

# RF TEST REPORT

## FCC ID: 2BCFYHT-360AX

Test Report No.....: RF230807005-01-001

Product(s) Name.....: Wireless Home Gateway

Model(s).....: HT-360AXE, HT-360AXI, HT-360AXG

Trade Mark.....: HEIGHTS

Applicant.....: Heights Telecom T LTD

Address.....: Ha-Sakhlav 6, Irus, 7680900, Israel

Receipt Date.....: 2023.08.07

Test Date.....: 2023.08.11~2023.09.14

Issued Date.....: 2023.09.23

Standards.....: 47 CFR FCC Part 15, Subpart C(Section 15.247);  
ANSI C63.10:2013

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

| Prepared By:      | Checked By:      | Approved By:    |  |
|-------------------|------------------|-----------------|---------------------------------------------------------------------------------------|
| Black ding        | Tim zhang        | Misue Su        |                                                                                       |
| <i>Black Ding</i> | <i>Tim.zhang</i> | <i>Misue Su</i> |                                                                                       |

# Table of Contents

|                                                    |           |
|----------------------------------------------------|-----------|
| <b>History of this test report.....</b>            | <b>4</b>  |
| <b>1. General Information .....</b>                | <b>5</b>  |
| 1.1 Applicant.....                                 | 5         |
| 1.2 Manufacturer.....                              | 5         |
| 1.3 Basic Description of Equipment Under Test..... | 5         |
| 1.4 Transmit Operating Mode .....                  | 6         |
| <b>2. Summary of Test Results .....</b>            | <b>7</b>  |
| 2.1 Summary of Test Items .....                    | 7         |
| 2.2 Application of Standard.....                   | 7         |
| 2.3 Test Instruments .....                         | 8         |
| 2.4 Test Mode .....                                | 9         |
| 2.5 Test Condition .....                           | 9         |
| 2.6 Duty Cycle of Test Signal .....                | 10        |
| 2.7 Measurement Uncertainty.....                   | 14        |
| 2.8 Test Location.....                             | 14        |
| 2.9 Description of Support Units .....             | 14        |
| 2.10 Deviation from Standards .....                | 14        |
| <b>3. Test Procedure And Results .....</b>         | <b>15</b> |
| 3.1 AC Power Line Conducted Emission .....         | 15        |
| 3.1.1 Limit .....                                  | 15        |
| 3.1.2 Test Procedure.....                          | 15        |
| 3.1.3 Test Setup.....                              | 15        |
| 3.1.4 Test Result .....                            | 16        |
| 3.2 Radiated Emission and Band Edge .....          | 22        |
| 3.2.1 Limit .....                                  | 22        |
| 3.2.2 Test Procedure.....                          | 22        |
| 3.2.3 Test Setup.....                              | 23        |
| 3.2.4 Test Result.....                             | 25        |

|       |                                                    |     |
|-------|----------------------------------------------------|-----|
| 3.3   | Spurious Emission at Antenna Port.....             | 53  |
| 3.3.1 | Limit .....                                        | 53  |
| 3.3.2 | Test Procedure.....                                | 53  |
| 3.3.3 | Test Setup.....                                    | 54  |
| 3.3.4 | The Result .....                                   | 55  |
| 3.4   | 6dB Bandwidth.....                                 | 154 |
| 3.4.1 | Limit .....                                        | 154 |
| 3.4.2 | Test Procedure.....                                | 154 |
| 3.4.3 | Test Setup.....                                    | 154 |
| 3.4.4 | Test Result.....                                   | 155 |
| 3.5   | Maximum conducted output power .....               | 213 |
| 3.5.1 | Limit .....                                        | 213 |
| 3.5.2 | Test Procedure.....                                | 213 |
| 3.5.3 | Test Setup.....                                    | 213 |
| 3.5.4 | Table of Parameters of Text Software Setting ..... | 214 |
| 3.5.5 | The Result .....                                   | 215 |
| 3.6   | Power Spectral Density.....                        | 218 |
| 3.6.1 | Limit .....                                        | 218 |
| 3.6.2 | Test Procedure.....                                | 218 |
| 3.6.3 | Test Setup.....                                    | 218 |
| 3.6.4 | The Result .....                                   | 219 |

## History of this test report

Original Report Issue Date: 2023.09.23

- ☒ No additional attachment
- ☐ Additional attachments were issued following record

| Attachment No. | Issue Date | Description |
|----------------|------------|-------------|
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |
|                |            |             |

