -2.5/-2.5         | -2.56/-3.02       | -3.71/-4.29       | -5.03/-5.69        | -6.39/-7.46       | -8.07/-8.49       | -8.43/-8.33       | -7.62/-7.12       | -6.75/-7.33       | -8.02/-7.22       | -6.49/-6.64       | -8.15/-10.22      |
| Θ(172.5°) | -11.39/-10.08 | -9.78/-9.77     | -12.28/-18.44   | -17.57/-18.86   | -15.15/-11.31   | -8.99/-8        | -7.91/-8.49     | -9.18/-9.59       | -9.04/-8.16       | -7.79/-8.45       | -9.49/-10.43      | -10.85/-10.76     | -10.29/-9.63      | -8.68/-8.45       | -8.77/-9.22       | -10.39/-12.2       | -13.82/-13.63     | -12.69/-11.21     | -9.76/-7.61       | -6.39/-5.5        | -5.85/-7.19       | -8.89/-9.78       | -10.37/-11.66     | -13.79/-13.33     |
| Θ(180°)   | -19.06/-18.57 | -18.92/-18.89   | -17.77/-15.73   | -13.54/-13.46   | -13.85/-13.51   | -13.34/-15.06   | -16.69/-19.31   | -17.61/-17.96     | -19.18/-18.68     | -18.9/-16.84      | -14.3/-12.9       | -12.47/-12.05     | -12.02/-11.86     | -11.66/-11.32     | -10.54/-9.71      | -8.99/-8.55        | -8.7/-8.78        | -8.98/-8.66       | -8.4/-7.73        | -7.6/-8.21        | -9.93/-12.46      | -14.33/-14.66     | -13.62/-14.31     | -17.29/-17.97     |
| Freq(Hz)  | 5.785GPol.    | PhiAnt. 2       | +               | +               | +               | +               | +               | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                 | +                  | +                 | +                 | +                 | +                 | +                 | +                 | +                 |                   |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°)  | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -13.46/-15.69 | -14.97/-14.93   | -15.85/-19.46   | -18.79/-18.21   | -18.18/-17.29   | -18.71/-18.1    | -13.61/-12.91   | -12.93/-12.68     | -12.83/-13.63     | -14.65/-15.66     | -15/-13.99        | -13.04/-16.92     | -14.87/-18.21     | -17.94/-18.94     | -17.98/-18.48     | -19.22/-13.38      | -14.06/-12.14     | -12.64/-13.32     | -14.71/-14.45     | -12.99/-11.77     | -10.75/-9.92      | -10.23/-9.24      | -8.86/-10.22      |                   |
| Θ(7.5°)   | -16.56/-18.72 | -17.81/-18.84   | -18.57/-18      | -18.75/-17.59   | -18.71/-17.59   | -17.39/-15.46   | -14.02/-13.48   | -11.73/-12.52     | -11.81/-11.5      | -10.19/-11.25     | -11.19/-11.16     | -10.31/-10.78     | -12.34/-15.13     | -14.40/-11.06     | -12.34/-15.13     | -18.47/-19.09      | -18.75/-18.47     | -17.55/-16.47     | -15.95/-16.73     | -14.72/-14.97     | -15.82/-14.96     | -14.74/-14.17     | -14.02/-12.89     | -12.22/-13.96     |
| Θ(15°)    | -18.71/-14.2  | -18.44/-18.36   | -17.96/-18.41   | -18.45/-16.6    | -13.44/-12.76   | -12.47/-12.44   | -13.33/-13.82   | -12.85/-11.43     | -10.16/-9.55      | -8.79/-8.76       | -9.21/-10.61      | -11.48/-12.11     | -13.25/-14.59     | -15.13/-13.95     | -12.64/-13.51     | -16.89/-19.51      | -18.81/-17.78     | -17.31/-18.09     | -18.46/-17.38     | -15.43/-14.04     | -13.65/-14.12     | -16.22/-17.47     | -17.59/-18.91     | -18.81/-17.29     |
| Θ(22.5°)  | -17.43/-18.37 | -18.11/-14.85   | -17.81/-17.83   | -17.41/-16.15   | -12.24/-12.33   | -11.52/-10.74   | -10.88/-10.54   | -10.45/-10        | -8.81/-9.66       | -8.01/-7.66       | -8.34/-8.73       | -9.83/-12.1       | -15.31/-10.73     | -17.23/-18.97     | -17.36/-18.17     | -16.95/-18.18      | -17.98/-18.1      | -17.55/-17.67     | -18.16/-17.77     | -18.46/-17.83     | -15.38/-13.74     | -14.11/-15.17     |                   |                   |
| Θ(30°)    | -8.13/-9.57   | -12.17/-16.85   | -17.29/-17.26   | -17.56/-18.18   | -18.29/-17.68   | -18.25/-16.72   | -12.14/-9.43    | -3.84/-8.21       | -8.71/-8          | -8.71/-8          | -8.82/-7.15       | -8.19/-10.36      | -13.54/-15.66     | -14.44/-13.09     | -12.76/-13.92     | -15.86/-15.04      | -14.21/-16.43     | -13.18/-18.54     | -16.65/-12.61     | -14.16/-11.15     | -10.15/-8.53      | -7.73/-7.22       |                   |                   |
| Θ(37.5°)  | -16.14/-14.23 | -13.54/-16.26   | -16.37/-17.14   | -17.24/-18.19   | -18.62/-17.21   | -15.08/-13.96   | -13.08/-13.33   | -12.01/-11.94     | -10.48/-8.55      | -7.78/-7.95       | -7.78/-7.75       | -8.91/-10.81      | -12.68/-13.77     | -11.87/-9.83      | -9.2/-8.76        | -7.76/-8.25        | -11.99/-16.25     | -12.36/-14.08     | -18.77/-19.15     | -18.32/-13.72     | -9.82/-8.65       | -8.7/-10.06       | -11.38/-12.48     | -13.52/-15.07     |
| Θ(45°)    | -17.77/-14.5  | -13.24/-14.69   | -11.79/-9.53    | -8.89/-9.67     | -10.09/-11.53   | -11.15/-10.24   | -12.8/-14.3     | -11.16/-11.11     | -11.17/-9.96      | -10.14/-12.72     | -13.33/-13.2      | -11.23/-10.95     | -11.39/-11.94     | -14.02/-16.24     | -13.43/-11.12     | -10.05/-7.83       | -10.99/-10.44     | -9.88/-18.71      | -12.2/-9.93       | -11.18/-12.96     | -17.91/-19.22     | -18.26/-18.38     | -18.31/-17.51     | -15.94/-15.93     |
| Θ(52.5°)  | -8.16/-59     | -8.14/-78       | -9.32/-9.24     | -10.85/-11.04   | -11.34/-12.99   | -11.47/-11.16   | -11.53/-14.65   | -6.21/-7.67       | -17.71/-67        | -9.46/-9.17       | -9.06/-9.75       | -10.21/-10.61     | -12.42/-13.75     | -13.58/-17.79     | -18.97/-18.95     | -17.18/-13.25      | -16.15/-16.57     | -14.93/-12.58     | -8.36/-7.46       | -9.22/-14.1       | -12.36/-9.82      | -8.54/-11.7       |                   |                   |
| Θ(60°)    | -7.9/-7.51    | -6.58/-7.34     | -10.26/-12.32   | -16.06/-13.14   | -12.47/-14.21   | -14.52/-13.57   | -12.28/-15.09   | -18.64/-18.26     | -11.36/-11.48     | -12.39/-11.43     | -9.37/-8.28       | -9.37/-12.16      | -12.71/-12.27     | -16.14/-18.98     | -18.08/-14.19     | -12.84/-13.59      | -15.69/-17.95     | -19.05/-17.62     | -17.87/-14.14     | -9.29/-5.94       | -6.69/-13.16      | -18.48/-18.55     | -11.83/-11.23     | -12.3/-9.23       |
| Θ(67.5°)  | -11.28/-9.79  | -8.33/-0.73     | -7.35/-8.72     | -12.6/-11.44    | -6.25/-4.74     | -7.15/-11.89    | -16.65/-14.7    | -15.86/-19.27     | -18.4/-16.62      | -14.85/-11.63     | -7.96/-6.42       | -8.14/-13.51      | -16.66/-18.54     | -15.26/-14.57     | -16.9/-15.03      | -10.02/-6.76       | -6.45/-12.68      | -18.5/-18.76      | -16.65/-18.69     | -10.37/-8.16      | -10.79/-15.88     | -18.47/-17.38     | -14.73/-15.38     | -14.8/-13.39      |
| Θ(75°)    | -13.01/-11.33 | -10.72/-10.6    | -8.43/-6.02     | -6.55/-11.3     | -8.77/-6.35     | -10.12/-13.41   | -18.63/-18.12   | -14.21/-13.64     | -13/-13.99        | -10.8/-13.69      | -14.07/-13.11     | -12.85/-15.54     | -18.44/-14.47     | -12.25/-12.28     | -9.76/-6.73       | <b>-3.84/-7.99</b> | -15.88/-18.51     | -16.97/-15.07     | -9.63/-13.57      | -16.13/-10.3      | -7.69/-9.96       | -15.14/-18.83     | -17.26/-16.81     |                   |
| Θ(82.5°)  | -7.32/-6.16   | -5.73/-7.08     | -11.33/-8.6     | -5.03/-5.75     | -8.39/-10.99    | -13.13/-17.71   | -18.08/-15.61   | -12.46/-16.48     | -16.63/-17.42     | -18.41/-11.43     | -8.71/-11.6       | -14.3/-18.73      | -18.82/-19.4      | -17.28/-19.06     | -17.67/-15.14     | -10.11/-13.05      | -16.37/-14.17     | -10.76/-13.64     | -13.28/-8.02      | -12.29/-10.64     | -9.57/-17.25      | -16.91/-12.96     | -10.92/-10.78     |                   |
| Θ(90°)    | -6.4/-5.8     | -5.37/-5.33     | -12.79/-13.11   | -8.72/-8.71     | -10.16/-13.89   | -17.54/-17.99   | -18.6/-17.58    | -16.82/-17.24     | -17.79/-17.62     | -16.78/-11.75     | -8.96/-9.98       | -13.14/-10.85     | -19.05/-18.9      | -16.8/-17.37      | -18.82/-17.41     | -17.65/-15.22      | -11.56/-10.39     | -15.07/-18.35     | -12/-17.98        | -16.68/-9.54      | -17.32/-16.83     | -9.86/-14.07      | -13.08/-18.36     | -12.79/-10.16     |
| Θ(97.5°)  | -5.93/-4.78   | -6.49/-7.87     | -17.22/-12      | -10.99/-14.7    | -18.18/-18.19   | -17.48/-15.98   | -15.75/-12.98   | -13.58/-17.61     | -18.72/-17.76     | -18.63/-14.78     | -13.49/-13.86     | -18.64/-18.32     | -15.92/-13.98     | -17.46/-17.51     | -13.11/-17.47     | -11.19/-7.88       | -10.86/-14.72     | -17.53/-17.04     | -14.96/-12.38     | -9.73/-8.33       | -10.36/-17.7      | -10.23/-18.17     | -11.93/-12.96     | -19.25/-15.5      |
| Θ(105°)   | -6.38/-6.64   | -11.42/-10.45   | -17.58/-18.86   | -16.26/-17.17   | -16.65/-17.79   | -16.15/-17.97   | -10.97/-13.23   | -12.84/-18.25     | -17.98/-17.51     | -16.47/-17.49     | -14.73/-11.76     | -12.09/-13.19     | -13.25/-11.62     | -14.17/-15.67     | -13.36/-17.48     | -14.45/-14.17      | -17.49/-18.43     | -18.94/-10.14     | -14.45/-18.68     | -10.13/-10.64     | -12.81/-16.39     |                   |                   |                   |