# 1. General Information

## 1.1 Applicant

Heights Telecom T LTD

Ha-Sakhlav 6, Irus, 7680900, Israel

## 1.2 Manufacturer

Heights Telecom T LTD

Ha-Sakhlav 6, Irus, 7680900, Israel

## 1.3 Basic Description of Equipment Under Test

| Items                                                 | Description                                                                                                                                                                                            |                             |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Equipment Name                                        | Wireless Home Gateway                                                                                                                                                                                  |                             |
| Model No.                                             | HT-360AXE, HT-360AXI, HT-360AXG                                                                                                                                                                        |                             |
| Model difference                                      | They have the same RF module circuit and antenna, and differ in the network port and optical port part of the circuit, appearance and model name                                                       |                             |
| Trade Mark                                            | HEIGHTS                                                                                                                                                                                                |                             |
| Power Supply                                          | DC 12V from adapter                                                                                                                                                                                    |                             |
| Adapter Information                                   | Model: SOY-1200250US-459<br>Input: 100-240V~ 50/60Hz 0.9A Max<br>Output: DC 12V2.5A, 30W                                                                                                               |                             |
| Operate temperature                                   | 0℃-60℃                                                                                                                                                                                                 |                             |
| EUT Stage                                             | ○ Product Unit                                                                                                                                                                                         | ● Final-Sample              |
| Operating Band and Conducted Output Power (Max power) | 2400MHz ~ 2483.5MHz                                                                                                                                                                                    | ● IEEE 802.11AX20: 29.02dBm |
| Product Type                                          | IEEE 802.11b: WLAN (MIMO)<br>IEEE 802.11g: WLAN(MIMO)<br>IEEE 802.11n: WLAN(MIMO)<br>IEEE 802.11ax: WLAN (MIMO)                                                                                        |                             |
| Nominal Bandwidth                                     | 20MHz / 40MHz                                                                                                                                                                                          |                             |
| Modulation                                            | IEEE 802.11b: DSSS (DBPSK / DQPSK / CCK)<br>IEEE 802.11g: OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>IEEE 802.11n: OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>IEEE 802.11ax: OFDMA (BPSK / QPSK / 16QAM / 64QAM) |                             |
| Data Rate (Mbps)                                      | IEEE 802.11b mode: DSSS (1/2/5.5/11)<br>IEEE 802.11g mode: OFDM (6/9/12/18/24/36/48/54)<br>IEEE 802.11n mode: MCS0~MCS23<br>IEEE 802.11ax mode: MCS0~MCS11                                             |                             |
| Antenna gain                                          | Ant1: 2.81dBi, Ant2: 3.01dBi, Ant3: 3.43dBi                                                                                                                                                            |                             |
| Directional Gain                                      | 6.44dBi                                                                                                                                                                                                |                             |
| Antenna type                                          | PCB antenna                                                                                                                                                                                            |                             |

Note: For directional gain was performed in accordance with method FCC KDB 662911 D01 Multiple Transmitter Output v02r01

Unequal antenna gains, with equal transmit powers. For antenna gains given by  $G_1, G_2, \dots, G_N$  dBi  
If transmit signals are correlated, then Directional gain =  $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$  dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

Eleven channels are provided for 802.11b, 802.11g, 802.11n (20MHz), 802.11ax (20MHz):

| Frequency Band       | Channel No. | Frequency | Channel No. | Frequency |
|----------------------|-------------|-----------|-------------|-----------|
| 2400MHz ~ 2483.5 MHz | 01          | 2412MHz   | 07          | 2442MHz   |
|                      | 02          | 2417MHz   | 08          | 2447MHz   |
|                      | 03          | 2422MHz   | 09          | 2452MHz   |
|                      | 04          | 2427MHz   | 10          | 2457MHz   |
|                      | 05          | 2432MHz   | 11          | 2462MHz   |
|                      | 06          | 2437MHz   | /           | /         |

Seven channels are provided for 802.11n (40MHz), 802.11ax (40MHz):

| Frequency Band       | Channel No. | Frequency | Channel No. | Frequency |
|----------------------|-------------|-----------|-------------|-----------|
| 2400MHz ~ 2483.5 MHz | 03          | 2422 MHz  | 07          | 2442MHz   |
|                      | 04          | 2427MHz   | 08          | 2447MHz   |
|                      | 05          | 2432MHz   | 09          | 2452MHz   |
|                      | 06          | 2437MHz   | /           | /         |

Note: For 802.11ax mode only support full RU mode.

## 1.4 Transmit Operating Mode

| Transmit Operating Mode          |                                                        |                |                       |     |                       | Transmit Multiple Antennas |                                  |                                  |     |                       |     |
|----------------------------------|--------------------------------------------------------|----------------|-----------------------|-----|-----------------------|----------------------------|----------------------------------|----------------------------------|-----|-----------------------|-----|
| <input type="radio"/>            | Operating mode 1 (single antenna)                      |                |                       |     |                       | <input type="radio"/>      | 1TX                              |                                  |     |                       |     |
| <input type="radio"/>            | Operating mode 2 (multiple antenna, no beam forming)   |                |                       |     |                       | <input type="radio"/>      | 2TX                              | <input type="radio"/>            | 3TX | <input type="radio"/> | 4TX |
| <input checked="" type="radio"/> | Operating mode 3 (multiple antenna, with beam forming) |                |                       |     |                       | <input type="radio"/>      | 2TX                              | <input checked="" type="radio"/> | 3TX | <input type="radio"/> | 4TX |
| <input checked="" type="radio"/> | 802.11b                                                | Operating mode | <input type="radio"/> | 1TX | <input type="radio"/> | 2TX                        | <input checked="" type="radio"/> | 3TX                              |     |                       |     |
| <input checked="" type="radio"/> | 802.11g                                                | Operating mode | <input type="radio"/> | 1TX | <input type="radio"/> | 2TX                        | <input checked="" type="radio"/> | 3TX                              |     |                       |     |
| <input checked="" type="radio"/> | 802.11n(20MHz)                                         | Operating mode | <input type="radio"/> | 1TX | <input type="radio"/> | 2TX                        | <input checked="" type="radio"/> | 3TX                              |     |                       |     |
| <input checked="" type="radio"/> | 802.11n(40MHz)                                         | Operating mode | <input type="radio"/> | 1TX | <input type="radio"/> | 2TX                        | <input checked="" type="radio"/> | 3TX                              |     |                       |     |
| <input checked="" type="radio"/> | 802.11ax(20MHz)                                        | Operating mode | <input type="radio"/> | 1TX | <input type="radio"/> | 2TX                        | <input checked="" type="radio"/> | 3TX                              |     |                       |     |
| <input checked="" type="radio"/> | 802.11ax(40MHz)                                        | Operating mode | <input type="radio"/> | 1TX | <input type="radio"/> | 2TX                        | <input checked="" type="radio"/> | 3TX                              |     |                       |     |
| Beamforming gain:2.5dB           |                                                        |                |                       |     |                       |                            |                                  |                                  |     |                       |     |

## 2. Summary of Test Results

### 2.1 Summary of Test Items

| 47 CFR FCC Part 15, Subpart C (Section 15.247)                               |                             |            |                                   |
|------------------------------------------------------------------------------|-----------------------------|------------|-----------------------------------|
| Test item                                                                    | FCC Clause                  | Results    | Remarks                           |
| AC Power Conducted Emission                                                  | 15.207                      | Pass       | Meet the requirement of the limit |
| Radiated Emission and Band<br>Edge Measurement                               | 15.205/15.209<br>/15.247(d) | Pass       | Meet the requirement of the limit |
| Spurious Emission at Antenna<br>Port                                         | 15.247(d)                   | Pass       | Meet the requirement of the limit |
| 6dB Bandwidth                                                                | 15.247(a)(2)                | Pass       | Meet the requirement of the limit |
| Maximum Conducted Power                                                      | 15.247(b)                   | Pass       | Meet the requirement of the limit |
| Power Spectral Density                                                       | 15.247(e)                   | Pass       | Meet the requirement of the limit |
| Antenna Requirements                                                         | 15.203                      | Compliance | Note                              |
| Note: The EUT has 3 PCB antennas arrangement which was permanently attached. |                             |            |                                   |

### 2.2 Application of Standard

47 CFR FCC Part 15, Subpart C (Section 15.247)

KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10:2013

## 2.3 Test Instruments

| Radiated Emissions    |                                         |                              |                 |                |                           |                               |
|-----------------------|-----------------------------------------|------------------------------|-----------------|----------------|---------------------------|-------------------------------|
| No.                   | Equipment                               | Manufacturer                 | Type No.        | Serial No.     | Cal. date<br>(yyyy/mm/dd) | Cal. Due date<br>(yyyy/mm/dd) |
| 1                     | Test receiver                           | Rohde&Schwarz                | ESU             | 100184         | 2023/5/3                  | 2024/5/2                      |
| 2                     | Horn Antenna                            | Schwarzbeck                  | BBHA<br>9120 D  | 9120D-127<br>3 | 2023/4/23                 | 2024/4/22                     |
| 3                     | Low frequency<br>amplifier              | Unknown                      | LNA 0920N       | 2014           | 2023/5/3                  | 2024/5/2                      |
| 4                     | High frequency<br>amplifier             | Schwarzbeck                  | BBV 9718        | 284            | 2023/5/3                  | 2024/5/2                      |
| 5                     | Loop Antenna                            | Schwarzbeck                  | FMZB1519<br>B   | 00029          | 2022/7/4                  | 2025/7/3                      |
| 6                     | Log periodic<br>antenna                 | Schwarzbeck                  | VULB 9168       | 1151           | 2023/4/23                 | 2024/4/22                     |
| 7                     | Horn Antenna                            | Schwarzbeck                  | BBHA<br>9120 D  | 9120D-127<br>3 | 2022/5/5                  | 2025/5/4                      |
| 8                     | Horn Antenna                            | Schwarzbeck                  | BBHA<br>9170    | 9170#685       | 2022/7/4                  | 2025/7/3                      |
| 9                     | Temp&Humidity<br>Recorder               | Meideshi                     | JR900           | /              | 2023/5/3                  | 2024/5/2                      |
| 10                    | RF cable(966<br>chamber)9kHz-1<br>GHz   | Unknown                      | Unknown         | Unknown        | 2023/5/3                  | 2024/5/2                      |
| 11                    | RF cable(966<br>chamber)1GHz-<br>18GHz  | Unknown                      | Unknown         | Unknown        | 2023/5/3                  | 2024/5/2                      |
| 12                    | RF cable(966<br>chamber)18GHz<br>-40GHz | Unknown                      | Unknown         | Unknown        | 2023/5/3                  | 2024/5/2                      |
| 13                    | Test software                           | Farad Technology<br>Co., Ltd | EZ-EMC          | /              | /                         | /                             |
| Conducted Emission    |                                         |                              |                 |                |                           |                               |
| 1                     | Test receiver                           | Rohde&Schwarz                | ESCI            | 100718         | 2023/5/3                  | 2024/5/2                      |
| 2                     | LISN                                    | Rohde&Schwarz                | ENV216          | 100075         | 2023/5/3                  | 2024/5/2                      |
| 3                     | Pulse limiter                           | Rohde&Schwarz                | ESH3-Z2         | 102299         | 2023/5/3                  | 2024/5/2                      |
| 4                     | RF cable<br>(9kHz-30MHz)                | Unknown                      | Unknown         | Unknown        | 2023/5/3                  | 2024/5/2                      |
| 5                     | Test software                           | Farad Technology<br>Co., Ltd | EZ-EMC          | /              | /                         | /                             |
| RF Conducted Emission |                                         |                              |                 |                |                           |                               |
| 1                     | MXA Signal<br>Analyzer                  | Keysight                     | N9021B          | MY600801<br>69 | 2023/4/23                 | 2024/4/22                     |
| 2                     | RF Control Unit                         | dsusoft                      | JS0806-2        | 21G806044<br>9 | 2023/4/23                 | 2024/4/22                     |
| 3                     | power supply<br>unit                    | dsusoft                      | JS0806-4A<br>DC | N/A            | 2023/4/23                 | 2024/4/22                     |
| 4                     | VXG Signal<br>Generator                 | Keysight                     | M9384B          | MY612707<br>87 | 2023/4/23                 | 2024/4/22                     |
| 5                     | EXG Analog<br>Signal<br>Generator       | Keysight                     | N5173B          | MY591012<br>82 | 2023/4/23                 | 2024/4/22                     |
| 6                     | Test software                           | dsusoft                      | JS1120-3        | /              | /                         | /                             |