# Radiated Composite Gain Data

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

# Appendix A.1

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(112.5°) | -6.42/-4.09   | -3.21/-4.01     | -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/-8.01       | -6.8/-5.94        | -5.22/-4.57       | -4.4/-4.97        | -6.19/-7.55       | -8.55/-9.42       | -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     | -9.6/-8.08        | -8.44/-8.79       |
| Θ(120°)   | -5.54/-4.66   | -4.77/-6.69     | -10.39/-10.99   | -8.36/-6.86     | -6/-5.33        | -5.41/-6.5      | -8.17/-9.72     | -11.31/-12.87     | -13.99/-13.75     | -13.43/-13.81     | -12.88/-10.17     | -7.63/-6.01       | -5.18/-4.75       | -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/-11.44      | -17.94/-11.63     | -8.59/-6.24       | -4.78/-4.4        | -5.01/-5.95       |
| Θ(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     | -6.89/-6.96       | -8.25/-7.9        | -6.31/-5.82       | -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      | -17.79/-17.43     | -13.92/-13.79     | -13.48/-13.15     | -13.54/-12.6      | -11.94/-9.22      | -7.05/-6.2        |
| Θ(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       | -11.77/-14.74     | -13.63/-9.54      | -7.15/-5.93       | -5.41/-5.21       | -5.22/-5.31       | -5.37/-4.59       | -6/-6.96          | -7.97/-8.77       | -9.95/-11.27      | -13.58/-18.03     | -18.35/-14.12     | -11.96/-13.88     | -18.65/-18.61     | -17.1/-12.61      | -9.04/-6.12       | -4.09/-11.3       |
| Θ(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      | -11.5/-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/-8.75       | -7.58/-6.54       | -6.53/-8.07       | -11.38/-14.22     | -11.99/-10.37     | -10.72/-12.36     | -13.58/-12.92     | -11.2/-9.31       | -7.8/-7.3         |
| Θ(150°)   | -16.51/-18.72 | -18.96/-15.09   | -10.17/-7.15    | -5.13/-3.86     | -3.27/-3.84     | -4.14/-5.63     | -13.83/-16.6    | -13.65/-13.06     | -10.34/-8.6       | -16.97/-6.31      | -5.15/-4.01       | -3.24/-2.88       | -2.93/-3.41       | -4.1/-4.59        | -4.97/-5.39       | -6.1/-6.99        | -5.55/-6.42       | -4.95/-4.69       | -8.54/-6.42       | -4.95/-4.69       | -5.55/-7.89       | -11.82/-17.22     | -17.99/-17.43     | -17.29/-15.75     |
| Θ(157.5°) | -12.21/-13.01 | -15.29/-19.11   | -18.51/-14.08   | -10.54/-8.31    | -7.11/-6.44     | -8.57/-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      | -14.8/-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     |
| Θ(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        | -1.3/-1.37        | -1.79/-2.55       | -3.4/-4.39        | -5.57/-7.4        | -10.29/-13.79     | -16.36/-15.73     | -14.71/-14.64     | -14.54/-15.08     | -15.59/-17.14     | -18.54/-18.04     | -16.99/-14.71     | -12.98/-11.54     | -10.21/-9.48      |
| Θ(172.5°) | -8.36/-9.31   | -10.6/-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       | -2.2/-1.86        | -1.74/-1.81       | -2.05/-2.61       | -3.65/-5.16       | -7.13/-8.67       | -9.84/-11         | -12.33/-14.58     | -18.13/-18.53     | -17.55/-18.51     | -17.77/-14.64     | -12.5/-11.02      | -8.84/-8.97       | -8.37/-8.31       |
| Θ(180°)   | -8.28/-8.3    | -8.15/-7.73     | -7.03/-6.35     | -6.09/-6.43     | -7.25/-8.57     | -10.3/-13.04    | -16.8/-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       | -11.4/-14.19      | -18.28/-18.52     | -19.87/-17.35     | -14.53/-12.55     | -11/-9.66         | -8.6/-7.92        | -7.71/-7.94       |
| Freq(Hz)  | 2.45GPol.     | PhiAnt. 3       | -               | -               | -               | -               | -               | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -11.69/-15.81 | -15.68/-12.38   | -9.39/-6.86     | -4.82/-3.27     | -1.99/-0.9      | -0.120/3        | 0.540/67        | 0.70/53           | 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         | -1.5/-3.2         | -5.27/-7.93       |
| Θ(7.5°)   | -14.73/-13.77 | -10.56/-8.48    | -7.14/-5.72     | -4.45/-3.27     | -2.23/-1.35     | -0.84/-0.63     | -0.52/-0.36     | -0.25/-0.27       | -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/-4.22       | -2.18/-0.66       | 0.51/27           | 1.78/2.1          | 2.32/2.35         | 2.26/2.03         | -0.01/-1.18       | -2.81/-4.96       | -7.92/-11.98      |                   |
| Θ(15°)    | -18.12/-12.26 | -8.13/-6.11     | -5/-4.32        | -2.04/-1.67     | -1.23/-1.42     | -1.78/-1.97     | -1.99/-2        | -1.95/-1.93       | -1.97/-2.05       | -2.38/-3.08       | -4.16/-5.99       | -8.55/-12.49      | -19.41/-18.11     | -12.09/-7.3       | -4.18/-2          | -0.320/8.1        | 1.562/0.8         | 2.432/5.4         | 2.44/2.06         | 1.390/4.2         | -0.84/-2.31       | -4.13/-6.62       | -10.45/-17.88     |                   |
| Θ(22.5°)  | -15.21/-11.22 | -7.92/-5.75     | -4.34/-3.58     | -3.02/-2.37     | -1.67/-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       | -0.410/6.1        | 1.331/77          | 2.082/16          | 1.94/1.28         | 0.18/-1.33        | -3.03/-4.71       | -6.39/-8.23       | -10.8/-14.11      |
| Θ(30°)    | -11.41/-12.19 | -6.59/-6.31     | -4.1/-2.79      | -2.04/-1.54     | -1.08/-0.76     | -0.98/-1.61     | -2.08/-1.84     | -1.15/-0.52       | -0.030/2          | 0.260/13          | -0.28/-1.05       | -2.25/-4.03       | -6.51/-9.62       | -11.78/-9.15      | -6.67/-4.52       | -2.19/-1.69       | -0.650/1          | 0.610/95          | 1.131/14          | 0.850/03          | -1.31/-2.71       | -4.16/-4.54       | -6.15/-6.81       | -7.94/-9.54       |
| Θ(37.5°)  | -13.61/-13.69 | -8.89/-5.26     | -2.71/-1.01     | 0.040/6         | 0.840/77        | 0.11/-1.12      | -2.31/-2.5      | -1.69/-0.59       | 0.360/87          | 1.11/102          | 0.55/-0.28        | -1.49/-3.18       | -5.41/-9.22       | -9.93/-7.97       | -5.29/-3.62       | -2.72/-2.16       | -1.62/-1.22       | -0.87/-0.39       | 0.090/42          | 0.480/08          | -0.71/-1.78       | -3.02/-4.31       | -6.49/-6.78       | -8.61/-11.09      |
| Θ(45°)    | -9.53/-7.85   | -5.86/-4.11     | -2.34/-0.6      | 0.84/1.93       | 2.672/99        | 2.62/1.64       | 0.26/-1.19      | -2.31/-2.48       | -1.84/-1.21       | -0.7/-0.51        | -0.79/-1.49       | -2.5/-3.71        | -5.25/-7.31       | -9.72/-10.18      | -7.59/-5.4        | -4.37/-3.93       | -3.57/-3.03       | -2/-0.59          | 0.52/1.07         | 1.110/64          | -0.26/-1.7        | -3.55/-5.35       | -6.69/-7.85       | -9.19/-10.16      |
| Θ(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        | 1.250/7         | 0.320/08          | -0.48/-1.9        | -4/-5.96          | -5.62/-6.16       | -6.02/-6.61       | -8.48/-12.5       | -17.45/-18.01     | -11.93/-8.34      | -6.13/-4.4        | -2.92/-1.67       | -0.440/6.1        | 1.11/0.9          | 0.07/-1.1         | -2.34/-3.52       | -4.02/-3.44       | -2.81/-2.89       | -3.55/-4.31       |
| Θ(60°)    | -5.39/-6.85   | -9.54/-13.34    | -18.59/-18.24   | -11.96/-6.78    | -4.34/-0.99     | 0.120/07        | -1.07/-2.56     | -2.14/-0.12       | 1.321/36          | 0.01/-2.98        | -8.75/-19.05      | -12.08/-7.2       | -5.46/-5.07       | -12.14/-9.8       | -7.17/-15.1       | -1.61/-3.7        | -0.69/-0.32       | -0.23/-0.33       | -0.73/-1.54       | -2.02/-1.72       | -1.37/-1.35       | -1.23/-1          | -1.19/-2.08       | -3.42/-4.71       |
| Θ(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       | 2.180/27        | -3.28/-5.66       | -3.68/-1.65       | -0.9/-1.4         | -3.63/-8.66       | -17.8/-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       | 0.650/79          | -0.04/-1.56       | -3.21/-4.7        | -6.53/-9.03       | -11.9/-14.35      |
| Θ(75°)    | -11.55/-11.96 | -11.87/-13.34   | -17.32/-17.61   | -15.17/-13.08   | -8.45/-6.13     | -2.61/25        | 1.812/13        | 1.680/72          | -1.1/-4.29        | -0.91/-11.08      | -8.85/-8.82       | -10.79/-13.22     | -12.67/-9.82      | -7.34/-5.36       | -4.24/-4.21       | -5.59/-6.52       | -5.12/-9.22       | -0.970/35         | 1.04/1.21         | 0.58/-1.18        | -4.18/-1.14       | -13.47/-17.77     | -16.8/-13.99      | -12.17/-11.46     |
| Θ(82.5°)  | -12.3/-12.91  | -14.2/-16.22    | -18.15/-14.89   | -10.32/-0.74    | -5.46/-5.23     | -4.53/-3.42     | -2.75/-2.36     | -1.39/-0.14       | 0.38/-0.08        | -1.48/-4.12       | -8.55/-13.91      | -13.07/-9.79      | -3.72/-2.48       | -1.82/-1.76       | -2.22/-2.08       | -1.19/-0.14       | 0.450/39          | 0.18/-0.29        | -1.69/-3.92       | -6.43/-9.14       | -12.78/-17.72     | -18.34/-19.02     | -15.55/-12.98     |                   |
| Θ(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     | -0.130          | -0.89/-1.98       | -3/-4.31          | -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          | 0.370/79          | 0.880/22          | -1.74/-5.14       | -10.03/-18.34     | -18.16/-16.47     | -14.51/-16.97     | -10.99/-13.26     |
| Θ(97.5°)  | -9.96/-9.64   | -9.96/-10.16    | -8.8/-5.54      | -2.55/-0.87     | -0.88/-3.09     | -7.09/-5.23     | -1.460/29       | 0.730/36          | -0.73/-1.8        | -2.02/-4.27       | -4.34/-7.63       | -11.22/-13.98     | -16.34/-16.51     | -11.75/-7.68      | -5.51/-5.66       | -7.25/-4.82       | -1.090/88         | 1.160/31          | -0.87/-1.92       | -3.06/-4.75       | -7.37/-11.51      | -18.36/-18.32     | -17.96/-19.21     | -14.22/-11.12     |
| Θ(105°)   | -9.54/-9.4    | -9.21/-9.02     | -8.46/-6.58     | -3.51/-0.92     | 0.1/-0.63       | -3.21/-4.79     | -1.660/99       | 2.252/29          | 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         | -1.640/-0.8       | -0.28/-1.71       | -2.6/-2.13        | -2.5/-5.33        | -12.76/-18.49     | -11.03/-8.07      | -7.38/-7.89       | -8.63/-9.85       |
| Θ(112.5°) | -5.19/-5      | -5.24/-5.65     | -6.8/-8.21      | -5.76/-1.86     | 0.340/88        | -3.07/-3.78     | -2.17/-3.53     | 0.292/14          | 2.76/23           | 1.12/-0.71        | -3.43/-6.94       | -10.43/-14.33     | -17.45/-18.01     | -10.17/-6.45      | -5.15/-3.7        | -5.11/-3.58       | -1.96/-1.45       | -3.19/-8.23       | -7.13/-3.53       | -3.67/-7.29       | -13.5/-13.21      | -10.34/-10.04     | -11.51/-11.06     | -7.93/-5.76       |
| Θ(120°)   | -9.29/-7.67   | -6.51/-5.54     | -5.11/-5.35     | -5.12/-3.16     | -0.840/-75      | 1.240/58        | -1.07/-3.22     | -4.9/-4.87        | -3.14/-1.21       | 0.270/8           | 0.26/-1.01        | -2.5/-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       | -0.130/3          | -1.75/-6.36       | -10.38/-9.18      | -8.67/-9.28       | -10.92/-15.71     | -18.64/-12.54     |
| Θ(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/-1.21     | -1.17/-1.2        | -2.48/-4.93       | -7.11/-6.56       | -5.43/-4.76       | -4.45/-4.82       | -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       | -8.8/-14.95       | -17.14/-10.21     |
| Θ(135°)   | -5.84/-5.86   | -5.73/-5.54     | -5.81/-7.26     | -10.69/-13.85   | -9.1/-5.26      | -3.5/-3.51      | -5.17/-7.45     | -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       | -8.67/-6.33       | -4.01/-2.68       | -2.38/-3.92       | -9.42/-11.15      | -3.99/-1.21       | -0.71/-1.8        | -4.73/-10.03      | -17.05/-18.66     | -11.72/-8.57      | -6.91/-6.1        |
| Θ(142.5°) | -5.2/-8.4     | -12.13/-16.14   | -19.1/-17.91    | -16.97/-9.61    | -5.12/-0.26     | -0.220/55       | 0.34/-0.75      | -2.55/-5.05       | -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       | -1.140/75         | 2.12/27           | 1.1/-9.2          | -5.82/-5.76       | -2.86/-1.1        | -0.34/-0.42       | -1.29/-2.97       |
| Θ(150°)   | -10.51/-18.9  | -18.09/-11.67   | -8.99/-7.66     | -7.42/-7.71     | -6.59/-4.27     | -1.99/-0.43     | 0.360/54        | 0.23/-0.48        | -1.78/-3.63       | -6.21/-9.62       | -13.99/-18.19     | -16.52/-13.13     | -10.64/-8.69      | -8.88/-5.15       | -3.59/-2.33       | -1.26/-0.6        | -0.35/-0.47       | -0.7/-0.93        | -1.43/-2.9        | -6.22/-10.72      | -6.73/-2.53       | -0.350/-49        | 0.39/-0.54        | -2.43/-5.59       |
| Θ(157.5°) | -19.32/-12.43 | -8.26/-5.97     | -4.67/-4.04     | -5.46/-6.14     | -8.4/-9.22      | -6.79/-4.2      | -2.39/-1.28     | -0.64/-0.5        | -0.89/-1.79       | -3.62/-5.11       | -7.34/-9.99       | -10.26/-9.39      | -8.02/-6.93       | -6.06/-5.35       | -4.91/-4.88       | -5.38/-6.3        | -6.59/-6.43       | -11.42/-13.79     | -15.59/-11.34     | -7.21/-8.2        | -3.77/-3.74       | -4.7/-6.85        | -10.71/-8.51      |                   |
| Θ(165°)   | -9.62/-7.57   | -6.2/-5.32      | -4.78/-4.86     | -5.9/-8.43      | -13/-17.99      | -13.14/-7.78    | -4.92/-3.09     | -1.93/-1.35       | -1.32/-1.76       | -2.83/-4.43       | -6.39/-8.52       | -10.85/-13        | -13.69/-13.78     | -13.87/-13.46     | -12.1             |                   |                   |                   |                   |                   |                   |                   |                   |                   |

[illegible]







## DG 1SS Result

Sporton International Inc. Hsinchu Laboratory



# Radiated Composite Gain Data

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

## Appendix A.2

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(22.5°)  | -7.21/6.23    | -4.21/2.93      | -2.79/-3.01     | -2.38/-1.21     | -0.48/-0.48     | -0.88/-0.75     | 0.020/68        | 0.83/0.86         | 0.37/-0.23        | -0.81/-1.26       | -2.41/-3.62       | -3.92/-4.09       | -3.87/-2.82       | -1.83/-1.04       | -0.57/-0.31       | -0.20/0.1         | 0.21/0.52         | 1.35/2.19         | 2.67/3.03         | 3.39/3.42         | 3.04/2.43         | 1.74/0.83         | -0.52/-2.4        | -4.76/-6.56       |
| Θ(30°)    | -8.51/-6.19   | -3.72/-2.48     | -2.04/-1.71     | -1.43/-0.92     | -0.64/-0.84     | -1.15/-0.24     | 0.95/1.12       | 2.44/-2.24        | 2.04/-1.45        | 0.36/-1.54        | -2.98/-3.76       | -3.78/-3.47       | -3.11/-2.64       | -2.05/-1.04       | 0.07/0.77         | 1.09/1.22         | 1.08/0.86         | 1.42/2.9          | 2.87/3.08         | 3.11/2.72         | 2.01/0.8          | -0.17/-1.53       | -3.23/-5.76       | -8.08/-8.96       |
| Θ(37.5°)  | -8.23/-6.81   | -3.81/-3.46     | -1.83/-0.29     | -0.48/-0.28     | -0.33/-1.19     | -1.09/0.01      | 1.03/1.72       | 2.24/-2.39        | 2.06/-1.45        | 0.68/-0.34        | -0.64/-1.29       | -2.48/-2.96       | -2.92/-3.28       | -3.68/-2.82       | -1.03/0.44        | 1.29/1.66         | 1.45/0.74         | 0.71/0.99         | 1.45/1.75         | 1.69/1.28         | 0.81/-0.08        | -1.57/-3.06       | -4.63/-6.38       | -7.94/-8.1        |
| Θ(45°)    | -6.19/-5.41   | -3.16/-1.83     | -1.0/99         | 2.43/2.56       | 1.76/0.97       | 10/86           | 0.74/0.85       | 1.21/1.16         | 0.82/0.2          | 0.01/0.36         | 0.47/-0.05        | -1.45/-2.96       | -3.41/-3.66       | -4.39/-4.17       | -2.87/0.76        | 0.65/-1.44        | 1.41/0.25         | -0.42/0.33        | 1.38/1.94         | 2.19/2.31         | 2.02/1.03         | -0.36/-2.02       | -3.81/-4.86       | -5.64/-6.33       |
| Θ(52.5°)  | -4.7/-6.47    | -3.6/-2.25      | -1.1/0.9        | 2.61/2.99       | 2.45/2.39       | 2.84/2.5        | 1.84/1.58       | 1.46/0.23         | -1.74/-1.69       | -1.13/-1.05       | -1.26/-1.59       | -2.72/-4.95       | -6.65/-7.07       | -7.85/-7.48       | -6.15/-4.39       | -2.1/-0.34        | 0.42/-0.02        | 0.28/1.69         | 2.84/3.39         | 3.45/3.22         | 2.25/0.98         | -0.3/-1.4         | -1.98/-2.38       | -3.16/-4.41       |
| Θ(60°)    | -5.15/-6.24   | -6.1/-5.2       | -4.68/-3.32     | -1.42/-0.72     | -0.11/-1.26     | 1.73/1.15       | 0.36/0.49       | 1.88/1.29         | 0.55/0.59         | -0.61/-2.62       | -5.89/-7.19       | -6.57/-6.12       | -8.45/-9.75       | -11.84/-11.18     | -8.82/-5.83       | -3.63/-1          | 1.07/1.71         | 1.97/2.22         | 2.19/2.2          | 1.71/0.32         | -0.8/-1.22        | -1.1/-1.71        | -2.79/-3.97       |                   |
| Θ(67.5°)  | -9.25/-9.95   | -9.96/-7.43     | -5.67/-3.05     | -1.57/-1.01     | 0.65/1.76       | 1.67/1.05       | 0.42/-0.3       | -0.59/-1.04       | -0.84/0.02        | -0.24/-1.94       | -5/-9.04          | -11/-9.6          | -8.59/-6.8        | -6.58/-6.45       | -4.32/-2.31       | -1.33/-0.63       | 0.92/1.04         | 1.09/0.91         | 0.84/1.36         | 2.35/2.87         | 2.43/1.41         | 0.18/-0.62        | -1.56/-2.73       | -4.72/-6.68       |
| Θ(75°)    | -9.9/-10.38   | -10.21/-9.04    | -7.93/-5.29     | -4.35/-1.62     | 0.46/0.71       | 1.14/2.36       | 2.42/1.51       | 0.78/-1.11        | -1.35/-2.05       | -3.4/-5.17        | -6.24/-6.89       | -8.89/-10.56      | -10.17/-7.47      | -6.03/-6.36       | -5.06/-3.45       | -2.96/-4.11       | -2.13/-1.07       | -0.50/8.2         | 1.92/2.4          | 2.52/2.29         | 1.13/-1.13        | -3.22/-4.49       | -4.8/-5.31        | -6.08/-7.62       |
| Θ(82.5°)  | -7.64/-8.96   | -9.14/-7.5      | -5.25/-3.88     | -2.79/-0.59     | 0.21/0.62       | 1.41/-28        | -0.05/3         | 1.31/0.45         | -0.54/-0.57       | -2.81/-7.53       | -10.85/-10.49     | -9.34/-8.89       | -6.9/-4.25        | -5.56/-3.43       | -1.75/-1.96       | -0.43/0.61        | 1.37/2.21         | 2.01/1.83         | 2.18/1.55         | -0.39/-1.94       | -3.25/-3.52       | -3.66/-4.82       | -5.77/-6.77       |                   |
| Θ(90°)    | -9.35/-9.47   | -9.08/-7.51     | -6.13/-4.28     | -2.63/-2.45     | -0.71/0.67      | 0.37/0.8        | 0.67/0.47       | -0.13/-1.85       | -2.01/-1.35       | -3.01/-4.93       | -6.69/-7.54       | -7.25/-7.16       | -5.83/-2.7        | -1.41/-0.87       | -1.37/-2.11       | -0.9/-1.06        | -0.12/0.93        | 1.42/1.2          | 2.24/1.95         | 2.11/1.13         | -1.67/-4.16       | 4.91/-4.12        | -3.97/-5.37       | -6.17/-7.4        |
| Θ(97.5°)  | -7.6/-9.73    | -7.51/-7.1      | -4.44/-3.15     | 0.09/1.01       | 1.18/-0.91      | -0.79/-1.25     | 0.81/1.51       | 1.95/0.76         | -0.58/-1.16       | -3.36/-3.97       | -4.39/-5.75       | -7.03/-9.5        | -3.39/-2.5        | -3.78/-4.32       | -2.07/-1.5        | 0.46/1.91         | 2.04/2.53         | 2.53/-1.44        | 1.12/0.17         | -2.03/-2.04       | -1.77/-1.95       | -2.85/-4.63       | -6.05/-7.27       |                   |
| Θ(105°)   | -6.37/-8.08   | -10.63/-10.81   | -6.63/-3.8      | -0.47/7.73      | 2.35/1.44       | 0.13/0.58       | 1.12/2.26       | 2.48/0.45         | -0.67/-1.3        | -3.28/-3.79       | -3.04/-3.64       | -5.09/-7.66       | -9.64/-6.25       | -4.66/-4.1        | -6.03/-4.63       | -1.91/-0.92       | 0.31/5            | 1.11/0.44         | 0.59/0.19         | 0.19/-0.14        | -1.44/-2.02       | -1.98/-1.82       | -2.2/-3.23        | -4.4/-8.9         |
| Θ(112.5°) | -5.8/-7.41    | -8.64/-7.14     | -6.75/-5.08     | -0.69/1.82      | 2.59/1.59       | 0.80/0.9        | -1.18/0.39      | 2.29/2.51         | 2.52/2.28         | 0.67/-2.36        | -3.8/-4.51        | -6.21/-8.54       | -9.82/-8.13       | -7.74/-7.08       | -7.16/-3.69       | -0.77/0.08        | 0.36/1.05         | 0.77/-0.5         | -0.38/-0.1        | 0.45/0.17         | -1.03/-1.17       | -0.69/-0.13       | -0.71/-1.91       | -2.84/-3.81       |
| Θ(120°)   | -8.82/-9.38   | -8.22/-5.89     | -3.52/-1.22     | 0.27/1.41       | 2.27/0.09       | 3.12/1.23       | -2/-0.27        | 1.31/1.41         | 1.36/1.56         | 0.84/-0.76        | -1.67/-2.36       | -3.95/-5.87       | -7.7/-9.9         | -8.15/-6.42       | -5.87/-4.23       | -3.07/-2.34       | -1.86/-1.61       | -2.02/-1.26       | 1.18/1.98         | 1.14/0.21         | -0.27/-0.28       | -1.03/-1.73       | -2.4/-6.6         | -6.47/-7.92       |
| Θ(127.5°) | -5.62/-4.13   | -2.15/-0.28     | 0.76/1.06       | -6.62/-0.05     | 0.33/0.23       | -0.45/-0.44     | -0.01/-1.44     | 2.41/2.19         | 1.37/0.56         | -0.99/-3.37       | -3.81/-3.74       | -4.84/-5.62       | -6.38/-9.27       | -11.54/-11.11     | -7.77/-4.16       | -2.24/-1.1        | 0.62/0.23         | 1.93/0.8          | 0.83/0.57         | -1.54/-3.52       | -1.33/0.05        | -0.26/-1.11       | -2.27/-3.96       | -6.01/-6.47       |
| Θ(135°)   | -2.27/-1.6    | -1.08/-0.85     | -0.83/-0.78     | -1.05/-2.1      | -2.3/-1.26      | 0.94/1.39       | -0.38/-2.22     | -1.96/-1.56       | -1.56/-1.29       | -2/-4.26          | -6.09/-7.1        | -8.62/-10.16      | -10.71/-9.21      | -7.97/-6.53       | -3.8/-0.87        | 0.67/1.01         | 1.42/1.77         | 1.17/-0.48        | 0.08/0.77         | 0.51/0.01         | -0.75/-2.09       | -3.19/-4.33       | -6.08/-5.82       | -4.61/-3.29       |
| Θ(142.5°) | -3.27/-4.14   | -3.79/-3.44     | -2.04/-1.56     | -1.66/-1.46     | -0.14/2.07      | 3.33/3.03       | 1.29/-0.63      | -1.85/-2.67       | -2.66/-2.48       | -2.68/-3.48       | -4.96/-6.64       | -8.32/-10.22      | -13.06/-12.51     | -11.48/-9.62      | -5.48/-2.1        | -1.02/-0.4        | 0.2/0.84          | 1.71/2.72         | 3.73/7.4          | 2.8/1.23          | -0.67/-0.84       | 0.31/0.8          | 0.65/-0.01        | -1.3/-2.4         |
| Θ(150°)   | -7.99/-7.66   | -4.63/-1.3      | -0.29/-0.25     | -1.82/-0.94     | 0.27/1.57       | 1.95/-35        | 0.03/-0.08      | 0.17/0.08         | -1.19/-1.05       | -1.72/-2.94       | -4.88/-7.33       | -8.25/-8.55       | -8.61/-7.66       | -6.2/-5.14        | -5.68/-1.75       | -0.38/0.69        | 1.37/1.58         | 1.48/1.27         | 1.49/1.5          | 0.73/-0.63        | -1.61/-1.89       | -1.31/-1.35       | -1.56/-2.29       | -3.84/-6.12       |
| Θ(157.5°) | -6.74/-3.27   | -0.94/0.04      | -0.15/-0.83     | -1.45/-1.78     | -1.43/-1.08     | -1.41/-1.95     | -1.02/-0.45     | 0.35/0.68         | 0.79/0.46         | -0.33/-1.46       | -3.07/-5.4        | -4.84/-7.64       | -7.47/-5.6        | -4.37/-3.48       | -2.5/-1.39        | -0.33/0.42        | 0.65/0.38         | -0.29/-1.07       | -1.33/-1.38       | -1.4/-0.98        | -0.18/-0.22       | -0.99/-2.34       | -4.66/-8.3        | -9.82/-9.19       |
| Θ(165°)   | -4.1/-3.13    | -2.47/-2.43     | -2.63/-2.57     | -2.73/-3.36     | -3.93/-7.38     | -3.76/-2.16     | -2.2/-0.99      | -1.3/-0.65        | -0.8/-1.3         | -2.32/-3.57       | -4.4/-5.46        | -6.97/-6.95       | -6.78/-5.74       | -4.89/-4.1        | -3.5/-2.95        | -2.39/-2.08       | -2.23/-2.37       | -2.87/-3.45       | -3.02/-2.07       | -1.51/-1.24       | -1.25/-2.08       | -3.51/-5.02       | -6.39/-6.05       | -5.74/-4.98       |
| Θ(172.5°) | -4.31/-4.91   | -5.05/-4.87     | -5.07/-5.52     | -5.35/-4.91     | -4.46/-3.69     | -2.3/-1.13      | -0.42/-0.16     | -0.25/-0.74       | -1.47/-2.08       | -2.45/-2.96       | -3.77/-4.79       | -6.28/-7.35       | -7.89/-7.67       | -7.03/-5.69       | -4.71/-3.96       | -3.32/-2.89       | -2.69/-2.46       | -2.3/-1.93        | -1.49/-0.86       | -0.55/-0.65       | -1/-1.1           | -1.27/-1.62       | -2.17/-2.54       | -3.09/-3.6        |
| Θ(180°)   | -4.45/-5.34   | -5.6/-5.94      | -6.02/-5.46     | -4.92/-4.5      | -3.51/-1.81     | -0.49/0.02      | -0.64/-1.06     | -1.02/-0.79       | -0.97/-1.59       | -2.41/-3.59       | -5.6/-8.17        | -10.28/-11.89     | -11.51/-9.82      | -12.72/-10.81     | -11.51/-9.82      | -4.62/-3.6        | -2.72/-2.01       | -1.29/-0.61       | -0.1/0.21         | 0.38/0.37         | 0.33/0.22         | 0.02/-0.37        | -1.05/-1.68       | -2.46/-3.72       |
| Freq(Hz)  | 2.4835GPol.   | ThetaL          | -               | -               | -               | -               | -               | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| DG(dB)    | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -0.55/-0.18   | 1.13/0.33       | 0.33/0.41       | 0.21/-0.2       | -0.74/-1.42     | -2.31/-3.37     | -4.72/-6.54     | -8.71/-9.88       | -8.64/-6.67       | -4.46/-3.31       | -2.68/-1.72       | -0.91/-0.33       | 0.13/0.43         | 0.7/0.66          | 0.42/0.09         | -0.28/-0.54       | -0.96/-1.61       | -2.49/-3.76       | -5.47/-7.53       | -9.25/-9.87       | -8.29/-5.93       | -4.16/-2.8        | -1.85/-1.43       | -1.25/-0.82       |
| Θ(7.5°)   | 0.96/1.47     | 1.19/0.82       | 0.88/0.81       | 0.5/-0.19       | -1.17/-2.15     | -3.22/-4.46     | -6.7/-9.5       | -9.82/-9.95       | -8.44/-6.4        | -4.24/-2.58       | -1.75/-1.25       | -0.61/-0.02       | 0.36/0.76         | 1.01/0.93         | 0.73/0.57         | 0.50/0.45         | -0.0/-0.68        | -1.51/-2.7        | -3.41/-6.48       | -6.97/-9.32       | -6.52/-4.43       | -2.76/-1.51       | -2.04/0.57        | -0.1/-0.26        |
| Θ(15°)    | 1.36/1.87     | 2.05/1.46       | 0.78/0.69       | 0.5/-0.29       | -1.47/-2.84     | -4.35/-6.19     | -8.34/-9.85     | -9.15/-7.66       | -6.07/-4.71       | -3.27/-1.55       | -0.46/-0.14       | -0.20/0.5         | 0.28/0.16         | -0.35/-0.35       | -0.08/0.16        | 0.33/0.42         | 0.11/-0.52        | -1.4/-2.53        | -4.04/-5.81       | -7.16/0.9         | -4.17/-2.35       | -1.07/-0.23       | 0.45/1.12         | 1.36/1.14         |
| Θ(22.5°)  | 0.64/0.94     | 1.54/1.62       | 1.07/0.85       | 1.01/0.64       | -0.38/-1.78     | -3.41/-5.37     | -6.96/-9.66     | -5.92/-4.97       | -4.31/-3.73       | -2.77/-1.58       | -0.78/-0.31       | -0.39/-0.36       | -0.23/-0.27       | -0.66/-0.98       | -0.92/-0.72       | -0.5/-0.15        | -0.11/-0.56       | -1.37/-2.46       | -3.78/-5.05       | -5.37/-6.36       | -2.85/-1.45       | -0.41/0.2         | 0.61/1.03         | 1.41/1.43         |
| Θ(30°)    | 0.16/0.41     | 0.61/1.08       | 1.35/1.2        | 1.43/1.66       | 1.08/-0.15      | -1.66/-3.5      | -2.65/-6.62     | -4.09/-3.4        | -3.03/-2.87       | -2.79/-2.61       | -2.24/-1.85       | -1.81/-1.99       | -1.96/-1.45       | -1.85/-1.57       | -1.35/-0.9        | -0.31/-0.3        | -0.85/-1.82       | -3/-3.82          | -3.48/-2.54       | -1.64/-1.23       | -0.65/-0.38       | -0.28/-0.26       | -0.16/0.09        |                   |
| Θ(37.5°)  | -0.76/-0.48   | -0.23/-0.42     | 0.15/0.43       | 0.54/1.18       | 0.96/-0.08      | -1.45/-3.38     | -5.46/-5.98     | -5.31/-5.06       | -4.64/-3.92       | -3.39/-3.26       | -3.19/-2.75       | -2.08/-1.6        | -1.58/-1.5        | -1.32/-1.63       | -2.53/-2.87       | -2.48/-1.76       | -1.05/-0.79       | -1.08/-1.91       | -3.05/-3.46       | -2.66/-1.89       | -1.56/-1.49       | -1.57/-1.67       | -1.65/-1.35       | -0.81/-0.65       |
| Θ(45°)    | -1.98/-1.63   | -1.18/-1.72     | -1.71/-1.05     | -1.27/-1.1      | -1.08/-1.96     | -2.91/-3.63     | -3.19/-2.83     | -3.21/-4.73       | -5.16/-3.84       | -2.76/-2.39       | -2.45/-2.52       | -2.52/-2.33       | -2.06/-1.61       | -1.21/-1.09       | -1.8/-3.04        | -4.73/-4.21       | -2.13/-0.84       | -0.7/-1.38        | -2.25/-2.12       | -1.24/-0.85       | -1.19/-1.42       | -1.49/-1.62       | -1.8/-1.81        | -2.01/-2.26       |
| Θ(52.5°)  | -1.14/-1.14   | -0.84/-1.55     | -2.13/-1.52     | -1.66/-2.69     | -2.05/-2.66     | -3.38/-2.83     | -2.16/-2.3      | -2.52/-2.69       | -2.73/-2.38       | -2.17/-4          | -2.01/-3.04       | -5.25/-5.11       | -2.27/-0.1        | 0.65/0.07         | -1.21/-1.7        | -1.37/-1.46       | -1.91/-1.86       | -1.64/-1.86       | -1.84/-1.92       | -1.84/-1.92       | -1.84/-1.92       | -1.84/-1.92       | -1.84/-1.92       | -1.84/-1.92       |
| Θ(60°)    | -0.91/-1.27   | -0.97/-1.13     | -1.71/-1.17     | -1.75/-2.79     | -1.51/-1.72     | -2.61/-2.68     | -2.44/-2.11     | -1.32/-0.78       | -0.26/-0.29       | -1.19/-2.09       | -2.24/-2.63       | -2.85/-2.94       | -2.9/-2.52        | -2.13/-1.89       | -2.21/-3.32       | -4.74/-4.31       | -2.54/-1          | -0.38/-1.28       | -3.39/-4.49       | -4.33/-3.55       | -2.61/-1.21       | -0.98/-1.12       | -1.25/-1.46       | -1.29/-1.07       |
| Θ(67.5°)  | -2.34/-2.23   | -1.81/-1.45     | -1.06/-0.84     | -1.98/-3.32     | -2.62/-2.9      | -1.84/-1.28     | -1.35/-1.45     | -1.11/-1.03       | 0.18/0.21         | -0.43/-1.34       | -1.96/-2.28       | -2.21/-1.7        | -1.56/-1.45       | -1.54/-1.1        | -1.32/-2.51       | -3.88/-3.54       | -2.76/-2.1        | -2.1/-3.16        | -4.71/-5.19       | -3.83/-2.76       | -1.82/-1.48       | -1.82/-2.47       | -2.97/-2.99       | -3.32/-2.67       |
| Θ(75°)    | -2.15/-2.55   | -3.11/-3.2      | -2.88/-2.96     | -3.76/-4.09     | -4.13/-3.65     | -1.94/-1.22     | -1.24/-1.56     | -1.55/-0.6        | 0.17/0.05         | -0.43/-1.37       | -2.76/-3.22       | -3.83/-1.65       | -0.59/-0.46       | -0.89/-1.06       | -1.25/-1.15       | -1.19/-1.31       | -1.29/-0.96       | -1.26/-2.52       | -3.14/-2.85       | -2.42/-2.96       | -2.8/-2.92        | -2.79/-2.92       | -2.97/-2.5        |                   |
| Θ(82.5°)  | -1.78/-1.52   | -1.65/-2        | -3.19/-3.08     | -2.32/-3.16     | -4.46/-4.88     | -3.51/-2.2      | -1.8/-2.06      | -2.81/-2.49       | -1.48/-0.63       | -0.33/-0.84       | -2.05/-2.85       | -2.39/-1.84       | -1.77/-2.19       | -2.65/-2.45       | -1                |                   |                   |                   |                   |                   |                   |                   |                   |                   |