## 2.4 Test Mode

The EUT was supplied by and it was run in TX mode that was controlled by Master provided RF testing program. The worst case test result was showed in the report.

## 2.5 Test Condition

| Applicable to                               | Environmental conditions | Input Power  | Tested by   |
|---------------------------------------------|--------------------------|--------------|-------------|
| AC Power Conducted Emission                 | 24.3°C, 51% RH           | AC 120V/60Hz | Albert Fan  |
| Radiated Emission and Band Edge Measurement | 24.2°C, 55% RH           | AC 120V/60Hz | Albert Fan  |
| Spurious Emission at Antenna Port           | 24.2°C, 52% RH           | DC 12V       | Jason Huang |
| 6dB Bandwidth                               | 24.2°C, 52% RH           | DC 12V       | Jason Huang |
| Maximum Conducted Power                     | 24.2°C, 52% RH           | DC 12V       | Jason Huang |
| Power Spectral Density                      | 24.2°C, 52% RH           | DC 12V       | Jason Huang |

Note: Adapter supply voltage AC 120V/60Hz.

The applicant declare the operating environment of EUT as below:

Normal conditions: 12V DC, 0~60°C

## 2.6 Duty Cycle of Test Signal

If duty cycle is  $\geq 98\%$ , duty factor is not required.

If duty cycle is  $< 98\%$ , duty factor shall be considered.

All the duty factor of other test mode have been considered.

| Test Mode  | Frequency[MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle[%] |
|------------|----------------|----------------------------|--------------------------|---------------|
| 11B-CDD    | 2412           | 8.41                       | 9.06                     | 92.83         |
| 11G-CDD    | 2412           | 0.13                       | 0.24                     | 54.17         |
| 11N20MIMO  | 2412           | 0.15                       | 0.25                     | 60.00         |
| 11N40MIMO  | 2422           | 0.12                       | 0.22                     | 54.55         |
| 11AX20MIMO | 2412           | 0.32                       | 0.35                     | 91.43         |
| 11AX40MIMO | 2422           | 0.31                       | 0.34                     | 91.18         |