# 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    | -3.2/-7.46     | -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/-6.29     | -6.68/-7.26      | -4.9/-4.67        | -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     | -1.02/-3.09    | -2.14/-3.69    | -3.93/-5.13      | -7.87/-9.13      | -7.28/-4.96      | -3.08/-4.92      | -5.76/-6.27      | -14.52/-14.98    | -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/-2.77    | -4.75/-4.25    | -4.09/-9.03      | -11.69/-9.15     | -7.18/-4.64      | -1.78/-4.14      | -4.34/-4.74      | -10.19/-12.43    | -8.7/-5.12       | -3.8/-5.29       | -9.24/-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/-8.96     | -5.64/-8.67      | -4.84/-7.16      | -11.8/-11.97     | -9.85/-5.35      | -2.74/-4.03      | -8.14/-7.17      | -4.98/-9.37      | -5.5/-3.57        | -3.71/-1.45      | -2.09/-1.47      | -1.22/-4.88      | -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/-9.33     | -5.29/-5.01      | -8.01/-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    | -5.23/-1.03    | -2.07/-2.53    | -6.49/-2.73    | -3.44/-9.22    | -7.24/-12.7      | -12.72/-8.12     | -9.27/-11.87     | -8.6/-12.67      | -11.18/-10.54    | -14.21/-10.69    | -7.56/-6.53      | -12.28/-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     | -10.59/-11.76    | -15.82/-15.35    | -11.67/-14.3     | -12.24/-11.62    | -15.83/-11.5     | -8.81/-7.91      | -9.34/-4.34      | -5.38/-8         | -5.59/-3.17       | -4.26/-0.09      | -1.13/-2.39      | -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     | -12.95/-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/-7.95    | -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/-2.69      | -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     | -5.77/-0.82    | -2.52/-6.09    | -5.27/-2.72    | -2.58/-4.23      | -7.51/-12.39     | -14.83/-14.61    | -13.68/-10.88    | -13.75/-13.38    | -12.33/-14.18    | -11.56/-11.74    | -10.01/-6.38     | -7.61/-4.94      | -7.27/-10.21     | -4.96/-5.04       | -4.64/-3.62      | -1.93/-1.97      | -3.94/-3.51      | -2.78/-5.58      | -8.37/-9.41      | -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/-14.98    | -15.6/-14.46     | -12.13/-9.79     | -11.97/-14.15    | -14.76/-12.58    | -6.12/-4.47      | -6.43/-5.46      | -3.02/-8.74      | -4.4/-2.82        | -3.15/-2.46      | -4/-4.53         | -2.24/-0.55      | -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      | -10.7/-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    | -1.92/-1.9     | -2.52/-5.65    | -13.19/-13.7   | -10.74/-8.74     | -11.57/-11.89    | -14.83/-11.85    | -12.84/-12.04    | -12.25/-13.05    | -14.86/-15.43    | -15.67/-15.72    | -15.14/-11.91    | -9.35/-6.79      | -4.93/-6.47      | -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/-8.9     | -9.31/-9.31      | -5.42/-6.51      | -6.93/-7.24      | -8.58/-11.1      | -11.62/-13.36    | -13.29/-12.38    | -8.59/-7.05      | -5.5/-4.53       | -3.78/-3.95      | -4.23/-0.43      | -4.11/-4.13       | -5.12/-5.85      | -6.67/-9.97      | -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      | -8.27/-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)  | 5.63GPol      | ThetaL         | PhiL           | +              | -              | +              | -              | +                | -                | +                | -                | +                | -                | +                | -                | +                | -                | +                 | -                | +                | -                | +                | -                | +                |
| DG(dB)    | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°)  | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -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/-1.26    | -2.24/-3.57    | -3.1/-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   | -1.21/-0.91    | -1.63/-1.15    | -1.52/-2.45    | -2.58/-2.77    | -3.19/-3.79    | -4.92/-4.16    | -6.25/-5.28      | -5.1/-5.08       | -4.32/-5.35      | -4.9/-5.83       | -6.09/-6.56      | -5.59/-6.28      | -5.29/-5.55      | -7.62/-6.09      | -5.48/-5.54      | -6.31/-8.82      | -12.92/-14.06     | -12.9/-10.42     | -7/-9.66         | -5.39/-4.65      | -3.64/-2.72      | -2.04/-2.05      |                  |
| Θ(22.5°)  | -1.23/-1.57   | -1.99/-1.33    | -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       | -5.4/-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/-4.25    | -6.21/-3.61    | -7.17/-2.02    | -2.19/-1.4     | -2.33/-2.94      | -3.45/-8.35      | -5.06/-3.71      | -3.64/-7.24      | -2.76/-2.19      | -1.81/-2.63      | -3.51/-4.87      | -5.35/-5.07      | -3.48/-3.33      | -3/-3.47         | -3.7/-3.19        | -2.62/-2.27      | -0.84/-5.04      | -1.26/-1.12      | -2.1/-1.62       | -1.01/-0.5       |                  |
| Θ(37.5°)  | 0.36/-0.25    | 0.41/-0.51     | 0.63/-0.38     | -0.23/-1.45    | -2.95/-2.63    | -1.48/-3.13    | -6.65/-6.4     | -6.75/-8.3       | -10.48/-11.29    | -9.43/-10.43     | -11.11/-11.21    | -9.89/-9.4       | -8.86/-6.6       | -5.19/-4.6       | -4.77/-5.08      | -6.16/-8.07      | -8.03/-6.57      | -7.99/-7.56       | -7.54/-7.59      | -5.78/-4.54      | -3.42/-4.14      | -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   | -0.74/-1.82    | -1.03/-0.09    | -1.78/-0.92    | -1.22/-3.61    | -1.7/-2.02     | -2.19/-1.4     | -2.33/-2.94      | -3.45/-8.35      | -5.06/-3.71      | -3.64/-7.24      | -2.76/-2.19      | -1.81/-2.63      | -3.51/-4.87      | -5.35/-5.07      | -3.48/-3.33      | -3/-3.47         | -3.7/-3.19        | -2.62/-2.27      | -0.84/-5.04      | -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     | -0.44/-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      | -0.73/-0.02      | 1.14/-0.55       | -0.96/-3.57      | -5.21/-5.67      | -6.5/-3.03       | -3.08/-1.89      | -2.04/-1.65       | -2.74/-3.61      | -3.95/-3.14      | -1.51/-1.23      | -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/-43         | -2.61/-0.66      | -0.01/-0.5       |
| 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/-0.23     | -2.33/-1.69      | -0.78/-2.25      | -2.7/-2.41       | -2.18/-1.5       | 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/-3.32      | -1.01/-0.1       | -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      | <b>0.38/-1.81</b> | 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     | -2.8/-3.48     | -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      | -3.43/-3.6       | -4.83/-5.73      | -4.12/-4.32      | -2.42/-1.3        | -4.87/-7.42      | -4.2/-2.43       | -2.57/-1.82      | -1.9/-2.74       | -4.22/-3.07      | -2.08/-2.03      |
| Θ(97.5°)  | -1.16/-2.32   | -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/-6.13      | -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/-1.01      | -1.68/-1.17      | -2.85/-6.33       | -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    | -5.82/-5.47    | -5.93/-3.75    | -4.03/-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/-5.86      | -5.62/-4.15      | -2.42/-2.69      | -2/-2.72          | -3.68/-5.37      | -4.18/-6.33      | -4.66/-2.71      | -2.68/-2.56      | -2.34/-1.93      |                  |
| Θ(112.5°) | -4.01/-7.65   | -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      | -6.36/-4.06      | -5.31/-3.38      | -3.13/-2.62      | -3.67/-2.99      | -5.83/-4.37      | -7.56/-6.96      | -8.66/-7.1       | -11.39/-9.46     | -13.63/-7.81     | -11.6/-5.88       | -3.67/-7.11      | -3.82/-0.59      | -0.88/-2.58      | -4.46/-2.54      | -5.92/-3.54      |                  |
| Θ(120°)   | -7.97/-4.42   | -5.53/-5.44    | -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       | -4.69/-6.24      | -6.93/-5.84      | -4.03/-2.79      | -5.12/-4.25      | -2.74/-1.52      | -3.11/-6.43      | -5.71/-7.98      | -3.61/-3.86      | -3.53/-5.75       | -4.35/-1.7       | 1.26/-0.88       | -2.6/-0.23       | -1.56/-2.66      | -3.84/-5.18      | -9.1/-11.05      |
| Θ(127.5°) | -4.51/-3.6    | -3.49/-4.42    | -7             |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                  |                  |                  |                  |                  |                  |



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

Appendix A.2

|            |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ (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     |
| Θ (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     |
| Θ (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        |
| Θ (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     |
| Θ (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      | -9.05/-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      |
| Θ (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     |
| Θ (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        |
| Θ (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/-4.39          | -4.07/-5.61       | -6.58/-7.14       | -7/-6.56          |
| Θ (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        |
| Θ (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     | -10.77/-10.13     | -9.99/-10.13      |
| Freq(Hz)   | 5.785GPol.    | Theta-          | -/-             | -/-             | -/-             | -/-             | -/-             | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               | -/-               |
| DG(dB)     | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ (0°)     | -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       |
| Θ (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       |
| Θ (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       |
| Θ (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         |
| Θ (30°)    | 0.92/2.16     | 2.46/3.33       | 2.91/9.7        | 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/-5.25       | -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         |
| Θ (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       | -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         |                   |
| Θ (45°)    | -1.83/-2.19   | -2.63/-1.64     | -2.87/-1.52     | -1.98/-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       |
| Θ (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       |
| Θ (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       |
| Θ (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         |
| Θ (75°)    | -1.64/-1.36   | -0.97/-0.17     | -0.3/-0.16      | -0.35/-0.87     | 0.81/1.41       | -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        |
| Θ (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        | 1.93/2.05         | 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       |
| Θ (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         |
| Θ (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       |
| Θ (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/-6.01       | -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       |
| Θ (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       |
| Θ (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       |
| Θ (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       |
| Θ (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       |
| Θ (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       |
| Θ (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       |
| Θ (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       |
| Θ (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      | -12.34/-10.97     | -5.73/-3.39       | -1.72/-1.87       | -1.29/-1.17       | -1.34/-0.94       | -1.98/-2.76       |
| Θ (172.    |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |



## Gain Result

Sporton International Inc. Hsinchu Laboratory



# Radiated Composite Gain Data

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

# Appendix A.2

|           |               |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Θ(22.5°)  | -10.02/-7.64  | -5.51/-3.86    | -3.88/-4.36    | -3.29/-1.62    | -0.99/-1.61    | -3.11/-3.89    | -3.51/-3.69    | -3.57/-4.16      | -5.67/-7.76      | -9.4/-10.55      | -14.76/-19.06    | -15.45/-12.66    | -10.51/-7.56     | -6.05/-5.33      | -4.96/-5.12      | -5.65/-5.68      | -5.5/-4.49       | -2.35/-0.55      | 0.41/0.85        | 1.02/0.66        | -0.32/-1.53      | -2.75/-4.42      | -6.72/-9.68      | -13.21/-12.3     |
| Θ(30°)    | -11.36/-7.49  | -4.32/-3.17    | -3.15/-2.7     | -2.1/-1.3      | -1.33/-2.59    | -3.81/-3.27    | -2.29/-3.62    | -1.03/-1.62      | -2.78/-4.23      | -6.92/-13.55     | -19.01/-18.14    | -13.22/-9.96     | -8.27/-7.57      | -7.24/-5.93      | -4.29/-3.67      | -3.77/-4.01      | -4.65/-4.95      | -2.48/-0.02      | 1.23/1.69        | 1.5/0.48         | -0.88/-3.25      | -4.87/-7.22      | -10.39/-16.26    | -19.41/-15.26    |
| Θ(37.5°)  | -13.42/-9.9   | -4.93/-3.69    | -4.05/-2.03    | -0.79/-0.96    | -2.11/-3.66    | -3.28/-2.07    | -1.84/-2.67    | -3.23/-4.04      | -6.85/-8.11      | -11.51/-12.65    | -8.87/-8.18      | -10.01/-9.93     | -8.95/-10.36     | -13.99/-13.51    | -9.51/-6.98      | -5.91/-5.22      | -5.74/-7.3       | -4.77/-1.81      | -0.57/-0.37      | -1.04/-2.07      | -2.94/-3.96      | -6.43/-8.58      | -10.99/-14.4     | -17.16/-14.72    |
| Θ(45°)    | -14.29/-12.07 | -6.39/-4.16    | -4.33/-1.53    | 0.53/0.32      | -1.69/-3.09    | -1.29/-0.4     | -1.1/-2.4      | -3.21/-5.03      | -7.94/-13.38     | -14.58/-9.18     | -5.83/-4.92      | -6.76/-9.65      | -10.17/-11.18    | -16.08/-18.77    | -16.46/-10.04    | -6.92/-4.66      | -3.9/-5.69       | -4.77/-1.69      | -0.43/-0.54      | -1.36/-1.66      | -2.08/-3.45      | -4.82/-6.44      | -8.95/-10.94     | -13.08/-15.05    |
| Θ(52.5°)  | -14.53/-12.78 | -8.23/-5.1     | -3.27/-0.22    | 1.71/-1.2      | -1.23/-1.71    | 0.26/0.61      | -0.44/-1.48    | -1.96/-4.73      | -11.61/-10.46    | -6.9/-5.52       | -5.21/-5.1       | -6.58/-10.24     | -11.64/-10.21    | -14.74/-17.85    | -17.86/-15.55    | -9.14/-4.49      | -2.47/-3.68      | -3.34/-0.7       | 0.34/0.07        | -0.35/-0.28      | -1.19/-2.16      | -3.03/-5.08      | -7.49/-9.18      | -11.08/-14.86    |
| Θ(60°)    | -14.87/-17.03 | -12.49/-7.39   | -4.52/-1.79    | -0.03/-0.77    | -2.01/-0.87    | -0.06/-0.59    | -2.19/-3.26    | -1.36/-3.93      | -3.77/-3.93      | -6.24/-8.96      | -10.26/-11.68    | -15.34/-14.72    | -15.78/-17.67    | -17.08/-17.65    | -18.11/-9.46     | -4.29/-3.82      | -3.39/-1.7       | -1.33/-1.66      | -1.31/-0.87      | -2.54/-2.56      | -5.09/-6.93      | -7.18/-8.73      | -10.73/-12.5     |                  |
| Θ(67.5°)  | -18.99/-18.36 | -15.58/-9.19   | -5.84/-2.6     | -1.2/-1.52     | -0.27/0.2      | -1.09/-2.31    | -2.22/-1.61    | -2.07/-5.64      | -9.35/-6.55      | -5.63/-6.8       | -9.96/-13.31     | -13.31/-12.33    | -12.21/-10.81    | -13.65/-18.44    | -12.79/-10.61    | -12.86/-13.31    | -5.91/-4.58      | -2.8/-0.59       | -0.97/-2.15      | -1.53/-0.61      | -1.15/-2.5       | -4.78/-6.71      | -8.36/-8.67      | -10.5/-12.27     |
| Θ(75°)    | -17.09/-18.42 | -18.86/-13.27  | -8.06/-3.79    | -2.49/-0.27    | 0.91/-0.81     | -2.05/-0.78    | -1.03/-2.5     | -3.6/-4.91       | -6.59/-5.9       | -7.79/-12.27     | -19.11/-18.19    | -18.94/-18.57    | -14.21/-10.33    | -10.91/-18.72    | -15.74/-8.78     | -8.13/-14.45     | -7.64/-5.26      | -3.21/-0.57      | -0.48/-1.88      | -2.11/-1.13      | -1.26/-2.97      | -4.83/-6.33      | -6.79/-7.75      | -9.09/-12.14     |
| Θ(82.5°)  | -11.89/-15.62 | -18.05/-13.42  | -7.04/-3.03    | -0.36/-1.38    | 0.80/-1.8      | 0.91/0.17      | -2.61/-2.1     | -0.93/-3.99      | -6.59/-4.87      | -8.19/-13.71     | -17.83/-13.14    | -11.92/-15.03    | -12.7/-7.48      | -7.65/-10.5      | -18.28/-8.4      | -4.89/-8.95      | -7.17/-4.61      | -2.25/0.54       | 0.51/-0.56       | 0.07/0.2         | -0.97/-1.4       | -2.94/-4.39      | -5.19/-7.08      | -8.71/-10.56     |
| Θ(90°)    | -17.03/-18.36 | -18.9/-14.83   | -10.48/-4.77   | -1.13/-0.72    | 0.54/0.77      | -1.67/-2.08    | -2.43/-2.13    | -2.33/-6.1       | -6.82/-5.19      | -10.2/-18.34     | -19.15/-15.21    | -12.01/-12.84    | -13.21/-7.46     | -7.07/-8.32      | -12.83/-16.4     | -7.1/-8.82       | -7.79/-5.48      | -3.87/-0.89      | -0.68/-2.5       | -1.24/-0.42      | -1.68/-2.36      | -4.45/-6.76      | -8.18/-10.21     | -8.94/-11.01     |
| Θ(97.5°)  | -15.21/-17.42 | -19.05/-17.67  | -8.86/-2.35    | -3.20/-7.3     | 1.81/0.04      | -0.62/0.42     | -2.42/-1.3     | 0.1/-2.31        | -4.64/-5.24      | -11.5/-12.87     | -10.55/-10.71    | -10.47/-14.1     | -12.51/-6.23     | -5.96/-6.68      | -12.51/-12.83    | -5.59/-7.73      | -6.24/-3.79      | -3.02/0.13       | 0.98/-1.24       | -0.38/0.6        | -0.66/-1.64      | -3.09/-4.68      | -5.99/-7.12      | -8.84/-12.16     |
| Θ(105°)   | -11.63/-15.18 | -18.23/-13.27  | -6.12/-3.54    | -1.16/0.53     | 1.23/0.73      | -0.39/-0.55    | -2.27/-1.31    | -1.38/-6.28      | -7.97/-9.69      | -13.4/-16.73     | -10.73/-9.67     | -9.71/-12.75     | -16.93/-9.25     | -8.19/-9.52      | -18.34/-11.21    | -5.56/-7.74      | -8.4/-28         | -3.63/-2.14      | -0.48/-1.7       | -1.86/-0.98      | -1.49/-2.7       | -6.77/-5.69      | -7.07/-8.88      | -8.88/-9.45      |
| Θ(112.5°) | -12/-15.09    | -15.35/-9.43   | -7.13/-3.43    | 0.21/1.31      | 1.17/-0.76     | -0.25/0.66     | -2.99/-3.25    | -1.58/-2.45      | -2.35/-1.98      | -5.01/-14.67     | -15.73/-12.03    | -12.5/-14.97     | -14.3/-9.04      | -7.97/-9.97      | -16.07/-6.8      | -3.39/-5         | -6.51/-3.72      | -2.18/-1.07      | 0.06/-1.05       | -0.87/-0.22      | -0.93/-2.58      | -3.58/-3.42      | -4.51/-5.79      | -6.22/-7.74      |
| Θ(120°)   | -12.35/-13.98 | -12.93/-9.15   | -4.97/-1.15    | 0.71/0.62      | 0.06/0.58      | 0.91/-1.57     | -6.31/-1.01    | 0.76/0.71        | -2/-2.37         | -4.31/-9.53      | -11.61/-10.46    | -12.77/-16.39    | -16.6/-15.25     | -12.73/-13.34    | -15.08/-7.83     | -5/-5.43         | -5.08/-3.69      | -3.2/-2.39       | -0.45/-1.31      | -3.32/-2.84      | -1.63/-2.75      | -5.28/-6.41      | -6.06/-7.83      | -7.76/-9.42      |
| Θ(127.5°) | -9.19/-8.54   | -6.11/-3.53    | -2.01/-0.84    | -0.13/0.46     | 0.94/-0.36     | -2.29/-1.58    | -0.29/-1.37    | 1.37/0.71        | -3.45/-4.35      | -6.28/-1.78      | -10.79/-9.11     | -12.05/-14.15    | -13.42/-16.73    | -15.87/-14.23    | -8.67/-4.86      | -4.32/-5.41      | -3.27/-0.91      | -0.88/-2.39      | -0.38/0.58       | -0.36/-2.39      | -3.23/-2.76      | -3.48/-4.16      | -4.8/-5.69       | -6.74/-7.96      |
| Θ(135°)   | -9.61/-7.55   | -5.7/-4.46     | -3.18/-1.14    | 0.59/0.74      | -1.11/-1.89    | 0.78/1.6       | -0.39/-2.43    | -3.57/-6.71      | -10.09/-9.09     | -9.58/-15.46     | -18.52/-16.27    | -16.77/-17.39    | -17.91/-16.91    | -16.8/-13.1      | -7.81/-4.75      | -4.63/-6.14      | -4.81/-1.93      | -0.6/-1.32       | -1.65/-1.83      | -2.33/-2.97      | -3.46/-4.45      | -4.19/-6.33      | -10.28/-13.02    | -13.44/-11.5     |
| Θ(142.5°) | -11.45/-6.68  | -5.6/-2.56     | -0.67/0.59     | 0.69/-0.44     | -0.61/-1.16    | 1.93/0.53      | -3.19/-6.11    | -6.45/-7.21      | -6.6/-5.56       | -5.56/-7.29      | -11.42/-16.38    | -19.2/-17.78     | -14.17/-11.16    | -6.85/-4.07      | -3.63/-3.71      | -2.94/-1.61      | -0.51/0.01       | 0.92/0.88        | -0.49/-2.58      | -4.95/-6.43      | -3.76/-4.26      | -5.71/-8.35      | -13.62/-12       | -19.16/-22       |
| Θ(150°)   | -9.53/-8.48   | -6.13/-3.18    | -0.67/-0.59    | -0.88/-0.84    | 0.18/0.81      | -8.1/-7.9      | -5.87/-5.09    | -4.75/-5.79      | -5.75/-6.83      | -9.67/-15.4      | -18.18/-18.39    | -19.24/-17.71    | -13.34/-12.48    | -10.34/-7.35     | -5.69/-7.1       | -2.89/-2.33      | -2.32/-2.35      | -1.02/0.04       | -0.05/-0.93      | -3.7/-64         | -10.64/-14.21    | -14.78/-14.11    | -13.79/-11.8     |                  |
| Θ(157.5°) | -7.42/-5.06   | -2.91/-2.12    | -2.74/-3.17    | -2.32/-0.85    | -0.06/-0.69    | -2.92/-5.83    | -6.16/-4.19    | -2.89/-2.74      | -3.08/-4.16      | -6.2/-8.62       | -12.12/-18.8     | -18.18/-24       | -19.45/-15.19    | -13.02/-11.57    | -9.52/-6.96      | -4.53/-2.68      | -1.59/-1.14      | -1.28/-1.69      | -1.03/0.06       | 0.5/0.61         | 0.36/-0.7        | -2.44/-4.69      | -8.25/-13.04     | -11.79/-8.42     |
| Θ(165°)   | -9.11/-8.82   | -8.33/-8.38    | -7.35/-4.41    | -1.98/-0.96    | -1.61/-3.69    | -5.68/-5.13    | -5.29/-3.42    | -4.64/-4.21      | -5.78/-7.91      | -11.84/-17.27    | -18.22/-18.07    | -16.81/-16.55    | -15.98/-16.11    | -14.98/-12.5     | -10.42/-8.2      | -5.9/-4.22       | -3.17/-2.55      | -2.35/-2.47      | -2.24/-1.6       | -1.38/-1.44      | -1.47/-2.42      | -3.62/-4.55      | -5.67/-5.97      | -6.72/-7.71      |
| Θ(172.5°) | -15.43/-18.29 | -15.04/-10.16  | -7/-4.47       | -3.26/-3.72    | -5.58/-6.57    | -5.02/-3.46    | -2.83/-2.49    | -3.17/-4.87      | -7.36/-8.92      | -8.57/-8.15      | -8.21/-8.51      | -9.74/-12.05     | -14.41/-17.12    | -17.09/-12.32    | -9.33/-7.35      | -5.68/-4.29      | -3.23/-2.53      | -2.08/-1.8       | -1.5/-1.04       | -0.87/-1.22      | -1.78/-2.12      | -2.42/-3.12      | -4.51/-5.91      | -8.02/-10.24     |
| Θ(180°)   | -17.75/-18.39 | -13.3/-10.1    | -7.82/-6.58    | -6.96/-8.42    | -8.02/-5.33    | -3.35/-2.77    | -3.73/-3.6     | -4.9/-6.04       | -6.46/-4.39      | -3.78/-3.85      | -4.24/-5.28      | -9.7/-12.12      | -15.38/-18.56    | -17.71/-12.64    | -9.27/-4.46      | -5.97/-4.64      | -3.54/-2.78      | -2.28/-1.86      | -1.63/-1.5       | -1.42/-1.54      | -1.84/-2.3       | -2.82/-3.76      | -5.56/-7.44      | -9.73/-14.1      |
| Freq(Hz)  | 2.4835GPol.   | ThetaAnt.1     | +              | -              | +              | -              | +              | -                | +                | -                | +                | -                | +                | -                | +                | -                | +                | -                | +                | -                | +                | -                | +                | -                |
| Gain      | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -5.12/-4.39   | -4.13/-3.73    | -3.47/-3.6     | -4.19/-4.98    | -5.75/-6.59    | -7.74/-9.16    | -11.26/-14.42  | -17.96/-17.94    | -18.91/-11.96    | -8.46/-7.36      | -7.07/-5.52      | -4.16/-3.6       | -3.4/-2.93       | -2.72/-2.9       | -3.55/-3.97      | -4.21/-4.51      | -5.08/-6.14      | -7.71/-9.91      | -12.89/-16.9     | -18.01/-17.74    | -17.65/-14.15    | -11.54/-9.33     | -7.71/-6.92      | -6.49/-5.5       |
| Θ(7.5°)   | -0.77/0.2     | -0.67/-0.14    | -1.38/-1.34    | -1.64/-4.23    | -3.46/-6.37    | -6.03/-7.67    | -9.88/-12.17   | -15.16/-42       | -10.91/-6.33     | -9.01/-6.56      | -5.83/-5.97      | -5.72/-5.07      | -4.71/-3.94      | -3.32/-3.33      | -4/-4.2          | -3.85/-3.62      | -3.97/-4.89      | -6.28/-8.43      | -11.65/-16.71    | -18/-18.63       | -12.05/-9.07     | -7.41/-5.73      | -3.45/-1.93      | -3.63/-3.82      |
| Θ(15°)    | -8.0/0.45     | 0.93/-1.01     | -1.05/-0.79    | -0.65/-1.46    | -2.74/-4.13    | -5.68/-7.61    | -9.82/-11.55   | -11.91/-11.27    | -10.19/-10.5     | -7.33/-4.99      | -6.82/-4.33      | -5.77/-5.96      | -5.43/-6.03      | -7.79/-8.14      | -7.64/-7.02      | -6.11/-4.96      | -4.47/-4.77      | -5.74/-7.62      | -10.61/-14.57    | -16.21/-12.03    | -8.47/-11.7      | -4.81/-3.93      | -3.05/-1.78      | -1.29/-1.62      |
| Θ(22.5°)  | -3.11/-2.5    | -1.26/-1.15    | -2.5/-2.91     | -2.12/-2.34    | -3.7/-5.41     | -7.21/-9.57    | -12.11/-12.98  | -11.67/-10.36    | -9.5/-8.71       | -7.35/-5.88      | -5.11/-5.17      | -6.19/-11.7      | -7.05/-7.24      | -8.76/-10.7      | -11.86/-12.62    | -12.19/-9.39     | -7.22/-6.48      | -6.82/-8.29      | -10.88/-13.41    | -12.73/-9.95     | -7.63/-5.69      | -4.32/-3.65      | -3.18/-2.32      | -1.49/-1.49      |
| Θ(30°)    | -3.89/-0.44   | -4.49/-3.95    | -3.92/-5.06    | -4.69/-3.75    | -4.6/-6.66     | -8.8/-11.53    | -14.9/-16.64   | -11.12/-9.26     | -8.25/-7.69      | -7.38/-6.96      | -6.43/-6.4       | -7.95/-10.96     | -12.71/-6.02     | -10.09/-12.1     | -14.11/-14.73    | -16.93/-14.94    | -10.02/-7.66     | -6.92/-7.71      | -9.91/-1.88      | -10.2/-7.82      | -6.27/-6.38      | -5.55/-5.07      | -4.81/-6.45      | -4.32/-9.33      |
| Θ(37.5°)  | -4.39/-4.47   | -4.87/-6.82    | -6.23/-6.79    | -8.07/-6.34    | -6.55/-8.62    | -10.27/-12.56  | -16.23/-17.05  | -14.17/-12.28    | -11.16/-10.38    | -10.49/-11.24    | -11.56/-11.04    | -10.49/-10.57    | -11.76/-11.61    | -10.5/-11.57     | -16.14/-18.88    | -19.44/-17.75    | -14.44/-11.63    | -10.49/-11.08    | -13.43/-14.81    | -12.05/-9.69     | -8.29/-7.47      | -7.32/-7.22      | -6.76/-5.51      | -4/-3.82         |
| Θ(45°)    | -4.36/-3.95   | -3.63/-6.05    | -7.48/-6.78    | -9.17/-9.1     | -8.77/-9.72    | -10.37/-10.69  | -14.44/-16.78  | -15.84/-15.41    | -13.26/-12.33    | -12.32/-12.58    | -12.69/-12.48    | -12.61/-11.99    | -11.79/-9.8      | -8.55/-8.07      | -9.23/-11.17     | -16.31/-18.39    | -13.5/-10.42     | -9.91/-11.52     | -14.98/-16.37    | -13.02/-10.65    | -9.15/-7.37      | -5.99/-5.44      | -5.09/-4.45      | -4.47/-8.45      |
| Θ(52.5°)  | -5.33/-5.28   | -4.03/-5.28    | -7.4/-6.12     | -8.94/-14.39   | -9.55/-8.36    | -8.55/-10.82   | -15.12/-17.36  | -15.25/-19.12    | -9.68/-9.57      | -11.64/-14.34    | -15.95/-16.16    | -15.47/-15.26    | -15.06/-13.04    | -10.94/-9.07     | -8.24/-8.41      | -9.77/-13.17     | -1.359/-9.7      | -8.47/-10.41     | -15.16/-5.4      | -13.24/-10.96    | -8.94/-6.27      | -4.73/-4.7       | -5.28/-5.38      | -4.94/-6.14      |
| Θ(60°)    | -9.83/-10.97  | -8.24/-7.58    | -8.21/-6.44    | -9.15/-17.32   | -10.95/-10.98  | -13.3/-13.7    | -15.47/-16.27  | -7.05/-7.64      | -11.73/-15.3     | -17.44/-19.14    | -19.12/-19.4     | -19.4/-16.1      | -13.51/-11.85    | -11.97/-12.96    | -12.75/-13.47    | -17.39/-15.35    | -11.96/-12.83    | -17.5/-19.07     | -17.39/-13.46    | -11.51/-7.54     | -7.47/-8.15      | -8.18/-9.04      | -9.99/-10.08     |                  |
| Θ(67.5°)  | -15.78/-15.67 | -12.2/-10.28   | -8.55/-7.47    | -11.55/-18.72  | -15.22/-17.83  | -13.02/-11.41  | -13.27/-14.29  | -13.35/-11.5     | -9.89/-10.56     | -12.86/-16.17    | -18.54/-19.03    | -18.16/-15.8     | -17.4/-18.3      | -18.62/-12.21    | -10.21/-11.03    | -13.32/-15.86    | -16.52/-17.92    | -16.29/-16.66    | -17.13/-18.81    | -18.12/-16.12    | -11.01/-8.35     | -8.39/-10.44     | -12.81/-13.88    | -17.03/-16.32    |
| Θ(75°)    | -15.69/-16.12 | -14.13/-12.58  | -10.99/-11.92  | -14.81/-16.24  | -17.53/-17.68  | -11.46/-       |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |



# Radiated Composite Gain Data

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

# Appendix A.2

|           |               |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Θ(75°)    | -10.95/-9.82  | -9.7/-1.74     | -5.77/-0.07    | -1.56/-3.84    | -0.87/-0.47    | 1.23/-3.02     | -1.16/-3.18    | -4.49/-4.94      | -11.65/-14.5     | -10.6/-5.87      | -2.59/-4.24      | -4.84/-5.86      | -16.79/-17.89    | -9.43/-5.56      | -3.3/-7.82       | -11.75/-4.9      | -4.73/-8.49      | -3.74/-1.96      | -1.94/-0.38      | 0.05/-1.7        | -1.29/-3.05      | -4.51/-7.63      | -8.68/-8.5       | -17.93/-18.41    |
| Θ(82.5°)  | -10.8/-8.63   | -6.06/-9.06    | -7.31/-3.34    | -0.63/-4.57    | -2.83/-8.1     | -1.74/-0.84    | -3.17/-2.49    | -3.45/-9.38      | -11.86/-8.84     | -7.14/-5.66      | -2.46/-7.12      | -6.99/-7.84      | -18.93/-19.15    | -9.34/-3.8       | -2.02/-5.56      | -11.24/-4.48     | -4.73/-10.5      | -2.78/-2.15      | -3.1/-0.66       | -1.23/-1.91      | -0.69/-2.53      | -4.58/-6.94      | -8.1/-9.91       | -17.77/-13.54    |
| Θ(90°)    | -11.73/-7.85  | -5.27/-5.99    | -18.08/-2.44   | -2.74/-3.66    | -2.31/-1.77    | 0.57/-6.16     | 1.24/-5.64     | -3.53/-4.26      | -18.75/-13.69    | -10.13/-8.46     | -5/-1.28         | -5.46/-9.85      | -18.59/-14.7     | -10.24/-3.65     | -1.45/-4.35      | -12.41/-5.98     | -3.83/-13.03     | -4.15/-1.89      | -1.26/-1.4       | -1.82/-0.61      | -0.23/-4.4       | -4/-5.84         | -8.06/-12.66     | -14.74/-19.32    |
| Θ(97.5°)  | -12.77/-8.33  | -6.82/-7.13    | -12.68/-3.79   | -1.6/-2.06     | -4.46/-0.79    | -1.52/-1.23    | -1.54/-0.1     | -18.51/-4.37     | -9.16/-10.28     | -8.75/-10.68     | -9.86/-14.52     | -10.17/-14.35    | -16.4/-14.41     | -15.54/-7.01     | -3.9/-4.65       | -10.56/-6.72     | -5.63/-14.57     | -3.62/-2.09      | -2.73/-0.45      | -1.91/-2.04      | -0.23/-3.04      | -4.18/-7.67      | -8.49/-10.14     | -18.56/-18.35    |
| Θ(105°)   | -15.43/-8     | -6.18/-9.22    | -15.29/-4.44   | -0.8/-2.63     | -4.92/-0.4     | -0.64/-1.39    | -5.04/-0.85    | -2.32/-10.58     | -9.72/-17.3      | -17.5/-11.1      | -13.8/-16.42     | -7.94/-13.47     | -11.81/-10.66    | -16.12/-10.36    | -6.61/-5.54      | -12.77/-5.57     | -5.38/-4.86      | -5.42/-1.76      | -3.2/-0.13       | -0.69/-1.43      | -0.49/-3.21      | -4.23/-8.72      | -8.49/-10.46     | -13.21/-17.62    |
| Θ(112.5°) | -14.68/-9.2   | -10.99/-16.98  | -10.02/-2.29   | -1.91/-3.3     | -2.34/-1.03    | 0.86/-9.38     | 1.14/-5.16     | -6.25/-6.28      | -10.13/-10.1     | -12.9/-18.52     | -17.45/-18.95    | -17.33/-18.79    | -13.04/-18.58    | -11.11/-11.84    | -6.5/-10.44      | -6.5/-10.44      | -6.5/-10.44      | -4.5/-0.17       | -1.2/-1.19       | -1.62/-2.37      | -2.51/-4.65      | -8.62/-10.94     | -14.32/-19.03    |                  |
| Θ(120°)   | -12.01/-13.84 | -16.72/-14.5   | -6.42/-2.27    | -2.01/-4.32    | -4.93/-1.52    | -3.57/-1.52    | -4.86/-0.74    | -5.1/-10.73      | -7.65/-10.48     | -10.28/-12.03    | -18.84/-17.97    | -14.6/-18.02     | -14.01/-12.83    | -18.38/-15.23    | -8.34/-9.84      | -11.25/-2.77     | -3.75/-9.65      | -5.5/-3.03       | -3.91/-0.71      | -0.24/-1.56      | -2.68/-1.46      | -5.81/-5.93      | -5.51/-7.33      | -11.7/-14.24     |
| Θ(127.5°) | -15.21/-14.96 | -19.19/-5.61   | -2.45/-3.87    | -3.26/-7.86    | -1.1/-0.91     | -0.35/-4.31    | -0.45/-4.91    | -5.2/-6          | -14.5/-7.22      | -8.32/-7.43      | -8.54/-13.79     | -16.4/-9.88      | -18.94/-13.87    | -14.89/-13.93    | -7.85/-18        | -6.08/-4.3       | -4.76/-10.4      | -5.65/-4.19      | -4.16/-0.13      | -0.43/-2.29      | -1.14/-2.43      | -4.42/-5.1       | -7.06/-10.34     | -12.03/-18.48    |
| Θ(135°)   | -17.57/-10.26 | -8.79/-5.9     | -3.28/-4.46    | -4.69/-7.28    | 0.31/-2.74     | -0.21/-1.25    | -8.25/-2.05    | -1.96/-3.17      | -6.18/-15.95     | -18.03/-10.92    | -11.29/-14.76    | -12.93/-14.22    | -17.02/-15.42    | -18.28/-14.42    | -18.98/-9.11     | -4.58/-2.71      | -3.61/-12.34     | -4.99/-3.42      | -3.57/-1.45      | 0.35/-0.81       | -3.11/-2.09      | -2.99/-4.86      | -7.91/-10.05     | -11.67/-13.05    |
| Θ(142.5°) | -10.36/-6.9   | -5.67/-7.9     | -7.24/-5.96    | 9.37/-1.74     | -4.41/-0.92    | -1.11/-5.1     | -3.84/-1.11    | -2/-3.91         | -6.34/-13.12     | -18.43/-18.58    | -17.82/-12.83    | -17.27/-15.74    | -12.68/-16.97    | -12.57/-12.31    | -12.89/-6.93     | -6.67/-4.9       | -6.97/-9.82      | -6.39/-3.68      | -3.72/-2.52      | 0.06/-0.97       | -2.26/-3.61      | -3.38/-4.57      | -7.33/-11.7      | -19.22/-19.55    |
| Θ(150°)   | -17.68/-19.4  | -12.59/-13.92  | -12.95/-5.54   | -5.74/-2.35    | 0.5/-0.16      | -2.21/-0       | -1.28/-4.77    | -8.14/-8.52      | -9.25/-11.69     | -17.72/-17.49    | -18.31/-17.96    | -18.28/-13.17    | -17.43/-16.56    | -13.67/-13.17    | -8.94/-6.74      | -8.5/-8.46       | -4.29/-2.6       | -2.69/-1.65      | -1.26/-1.46      | -2.3/-3.59       | -2.48/-3.74      | -5.35/-7.42      | -11.2/-14.26     |                  |
| Θ(157.5°) | -18.17/-17.86 | -14.72/-11.81  | -7.85/-6.39    | -2.17/-3.15    | -4.01/-0.6     | -1.58/-6.39    | -1.86/-18.29   | -11.36/-6.71     | -5.46/-8.69      | -10.37/-14.33    | -16.02/-18.06    | -18.27/-17.86    | -17.46/-18.41    | -16.36/-15.17    | -12.89/-6.67     | -9.39/-9.42      | -8.2/-6.34       | -4.99/-3.18      | -2.04/-2.34      | -2.16/-1.17      | -1/-1.54         | -2.62/-4.81      | -7.52/-9.91      | -13.56/-15.91    |
| Θ(165°)   | -10.79/-12.32 | -9.11/-6.76    | -4.42/-3.56    | -3.93/-2.17    | -0.36/-0.19    | -0.6/-4.25     | -13.85/-15.46  | -10.33/-8.38     | -11.72/-12.88    | -12.12/-13.46    | -19.03/-18.47    | -18.01/-17.37    | -19.05/-18.46    | -18.97/-18.25    | -17.23/-12.81    | -10.04/-7.23     | -4.74/-3.83      | -3.56/-3.08      | -2.6/-2.73       | -2.54/-3.67      | -4.08/-4.46      | -4.42/-4.14      | -4.15/-4.72      | -6.12/-8.72      |
| Θ(172.5°) | -9.75/-8.56   | -6.41/-5.23    | -4.48/-4.02    | -2.78/-2.13    | -1.55/-3.43    | -7.58/-10.5    | -8.79/-9.16    | -10.03/-10.05    | -6.92/-5.07      | -4.54/-4.79      | -6.64/-7.1       | -9.16/-13.21     | -14.11/-18.04    | -18.9/-17.43     | -10.61/-8.36     | -6.22/-4.69      | -3.37/-2.92      | -2.54/-2.29      | -2.54/-2.51      | -3.49/-4.32      | -6.73/-8.48      | -11.83/-15.09    | -18.03/-18.53    | -19.22/-14.49    |
| Θ(180°)   | -13.72/-13.77 | -11.27/-17.49  | -11.74/-8.42   | -5.61/-4.54    | -6.66/-9.71    | -8.23/-6.49    | -7.32/-8.94    | -6.88/-3.11      | -1.62/-1.72      | -2.55/-4.33      | -4.94/-7         | -8.17/-10.78     | -12.89/-18.59    | -17.77/-15.14    | -10.93/-8.05     | -5.62/-4.08      | -2.63/-1.8       | -0.94/-0.21      | -0.4/-0.23       | -0.45/-0.82      | -1.09/-1.34      | -2.31/-2.99      | -3.75/-5.12      | -7.08/-9.5       |
| Freq(Hz)  | 5.3GPol.      | ThetaAnt. 1    | -              | -              | -              | -              | -              | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Gain      | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -2.11/-0.8    | -1.46/-1.34    | -2.7/-1.03     | -2.81/-4.05    | -4.05/-5.6     | -7.65/-10.95   | -15.08/-17.64  | -18.78/-16.82    | -12.35/-9.47     | -7.02/-5.82      | -3.66/-4.5       | -2.66/-3.33      | -2.23/-2.3       | -1.83/-2.45      | -2.05/-2.61      | -3.11/-4.09      | -4.93/-6.38      | -7.83/-10.88     | -13.39/-19.07    | -18.99/-16.17    | -11.15/-8        | -6.73/-5.25      | -4.27/-2.63      | -2.56/-1.21      |
| Θ(7.5°)   | -0.6/-0.98    | -0.66/-1.49    | -2.07/-1.88    | -1.98/-4.28    | -4.28/-5.04    | -6.86/-9.22    | -12.96/-17.58  | -18.06/-11.83    | -8.27/-5.59      | -4.96/-4.11      | -3.51/-2.58      | -2.42/-1.77      | -2.43/-1.92      | -2.1/-2.52       | -2.31/-2.16      | -2.84/-3.65      | -4.64/-6.03      | -7.85/-11.16     | -14.45/-18.66    | -18.74/-14.67    | -11.82/-8.11     | -5.39/-3.65      | -2.59/-2.09      | -2.85/-1.91      |
| Θ(15°)    | 0.02/-0.82    | -0.65/-0.83    | -2.38/-1.84    | -2.29/-3.57    | -3.66/-4.34    | -5.81/-9.22    | -11.12/-13.84  | -12.96/-9.41     | -6.28/-7.56      | -5.53/-6.51      | -4.91/-5.59      | -5.9/-5.62       | -4.62/-5.32      | -4.15/-5.3       | -6.28/-7.19      | -7.83/-4.46      | -6.13/-6.24      | -7.13/-10.45     | -15.72/-17.81    | -14.54/-10.35    | -7.44/-5.65      | -3.96/-3.06      | -2.31/-1.7       | -1.22/-1.32      |
| Θ(22.5°)  | -0.8/-0.72    | -0.53/-0.05    | -1.78/-2.42    | -4.86/-6.62    | -5.27/-3.34    | -5.14/-9.16    | -15.02/-13.78  | -10.99/-10.82    | -11.27/-11.78    | -11.63/-10       | -8.2/-6.53       | -4.97/-4.14      | -3.81/-4.92      | -5/-5.59         | -5.85/-6.39      | -7.07/-9.96      | -10.19/-9.8      | -9.74/-13.67     | -18.81/-18.42    | -13.28/-8.75     | -7.35/-5.72      | -4.48/-3.14      | -2.11/-1.45      | -0.9/-0.91       |
| Θ(30°)    | -2.74/-1.01   | -1.91/-0.65    | 0.8/-1.76      | -1.57/-5       | -8.07/-4.17    | -3.96/-7.33    | -15.57/-18.52  | -13.95/-14.04    | -16.25/-12.83    | -8.5/-5.98       | -5.15/-4.91      | -6.27/-5.93      | -6.5/-6.37       | -5.67/-5.11      | -4.9/-5.76       | -7.82/-9.74      | -8.63/-10.63     | -11.19/-12.06    | -18.24/-18.88    | -11.67/-9.1      | -9.3/-6.17       | -5.22/-3.91      | -3.27/-2.66      | -1.98/-1.74      |
| Θ(37.5°)  | -1.57/-2.49   | -2.78/-3.04    | -2.93/-2.94    | -9.37/-6.55    | -9.9/-8.37     | -5.07/-8.42    | -16.05/-15.48  | -13.65/-15.01    | -16.86/-12.61    | -11.88/-13.84    | -16.14/-19.13    | -16.68/-16.74    | -11.72/-9.77     | -9.17/-8.31      | -10.92/-12.37    | -12.6/-10.16     | -15.57/-17.15    | -17.32/-18.33    | -14.22/-14.09    | -12.06/-7.76     | -5.11/-3.68      | -3.1/-2.73       | -1.71/-1.9       |                  |
| Θ(45°)    | -2.47/-2.24   | -1.3/-1.59     | -2.6/-3.19     | -3.63/-4.82    | -9.55/-9.56    | -4.97/-10.09   | -14.25/-13.73  | -15.32/-19.01    | -18.75/-18.34    | -19.36/-17.35    | -14.83/-16.42    | -9.57/-10.26     | -10.53/-15.42    | -18.12/-18.16    | -17.39/-11.28    | -8.48/-10.89     | -14.22/-10.38    | -12.62/-18.06    | -17.74/-17.57    | -13.83/-15.54    | -14.81/-4.96     | -4.93/-5.16      | -2.31/-2.16      | -2.68/-2.62      |
| Θ(52.5°)  | -5.94/-5.27   | -5.26/-5.54    | -4.13/-3.21    | -6.63/-6.15    | -6.73/-14.32   | -6.76/-9.05    | -13.25/-12.45  | -15.95/-18.82    | -17.61/-14.84    | -19.08/-15.43    | -17.46/-11.9     | -10.32/-6.97     | -5.06/-3.63      | -8.96/-15.2      | -18.1/-18.24     | -11.6/-9.72      | -18.28/-11.77    | -14.53/-17.51    | -18.44/-19.32    | -19.14/-16.83    | -8.9/-7.68       | -7.09/-4.67      | -6.33/-6.63      | -7.35/-6.5       |
| Θ(60°)    | -9.39/-11.02  | -8.53/-5.66    | -4.64/-8.29    | -5.08/-5.5     | -7.81/-12.53   | -5.97/-5.58    | -12.81/-12.65  | -10.5/-14.18     | -16.76/-12.51    | -9.18/-15.47     | -11.82/-10.57    | -7.54/-9.97      | -5.26/-3.46      | -5.67/-10.74     | -19.31/-110      | -15.57/-14.01    | -16.45/-14.18    | -18.93/-15.25    | -15.72/-13.79    | -18.67/-15.61    | -10.57/-15.21    | -6.94/-18.41     | -14.28/-17.93    |                  |
| Θ(67.5°)  | -5.51/-7.36   | -7.13/-9.01    | -9.85/-10.6    | -12.36/-6.34   | -10/-12.59     | -15.84/-5.57   | -9.67/-10.07   | -9.96/-12.55     | -17.39/-16.22    | -16.1/-13.6      | -13.03/-10.51    | -8.31/-7.09      | -2.97/-3.15      | -5.45/-9.26      | -11.87/-19.11    | -16.57/-13.05    | -19.12/-15.85    | -18.03/-12.89    | -18.09/-11.95    | -15.47/-13.51    | -18.17/-12.75    | -12.54/-15.42    | -13.48/-7.1      | -5.98/-6.51      |
| Θ(75°)    | -9.51/-11.48  | -10.75/-9.65   | -10.77/-11.56  | -16.41/-9.3    | -7.68/-18.23   | -11.02/-8.44   | -14.18/-14.01  | -9.27/-8.14      | -18.97/-15.75    | -11.51/-19.3     | -18.52/-13.5     | -12.99/-10.32    | -4.97/-5.99      | -6.76/-7.97      | -7.79/-12.34     | -17.58/-17.68    | -16.03/-15.38    | -18.16/-11.59    | -14.82/-9.82     | -14.31/-18.2     | -14.28/-14.65    | -18.48/-18.42    | -9.9/-9.42       | -11.48/-12.83    |
| Θ(82.5°)  | -4.14/-12.77  | -9.46/-12.32   | -12.47/-10.46  | -11.89/-10.29  | -10.81/-17.45  | -13.77/-12.87  | -18.68/-12.63  | -10.09/-11.3     | -19.29/-18.25    | -13.34/-15       | -19.04/-18.8     | -13.5/-16.2      | -8.75/-10.81     | -9.82/-9.97      | -10.08/-11.54    | -16.64/-18.85    | -11.37/-13.49    | -13.61/-10.48    | -15.22/-13.79    | -18.67/-18.69    | -15.07/-15.21    | -16.67/-15.82    | -15.94/-18.41    | -18.28/-17.93    |
| Θ(90°)    | -18.27/-18.6  | -18.29/-14.06  | -17.77/-12.02  | -18.44/-15.85  | -9.84/-18.59   | -12.97/-17.75  | -8.62/-8.19    | -8.32/-9.82      | -14.11/-17.57    | -17.39/-18.92    | -9.39/-12.57     | -9.89/-13.59     | -10.45/-13.27    | -10.93/-13.4     | -16.57/-13.44    | -14.21/-11.83    | -10.35/-12.34    | -12.73/-9.13     | -14.63/-16.64    | -13.21/-17.57    | -17.63/-10.47    | -17.64/-18.14    | -18.72/-17.8     | -19.16/-18.89    |
| Θ(97.5°)  | -12.07/-18.06 | -17.4/-18.02   | -16.82/-15.02  | -16.88/-16.74  | -12.18/-18.97  | -13.35/-11.19  | -15/-16.78     | -10.23/-8.74     | -15.45/-18.38    | -18.56/-13.84    | -12.72/-12.62    | -10.31/-8.23     | -12.43/-17.32    | -9.7/-8.43       | -18.85/-15.38    | -15.35/-16.33    | -15.07/-15.45    | -15.44/-15.14    | -18.13/-15.63    | -13.15/-18.23    | -17.12/-11.4     | -14.46/-18.16    | -18.56/-14.72    | -13.82/-14.57    |
| Θ(105°)   | -8.86/-10.86  | -18.51/-13.07  | -10.24/-18.02  | -18.47/-16.92  | -19.04/-18.77  | -19.04/-11.13  | -15.86/-17.8   | -13.08/-11.17    | -17.87/-13.59    | -9.85/-8.32      | -16.68/-11.19    | -13.94/-17.73    | -14.55/-11.65    | -17.03/-17.35    | -18.99/-14.33    | -14.48/-18.01    | -19.64/-14.48    | -18.64/-15.63    | -10.48/-15.45    | -13.41/-10.77    | -11.66/-15.6     | -16.89/-13.87    | -10.69/-10.48    |                  |
| Θ(112.5°) | -12.96/-18.05 | -13.69/-7.6    | -8.12/-19.07   | -14.98/-12.52  | -15/-17.09     | -15.6/-19.01   | -14.6/-19.22   | -12.91/-12.28    | -12.05/-13.04    | -15.47/-12.64    | -14.64/-11.59    | -14.38/-7.84     | -17.84/-12.02    | -15.42/-9.45     | -16.07/-14.26    | -19.06/-19.82    | -16.09/-16.27    | -18.61/-12       | -13.99/-11.41    | -9.01/-19.54     | -13.82/-7.19     | -8.28/-12.55     | -12.53/-11.34    | -11.71/-10.66    |
| Θ(120°)   | -9.89/-7.2    | -5.53/-6.98    | -9.3/-18.85    | -7.85/-10.68   | -13.47/-16.49  | -13.92/-18.03  | -15.97/-17.42  | -17.97/-12.44    | -3.8/-8.51       | -13.39/-13.62    | -13.98/-14.5     | -8.84/-7.78      | -18.91/-13.08    | -9.13/-18.6      | -11.22/-15.8     | -18.13/-17.7     | -18.37/-15.83    | -19.4/-11.27     | -10.4/-1         |                  |                  |                  |                  |                  |