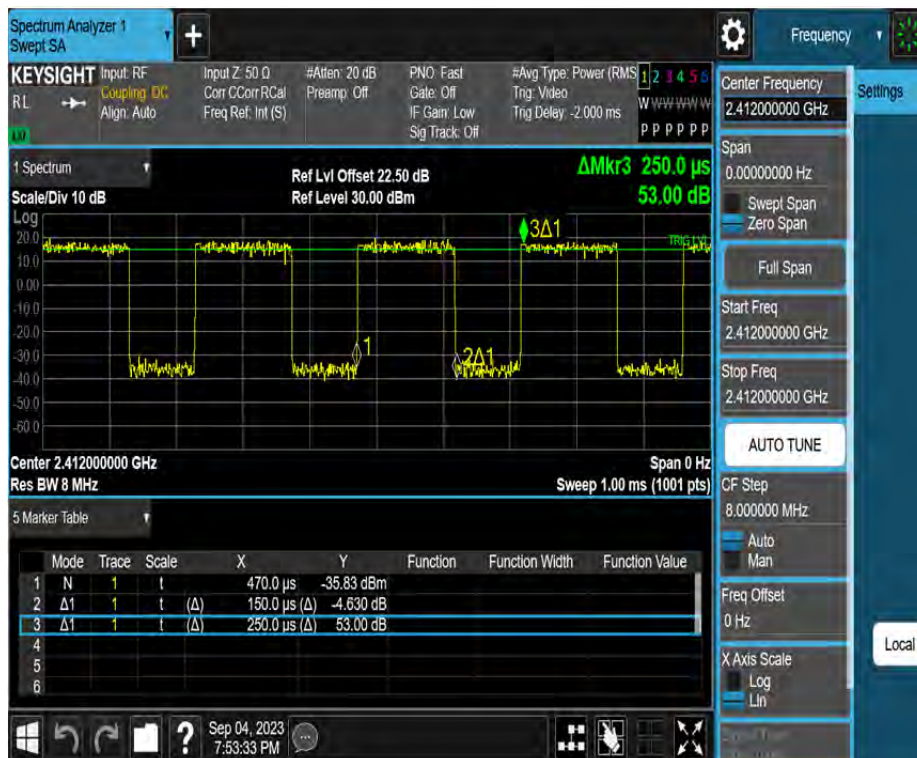
## 11B-CDD\_2412



## 11G-CDD 2412



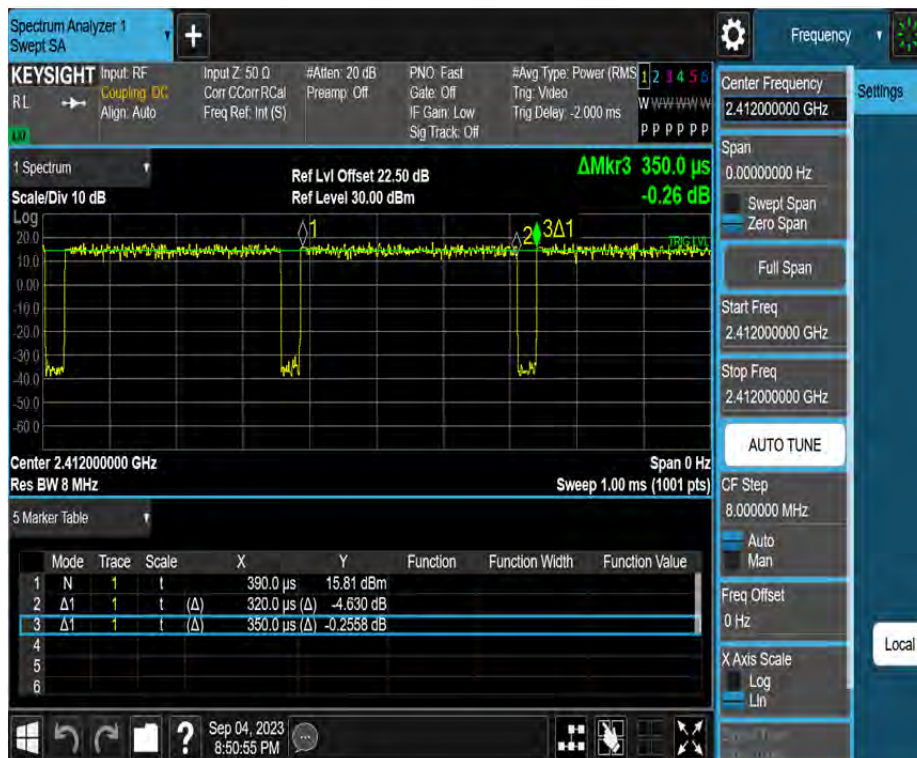
# 11N20MIMO\_2412



# 11N40MIMO\_2422



# 11AX20MIMO\_2412



# 11AX40MIMO\_2422



## 2.7 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

| Uncertainty                            |                        |
|----------------------------------------|------------------------|
| Parameter                              | Uncertainty            |
| Occupied Channel Bandwidth             | $\pm 143.88\text{kHz}$ |
| Power Spectral Density                 | $\pm 0.743\text{dB}$   |
| Conducted Spurious Emission            | $\pm 1.328\text{dB}$   |
| RF power conducted                     | $\pm 0.384\text{dB}$   |
| Conducted emission(9kHz~30MHz) AC main | $\pm 2.72\text{dB}$    |
| Radiated emission(9kHz~30MHz)          | $\pm 2.66\text{dB}$    |
| Radiated emission (30MHz~1GHz)         | $\pm 4.62\text{dB}$    |
| Radiated emission (1GHz~18GHz)         | $\pm 4.86\text{dB}$    |
| Radiated emission (18GHz~40GHz)        | $\pm 3.80\text{dB}$    |

## 2.8 Test Location

|                           |                                                                                             |
|---------------------------|---------------------------------------------------------------------------------------------|
| Company:                  | Shenzhen Haiyun Standard Technical CO., Ltd.                                                |
| Address:                  | No. 110-113, 115, 116, Block B, Jinyuan Business Building, Bao'an District, Shenzhen, China |
| CNAS Registration Number: | CNAS L18252                                                                                 |
| CAB identifier            | CN0145                                                                                      |
| A2LA Certificate Number   | 6823.01                                                                                     |
| Telephone:                | 0755-26024411                                                                               |

## 2.9 Description of Support Units

| Support Equipment |                        |              |              |           |
|-------------------|------------------------|--------------|--------------|-----------|
| No.               | Equipment              | Model Name   | Manufacturer | Remarks   |
| 1                 | Telephone 1            | /            | /            | /         |
| 2                 | Telephone 2            | /            | /            | /         |
| 3                 | Microcomputer          | TY510S-07IAB | LENOVO       | Y LX2QPQJ |
| 4                 | Microcomputer          | TY510S-07IAB | LENOVO       | Y LX2QPM7 |
| 5                 | Microcomputer          | M4600t-N000  | LENOVO       | M703V3VF  |
| 6                 | Notebook               | L450         | Think        | /         |
| 7                 | Notebook               | L450         | Think        | /         |
| 8                 | USB Disk               | /            | Kingston     | /         |
| 9                 | Optical local terminal | C300         | /            | /         |

## 2.10 Deviation from Standards

None

### 3. Test Procedure And Results

#### 3.1 AC Power Line Conducted Emission

##### 3.1.1 Limit

| Frequency       | Maximum RF Line Voltage          |                               |
|-----------------|----------------------------------|-------------------------------|
|                 | Quasi-Peak Level<br>dB( $\mu$ V) | Average Level<br>dB( $\mu$ V) |
| 150kHz ~ 500kHz | 66 ~ 56*                         | 56 ~ 46*                      |
| 500kHz ~ 5MHz   | 56                               | 46                            |
| 5MHz ~ 30MHz    | 60                               | 50                            |

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

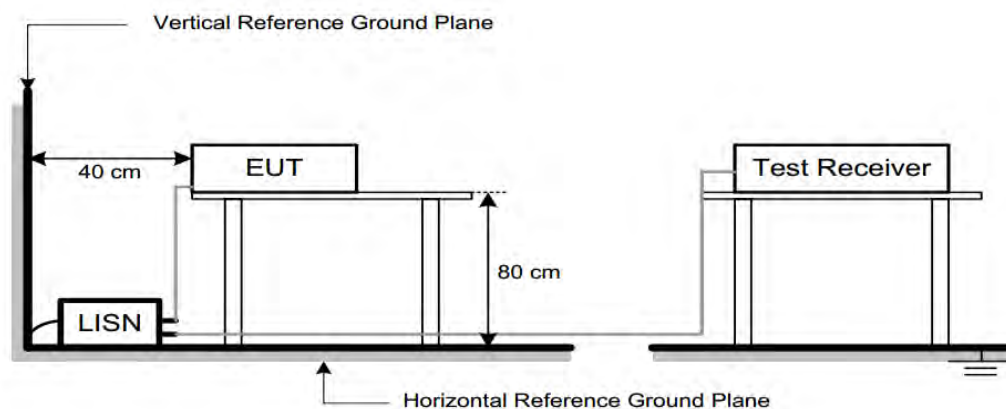
##### 3.1.2 Test Procedure

| Test Method                                              |                                                  |
|----------------------------------------------------------|--------------------------------------------------|
| <input checked="" type="radio"/> Conducted Measurement   | <input type="radio"/> Radiated Measurement       |
| Test Channels                                            |                                                  |
| <input type="radio"/> Lowest, Middle and Highest Channel | <input type="radio"/> Lowest and Highest Channel |
| Environmental conditions                                 |                                                  |
| <input checked="" type="radio"/> Normal                  | <input type="radio"/> Normal and Extreme         |

Note: ● : Test    ○ : No Test

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

##### 3.1.3 Test Setup



### 3.1.4 Test Result

#### Note:

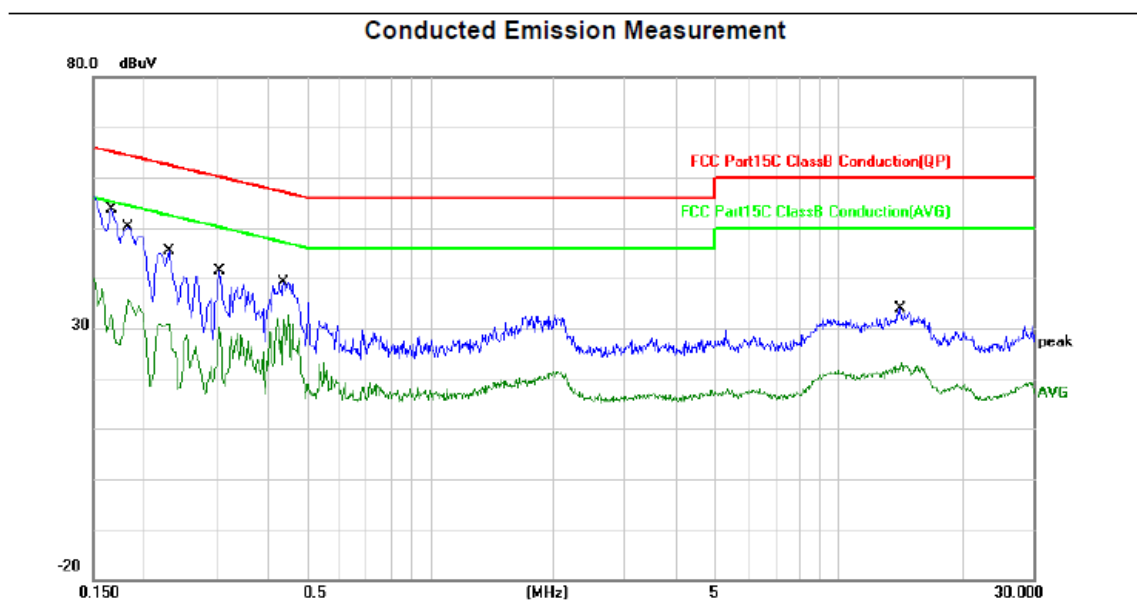
1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Measurement = Reading + Correct Factor.
3. Over = Measurement – Limit

We only recorded the data of the worst mode. Please see the following:

For model mane: HT-360AXE

|              |                                           |
|--------------|-------------------------------------------|
| 150kHz~30MHz | Worst Case Operating Mode: AX20 Channel 6 |
|--------------|-------------------------------------------|

Line



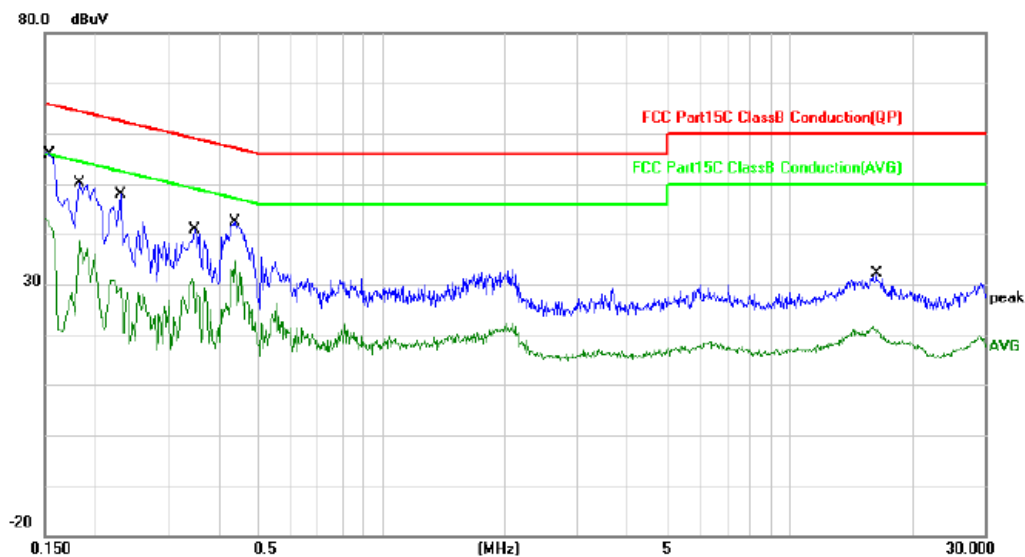
| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit | Over   |          |         |
|-----|-----|---------|---------------|----------------|-------------|-------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV        | dBuV  | dB     | Detector | Comment |
| 1   |     | 0.1660  | 26.55         | 19.88          | 46.43       | 65.16 | -18.73 | QP       |         |
| 2   |     | 0.1660  | 3.47          | 19.88          | 23.35       | 55.16 | -31.81 | AVG      |         |
| 3   | *   | 0.1825  | 28.01         | 19.88          | 47.89       | 64.37 | -16.48 | QP       |         |
| 4   |     | 0.1825  | 12.23         | 19.88          | 32.11       | 54.37 | -22.26 | AVG      |         |
| 5   |     | 0.2300  | 20.15         | 19.88          | 40.03       | 62.45 | -22.42 | QP       |         |
| 6   |     | 0.2300  | 6.09          | 19.88          | 25.97       | 52.45 | -26.48 | AVG      |         |
| 7   |     | 0.3060  | 12.57         | 19.88          | 32.45       | 60.08 | -27.63 | QP       |         |
| 8   |     | 0.3060  | 1.14          | 19.88          | 21.02       | 50.08 | -29.06 | AVG      |         |
| 9   |     | 0.4380  | 16.54         | 19.88          | 36.42       | 57.10 | -20.68 | QP       |         |
| 10  |     | 0.4380  | 7.86          | 19.88          | 27.74       | 47.10 | -19.36 | AVG      |         |
| 11  |     | 14.2060 | 6.63          | 20.00          | 26.63       | 60.00 | -33.37 | QP       |         |
| 12  |     | 14.2060 | 0.89          | 20.00          | 20.89       | 50.00 | -29.11 | AVG      |         |

150kHz~30MHz

Worst Case Operating Mode: AX20 Channel 6

Neutral

### Conducted Emission Measurement



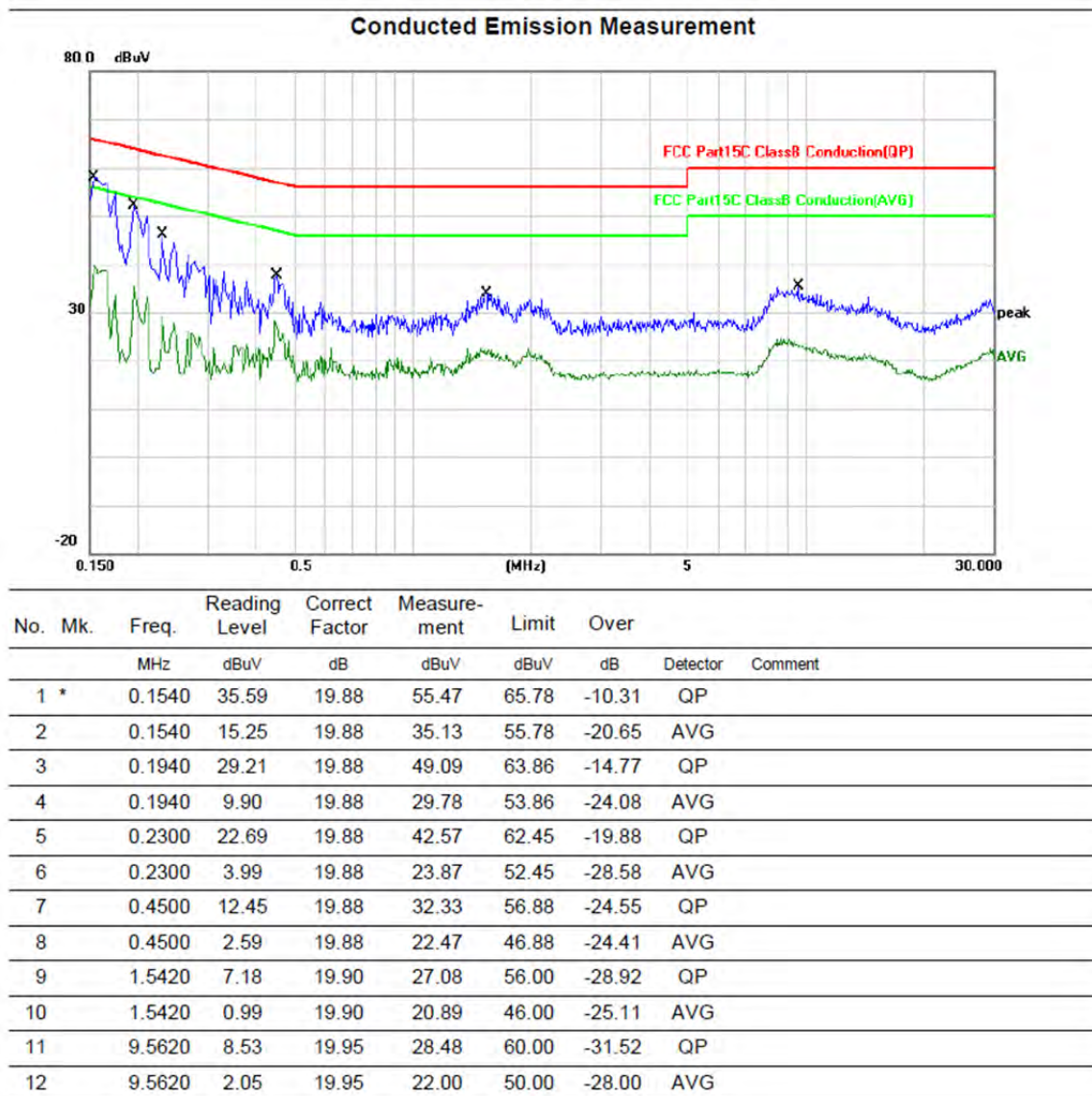
| No. | Mk. | Freq.   | Reading | Correct | Measure- | Limit | Over   |          |         |
|-----|-----|---------|---------|---------|----------|-------|--------|----------|---------|
|     |     | MHz     | Level   | Factor  | ment     |       |        | Detector | Comment |
|     |     |         | dBuV    | dB      | dBuV     | dBuV  | dB     |          |         |
| 1   | *   | 0.1548  | 33.78   | 19.88   | 53.66    | 65.74 | -12.08 | QP       |         |
| 2   |     | 0.1548  | 17.89   | 19.88   | 37.77    | 55.74 | -17.97 | AVG      |         |
| 3   |     | 0.1820  | 28.34   | 19.88   | 48.22    | 64.39 | -16.17 | QP       |         |
| 4   |     | 0.1820  | 13.64   | 19.88   | 33.52    | 54.39 | -20.87 | AVG      |         |
| 5   |     | 0.2300  | 20.59   | 19.88   | 40.47    | 62.45 | -21.98 | QP       |         |
| 6   |     | 0.2300  | 7.24    | 19.88   | 27.12    | 52.45 | -25.33 | AVG      |         |
| 7   |     | 0.3500  | 16.86   | 19.88   | 36.74    | 58.96 | -22.22 | QP       |         |
| 8   |     | 0.3500  | 6.82    | 19.88   | 26.70    | 48.96 | -22.26 | AVG      |         |
| 9   |     | 0.4380  | 20.15   | 19.88   | 40.03    | 57.10 | -17.07 | QP       |         |
| 10  |     | 0.4380  | 10.42   | 19.88   | 30.30    | 47.10 | -16.80 | AVG      |         |
| 11  |     | 16.2540 | 5.46    | 20.02   | 25.48    | 60.00 | -34.52 | QP       |         |
| 12  |     | 16.2540 | 0.01    | 20.02   | 20.03    | 50.00 | -29.97 | AVG      |         |

For model mane: HT-360AXG

150kHz~30MHz

Worst Case Operating Mode: AX20 Channel 6

Line