# Radiated Composite Gain Data

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

# Appendix A.2

|           |               |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Θ(112.5°) | -13.77/-12.33 | -9.15/-5.54    | -3.07/-11.9    | -6.38/-2.28    | -1.88/-4.92    | -0.74/-0.61    | -6.19/-0.73    | -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/-6.23      | -13.35/-5.3      | -5.96/-4.88      | 0.16/-1.66       | -1.63/-1.37      | -6.35/-4.82      | -5.4/-6.07       | -9.19/-18.89     | -18.89/-16.02    |
| Θ(120°)   | -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/-10.46     | -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    |
| Θ(127.5°) | -13.82/-11.42 | -7.86/-8.36    | -14.77/-9.96   | -3.04/-1.64    | -4.62/-3.5     | -0.13/-3.71    | -2.63/-2.54    | -6.94/-7.44      | -4.47/-14.63     | -15.05/-10.62    | -5.67/-11.93     | -13.63/-14.99    | -17.07/-15.87    | -18.47/-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     | -6.85/-14.58     | -14.86/-15.68    |                  |
| Θ(135°)   | -12.42/-7.58  | -8.76/-18.98   | -8.77/-4.01    | -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/-9.33     | -5.56/-11.53     | -7.2/-4.32       | -3.17/-7.77      | -3.13/-0.35      | 0.32/-2.02       | -1.57/-4.32      | -9.27/-6.42      | -5.65/-9.33      | -14.82/-18.62    |
| Θ(142.5°) | -14.26/-15.94 | -18.1/-8.99    | -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     | -8.81/-9.39      | -11.43/-14.4     | -12.86/-13.51    | -17.87/-16.72    | -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/-10.24     | -13.72/-14.28    | -12.3/-12.35     |
| Θ(150°)   | -12.19/-13.9  | -7.4/-6.05     | -3.79/-3.28    | -2.8/-10.98    | -1.69/-2.82    | -0.01/-2.12    | -8.22/-18.7    | -12.93/-11.98    | -10.71/-10.18    | -11.92/-12.47    | -11.18/-11.12    | -13.42/-12.47    | -9.94/-11.26     | -16.38/-15.75    | -10.13/-8.67     | -6.62/-3.35      | -3.15/-6.54      | -4.35/-1.21      | 0.14/-0.13       | -1.12/-2.43      | -4.55/-5.54      | -8.51/-14.96     | -17.61/-18.32    |                  |
| Θ(157.5°) | -18.88/-15.23 | -12.22/-7.35   | -5.43/-8.76    | -8.22/-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    |
| Θ(165°)   | -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     | -7.9/-8.81       | -12.46/-14.06    | -17.73/-13.27    | -13.59/-13.1     | -10.35/-6.69     | -4.77/-4.13      | -4.08/-4.42      | -3.56/-2.99      | -3.36/-2.57      | -1.73/-2.29      | -2.75/-4.55      | -4.61/-6.69      | -7.83/-10.01     | -9.92/-9.06      |
| Θ(172.5°) | -11.39/-13.53 | -13.78/-10.86  | -8.85/-7.03    | -4.13/-2.45    | -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       | -5.99/-5.57      | -5.47/-3.92      | -3.55/-2.1       | -1.96/-1.44      | -2.09/-2.61      | -3.28/-4.47      | -6.39/-7.46      |                  |
| Θ(180°)   | -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    | -12.8/-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      |
| Freq(Hz)  | 5.785GPol.    | ThetaAnt. 1    | +              | +              | +              | +              | +              | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |
| Gain      | Φ(0°)Φ(7.5°)  | Φ(15°)Φ(22.5°) | Φ(30°)Φ(37.5°) | Φ(45°)Φ(52.5°) | Φ(60°)Φ(67.5°) | Φ(75°)Φ(82.5°) | Φ(90°)Φ(97.5°) | Φ(105°)Φ(112.5°) | Φ(120°)Φ(127.5°) | Φ(135°)Φ(142.5°) | Φ(150°)Φ(157.5°) | Φ(165°)Φ(172.5°) | Φ(180°)Φ(187.5°) | Φ(195°)Φ(202.5°) | Φ(210°)Φ(217.5°) | Φ(225°)Φ(232.5°) | Φ(240°)Φ(247.5°) | Φ(255°)Φ(262.5°) | Φ(270°)Φ(277.5°) | Φ(285°)Φ(292.5°) | Φ(300°)Φ(307.5°) | Φ(315°)Φ(322.5°) | Φ(330°)Φ(337.5°) | Φ(345°)Φ(352.5°) |
| Θ(0°)     | -1.2/-0.54    | -1.01/-1.38    | -1.71/-1.17    | -3.41/-3.52    | -4.43/-2.35    | -11.62/-16.16  | -18.38/-18.84  | -13.24/-10.32    | -8.3/-5.99       | -3.49/-3.2       | -2.4/-2.28       | -1.98/-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      |
| Θ(7.5°)   | 1.07/0.88     | 0.57/-0.14     | -0.59/-1.12    | -3.1/-3.68     | -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/-9.99      | -10.26/-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      |
| Θ(15°)    | 0.44/-0.28    | 0.78/-0.11     | -0.11/-0.14    | -0.95/-3.74    | -4.42/-6.07    | -9.8/-10.29    | -11.72/-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    | -6.76/-4.64      | -2.79/-1.88      | -1.4/-0.51       | -0.93/-0.7       |                  |
| Θ(22.5°)  | -0.76/-0.19   | -0.6/-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      | -8.8/-5.66       | -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      | -0.85/-0.16      |
| Θ(30°)    | -1.2/-0.66    | 0.63/-1.72     | 0.63/-1.41     | -1.61/-6.22    | -6.92/-9.7     | -7.17/-6.56    | -9.81/-18.01   | -12.34/-13.83    | -11.12/-11.05    | -8.82/-8.28      | -6.79/-5.59      | -5.01/-4.17      | -3.84/-3.88      | -4.18/-3.75      | -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      |
| Θ(37.5°)  | -3.33/-4.16   | -0.45/-2.33    | -1.15/-2.37    | -3.45/-5.56    | -5.14/-15.96   | -11.36/-7.56   | -9.83/-15.04   | -13.29/-15.59    | -14.41/-10.66    | -7.76/-9.18      | -5.7/-6.7        | -6.12/-6.47      | -6.84/-7.64      | -8.09/-14.4      | -8.72/-11.38     | -7.66/-10.51     | -18.15/-16.63    | -18.46/-17.97    | -19/-9.77        | -12.25/-11.79    | -6.54/-5.02      | -3.18/-3.02      | -2.78/-3.18      |                  |
| Θ(45°)    | -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/-9.64     | -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      |
| Θ(52.5°)  | -2.78/-3.71   | -4.44/-6.44    | -9.4/-8.41     | -7.19/-4.18    | -6.31/-8.97    | -18.13/-7.91   | -8.42/-13.8    | -11.84/-10.52    | -13.07/-18.19    | -18.53/-18.3     | -17.74/-19.01    | -10.42/-6.56     | -9.19/-12.29     | -16.66/-11.73    | -11.14/-13.34    | -13.72/-11.95    | -9.88/-9.73      | -18.54/-14.72    | -17.41/-17.71    | -11.93/-9.03     | -15.16/-8.83     | -8.41/-6.41      | -7.18/-17.7      | -5.76/-4.41      |
| Θ(60°)    | -7.77/-5.53   | -4.44/-4.1     | -6.12/-10.84   | -8.68/-8.01    | -5.6/-9.64     | -8.1/-11.35    | -6.82/-9.54    | -15.75/-18.99    | -18.65/-18.81    | -16.05/-9.25     | -8.1/-7.31       | -2.23/-3.91      | -8.95/-15.12     | -17.85/-11.5     | -10.62/-12.56    | -9.81/-7.82      | -12.57/-17.81    | -17.24/-18.71    | -11.74/-18.82    | -12.25/-11.79    | -8.57/-9.2       | -7.21/-5.44      | -6.28/-8.39      |                  |
| Θ(67.5°)  | -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/-8.07     | -17.18/-18.63    | -13.21/-17.83    | -10.47/-7.04     | -5.2/-3.09       | -0.54/-1.03      | -4.55/-10.05     | -18.75/-12.68    | -15.52/-12.45    | -17.11/-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    | -14.1/-17.25     |
| Θ(75°)    | -16.91/-16.7  | -14.31/-14.71  | -10.21/-9.3    | -12.09/-18.35  | -8.68/-7.17    | -19.39/-13.55  | -4.85/-5.32    | -8.17/-9.67      | -11.56/-9.86     | -13.12/-10.12    | -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/-13.67     | -18.26/-14.73    | -17.41/-16.63    | -13.84/-14.94    | -18.96/-15.81    | -17.54/-16.37    | -17.54/-16.37    |                  |
| Θ(82.5°)  | -17.47/-19.14 | -16.13/-17.49  | -11.51/-13.19  | -18.95/-16.09  | -9.30/-10.5    | -18.98/-14.21  | -11.47/-9.95   | -8.3/-8.96       | -14.22/-15.1     | -11.11/-9.9      | -13.78/-15.09    | -8.99/-11.22     | -4.93/-4.8       | -14.85/-18.04    | -18.01/-17.66    | -13.78/-14.28    | -10.86/-16.82    | -18.9/-17.08     | -17.78/-14.45    | -18.73/-18.03    | -18.43/-18.51    | -18.73/-18.03    | -17.44/-18.56    |                  |
| Θ(90°)    | -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    | -17.65/-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     |
| Θ(97.5°)  | -18.76/-18.67 | -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/-9.11      | -18.54/-15.63    | -18.82/-12.18    | -8.34/-9.37      | -18.73/-15.23    | -5.83/-6.76      | -17.1/-15.83     | -17.83/-12.82    | -10.45/-9.24     | -11.18/-12.32    | -12.69/-18.91    | -15.41/-18.05    | -14.77/-12.37    | -11.68/-13.19    | -18.3/-19        |                  |
| Θ(105°)   | -18.13/-17.5  | -12.34/-12.31  | -18.47/-13.67  | -19.89/-17.99  | -13.73/-16.57  | -16.54/-11.26  | -9.84/-14.15   | -17.83/-8.69     | -6.44/-12.6      | -11.63/-12.9     | -17.87/-9.89     | -16.57/-15.55    | -9.93/-5.73      | -8.26/-9.33      | -16.49/-17.47    | -12.47/-12.45    | -12.17/-12.52    | -15.87/-18.21    | -19.42/-18.12    | -15.86/-8.74     | -15.45/-9.59     | -9.02/-11.25     | -13.41/-17.91    |                  |
| Θ(112.5°) | -12.09/-11.86 | -15.62/-18     | -17.48/-8.56   | -12.35/-17.84  | -10.47/-12.58  | -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     | -8.84/-14.29     | -18.68/-10.94    | -10.64/-11.23    | -12.35/-18.81    |
| Θ(120°)   | -10.06/-11.82 | -15.75/-12.42  | -11.35/-6.28   | -10.93/-18.12  | -8.66/-4.07    | -13.15/-11.6   | -14.35/-13.72  | -10.55/-13.2     | -6.53/-6.16      | -6.92/-4.14      | -17.93/-18.26    | -13.78/-12.95    | -16.33/-6.6      | -5.08/-12.85     | -17.43/-18.29    | -12.14/-7.26     | -7.87/-9.96      | -18.62/-14.9     | -9.92/-7.42      | -13.57/-8        | -5.27/-9.08      | -12.58/-14.05    | -8.69/-10.98     | -9.14/-9.31      |
| Θ(127.5°) | -7.1/-9.77    | -9.11/-6.5     | -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/-14.05     | -6.5/-12.4       | -12.82/-15.47    | -11.47/-14.19    | -6.5/-5.59       | -7.39/-12.89     | -17.72/-18.62    | -13.14/-7.63     | -13.63/-18.45    | -4.98/-9.4       | -5.12/-6.85      | -14.68/-7.93     | -8.54/-6.93      |
| Θ(135°)   | -8.16/-5.84   | -4.01/-3.83    | -5.04/-8.02    | -16.43/-6.69   | -4.49/-12.36   | -4.49/-12.36   | -16.29/-10.47  | -9.09/-11.44     | -18.57/-16.32    | -8.73/-11.57     | -10.41/-11.32    | -13.49/-18.61    | -18.53/-18.18    | -10.76/-12.45    | -19.34/-6.35     | -3.18/-2.55      | -8.03/-18.88     | -15.58/-18.58    | -9.5/-11.43      | -13.89/-14.59    | -7.19/-6.61      | -6.46/-5.63      | -6.09/-5.68      | -6.07/-8.83      |
| Θ(142.5°) | -2.35/-2.56   | -3.42/-4.37    | -9.54/-16.08   | -4.12/-3.79    | -3.61/-6.19    | -8.27/-7.95    | -10.52/-9.02   | -11.65/-12.18    | -10.8/-13.7      | -14.62/-14.5     | -17.68/-15.91    | -14.28/-18.09    | -18.58/-10.19    | -11.59/-14.04    | -10.74/-10.49    | -3.59/-3.49      | -10.33/-14.5     | -18/-17.96       | -13.21/-11.18    | -10.23/-17.81    | -7.43/-8.56      | -5.99/-4.85      | -4.42/-5.22      | -4.32/-2.68      |
| Θ(150°)   | -3.59/-2.85   | -4.21/-10.32   | -9.19/-2.41    | -1.47/-1.91    | -7.78/-13.73   | -16.37/-11.05  | -14.43/-18.02  | -12.29/-10.97    | -14.89/-18.37    | -12.3/-14.55     | -18.98/-12.94    | -9.5/-1.7        | -3.57/-6.32      | -10.92/-9.7      | -6.85/-6.03      | -6.63/-9.86      | -18.09/-12.9     | -16.75/-17.92    | -13.5/-6.69      | -7.18/-10        | -8.14/-6.16      | -7.55/-3.63      | -2.93/-2.96      | -3.81/-3.2       |
| Θ(157.5°) | -3.49/-4.03   | -4.73/-3.58    | -3.52/-1.36    | -1.19/-2.74    | -4.05/-9.26    | -9.81/-7.34    | -7.3/-9.72     | -8.31/-7.94      | -11.33/-10.91    | -8.72/-7.09      | -8.34/-8.51      | -14.61/-6.79     | -5.45/-4.59      | -4.64/-5.04      | -5.75/-7.07      | -11.56/-19.21    | -6.66/-9.5       | -14.21/-1        |                  |                  |                  |                  |                  |                  |



# Radiated Composite Gain Data

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

## Appendix A.2

|           |               |                 |                 |                 |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|-----------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Θ(165°)   | -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/-16.9      | -18.18/-16.3      | -14.27/-13.12     | -12.73/-12.71     | -13.41/-14.6      | -16.17/-15.24     | -17.89/-16.47     | -14.22/-12.15     |
| Θ(172.5°) | -10.85/-11.29 | -12.6/-15.04    | -18.99/-19.28   | -13.3/-18.2     | -17.06/-16.48   | -16.46/-16.2    | -15.42/-14.56   | -13.69/-12.64     | -11.56/-10.72     | -10.09/-9.48      | -9.06/-8.66       | -8.3/-7.91        | -7.59/-7.46       | -7.51/-7.3        | -8.17/-8.81       | -9.9/-11.02       | -12.55/-14.08     | -15.36/-16.37     | -17.36/-18.67     | -18.23/-17.27     | -19.31/-19.12     | -17.09/-15.52     | -13.75/-12.47     | -11.84/-11.31     |
| Θ(180°)   | -11.29/-12.44 | -14.16/-16.15   | -17.53/-17      | -15.53/-17      | -14.16/-14.66   | -15.26/-15.55   | -14.99/-14.24   | -13.61/-13.21     | -12.94/-13        | -13.52/-14.31     | -15.14/-15.48     | -15.14/-14.15     | -10.71/-10.12     | -9.81/-9.88       | -10.25/-10.6      | -10.88/-10.94     | -11.01/-11.23     | -11.53/-11.85     | -12.12/-12.25     | -12.11/-11.64     | -11.07/-10.56     | -10.47/-10.42     | -10.51/-10.82     |                   |
| Freq(Hz)  | 2.450GPol.    | Theta/Ant. 2    | +               | -               | +               | -               | +               | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -17.45/-18.49 | -18.43/-17.11   | -15.54/-14.07   | -13.01/-12.21   | -11.67/-11.15   | -10.62/-10.16   | -9.9/-9.83      | -9.99/-10.3       | -10.71/-11.32     | -12.02/-12.95     | -14.01/-15.19     | -16.49/-17.54     | -18.35/-17.54     | -17.71/-17.65     | -17.87/-19.36     | -15.74/-13.11     | -11.29/-10.16     | -9.46/-9.84       | -10.41/-11.15     | -11.76/-12.1      | -12.45/-13.14     | -14.36/-15.56     | -16.49/-17.44     |                   |
| Θ(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/-12.93     | -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         |
| Θ(15°)    | -11.61/-11.41 | -10.99/-10.72   | -10.42/-10.12   | -9.97/-9.89     | -9.87/-9.86     | -9.78/-9.86     | -10.2/-10.65    | -11.22/-11.3      | -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     |
| Θ(22.5°)  | -9.8/8        | -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     | -14.14/-14.44     | -15.9/-15.64      | -14.17/-12.26     | -10.42/-8.85      | -7.59/-6.69       | -6.12/-5.74       | -5.57/-5.59       | -5.67/-5.63       | -5.62/-5.7        | -5.82/-5.93       | -6.04/-6.25       | -6.78/-7.5        | -8.1/-8.52        | -8.88/-9.21       |
| Θ(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/-4.48     | -5.55/-5.63       | -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        |
| Θ(37.5°)  | -4.48/-4.7    | -5/-5.29        | -5.61/-5.9      | -6.04/-5.86     | -5.37/-4.72     | -4.08/-3.53     | -3.19/-3.13     | -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        |
| Θ(45°)    | -4.28/-4.16   | -4.04/-3.83     | -3.66/-3.78     | -4.27/-5.02     | -5.6/-5.72      | -5.31/-4.42     | -3.38/-2.58     | -2.18/-2.21       | -2.62/-3.53       | -4.84/-6.41       | -8.12/-9.8        | -11.04/-11.77     | -12.44/-10.15     | -8.47/-6.76       | -5.35/-4.2        | -3.52/-3.07       | -2.64/-2.17       | -1.77/-1.57       | -1.75/-2.32       | -3.16/-3.84       | -4.31/-4.67       | -4.88/-4.79       | -4.68/-4.56       |                   |
| Θ(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/-2.95       | -3.88/-5.07       | -5.73/-5.41       | -4.76/-4.09       | -3.27/-2.54       | -1.99/-1.6        |
| Θ(60°)    | 0.13/0        | -0.25/-0.54     | -0.76/-0.65     | -0.21/-0.22     | 0.21/-0.07      | -0.46/-0.92     | -1.28/-1.35     | -1.12/-1.05       | -0.33/-0.13       | -0.36/-0.97       | -1.71/-2.33       | -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       | -0.76/-0.29       | -0.03/0.11        |
| Θ(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        | 0.36/0.68         | 0.76/0.6          | 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        | -3.02/-2.94       | -2.49/-1.78       | -1.26/-1.06       | -1.13/-1.3        |
| Θ(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       |
| Θ(82.5°)  | -2.72/-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        | 0.13/0.2          | 0.17/0.24         | 0.17/-0.27        | -0.69/-0.91       | -0.81/-0.62       | -0.75/-1.38       | -2.23/-2.77       | -2.96/-2.86       |
| Θ(90°)    | -2.25/-2.28   | -2.3/-2.44      | -2.85/-3.46     | -3.47/-3.44     | -3.66/-3.42     | -2.74/-2.31     | -1.96/-1.66     | -1.14/-1.41       | -2.13/-2.89       | -3.32/-3.32       | -3.04/-2.83       | -2.7/-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       |                   |
| Θ(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       | -1.4/-1.55        | -1.7/-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       | -4.34/-7.3        | -4.94/-5.19       | -5.35/-5.27       |
| Θ(105°)   | -4.86/-4.58   | -4.25/-3.61     | -2.94/-2.75     | -3.17/-3.67     | -3.72/-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        | -5.53/-5.55       | -6.09/-5.96       | -5.08/-4.06       | -3.22/-2.59       | -2.02/-2.38       | -3.64/-5.23       | -6.8/-7.11        | -6.21/-5.56       | -5.37/-5.49       | -5.59/-5.36       |
| Θ(112.5°) | -4.47/-4.07   | -3.39/-3.87     | -3.73/-3.41     | -3.33/-3.67     | -4.14/-4.34     | -4.32/-4.07     | -3.63/-3.26     | -3.05/-3.57       | -5.01/-5.59       | -5.27/-4.06       | -2.74/-1.78       | -1.39/-1.65       | -2.15/-2.28       | -2.14/-1.96       | -2.52/-2.47       | -2.61/-2.86       | -3.37/-4.01       | -5.33/-5.87       | -13.72/-13.98     | -9.82/-6.84       | -5.4/-5.07        | -5.14/-4.96       | -4.63/-4.5        |                   |
| Θ(120°)   | -10.92/-10.54 | -10.2/-10.27    | -10.57/-10.38   | -9.17/-7.9      | -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       | -7.76/-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       |
| Θ(127.5°) | -11.52/-11.53 | -10.92/-12.69   | -6.82/-7        | -7.56/-7.06     | -5.98/-5.47     | -5.82/-6.97     | -8.65/-10.26    | -10.37/-8.47      | -6.8/-6.1         | -5.61/-5.37       | -5.4/-5.66        | -6.05/-6.22       | -6.99/-7.67       | -8.18/-8.3        | -8.03/-7.42       | -6.5/-5.44        | -4.56/-4.46       | -5.14/-6.76       | -8.34/-8.36       | -7.31/-6.42       | -6.01/-6.18       | -6.94/-7.9        | -8.57/-8.94       | -9.38/-10.23      |
| Θ(135°)   | -14.73/-18.15 | -15.07/-12.1    | -11.33/-12.54   | -15.52/-14.97   | -10.48/-8.15    | -7.14/-6.96     | -7.86/-7.89     | -8.86/-9.48       | -3.89/-9.22       | -9.12/-9.07       | -8.91/-8.61       | -8.16/-7.95       | -8.2/-8.65        | -8.89/-8.78       | -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       | -8.49/-8.75       | -8.89/-9.24       | -10.01/-11.84     |
| Θ(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/-17.94     | -18.1/-13.44      | -10.22/-8.01      | -6.67/-5.84       | -5.42/-5.29       | -5.51/-5.94       | -6.07/-5.93       | -5.69/-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      |
| Θ(150°)   | -18.93/-17.68 | -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/-18.55     | -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        |
| Θ(157.5°) | -16.03/-17.86 | -19.16/-22      | -12.16/-8.82    | -8.39/-7.58     | -7.28/-7.31     | -7.53/-7.82     | -7.92/-7.77     | -7.61/-7.9        | -13.09/-10.73     | -13.71/-18.15     | -19.1/-18.7       | -15.96/-14.17     | -13.23/-13.01     | -12.72/-11.21     | -9.55/-8.26       | -7.29/-6.76       | -6.99/-7.5        | -8.17/-6.91       | -9.59/-9.56       | -9.41/-9.55       | -10.01/-10.82     | -11.93/-12.22     |                   |                   |
| Θ(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/-9.21       | -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       |
| Θ(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/-10.15      | -10.46/-10.59     | -10.57/-10.59     | -10.76/-10.93     | -10.8/-10.51      | -10.33/-10.33     | -10.41/-10.44     | -10.32/-10.01     |
| Θ(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/-17.7      | -18.37/-18.77     | -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)  | 2.4835GPol.   | Phi/Ant. 2      | +               | -               | +               | -               | +               | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 | +                 | -                 |
| Gain      | Φ(0°)/Φ(7.5°) | Φ(15°)/Φ(22.5°) | Φ(30°)/Φ(37.5°) | Φ(45°)/Φ(52.5°) | Φ(60°)/Φ(67.5°) | Φ(75°)/Φ(82.5°) | Φ(90°)/Φ(97.5°) | Φ(105°)/Φ(112.5°) | Φ(120°)/Φ(127.5°) | Φ(135°)/Φ(142.5°) | Φ(150°)/Φ(157.5°) | Φ(165°)/Φ(172.5°) | Φ(180°)/Φ(187.5°) | Φ(195°)/Φ(202.5°) | Φ(210°)/Φ(217.5°) | Φ(225°)/Φ(232.5°) | Φ(240°)/Φ(247.5°) | Φ(255°)/Φ(262.5°) | Φ(270°)/Φ(277.5°) | Φ(285°)/Φ(292.5°) | Φ(300°)/Φ(307.5°) | Φ(315°)/Φ(322.5°) | Φ(330°)/Φ(337.5°) | Φ(345°)/Φ(352.5°) |
| Θ(0°)     | -8.34/-8.21   | -8.27/-8.51     | -8.98/-9.3      | -10.88/-12.17   | -13.24/-14.12   | -15.52/-17.89   | -19.1/-18.09    | -18.14/-19.05     | -16.85/-17.54     | -13.61/-19.07     | -10.53/-9.28      | -7.24/-9.66       | -6.89/-6.59       | -5.57/-6.8        | -7.24/-9.66       | -8.87/-9.97       | -11.41/-13.44     | -16.33/-18.36     | -18.03/-17.72     | -18.02/-17.57     | -16.34/-13.73     | -11.92/-10.62     | -9.73/-9.18       | -8.89/-8.74       |
| Θ(7.5°)   | -8.22/-8.22   | -8.45/-8.87     | -9.47/-10.4     | -11.79/-13.25   | -14.14/-14.86   | -16.02/-17.8    | -18.61/-17.41   | -18.14/-19.16     | -18.99/-19.07     | -16.95/-14.6      | -12.46/-10.69     | -9.33/-8.27       | -7.53/-7.08       | -6.91/-6.92       | -7.11/-7.61       | -8.32/-9.26       | -10.59/-12.42     | -14.83/-17.79     | -18.25/-18.3      | -18.05/-15.37     | -13.19/-11.49     | -10.26/-9.36      | -8.73/-8.46       | -8.41/-8.39       |
| Θ(15°)    | -8.41/-8.49   | -8.8/-9.23      | -9.8/-10.71     | -12.17/-13.78   | -14.83/-15.56   | -16.48/-17.58   | -18.83/-18.83   | -19.02/-18.14     | -17.86/-17.95     | -17.83/-16.33     | -13.67/-11.58     | -9.99/-8.74       | -                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |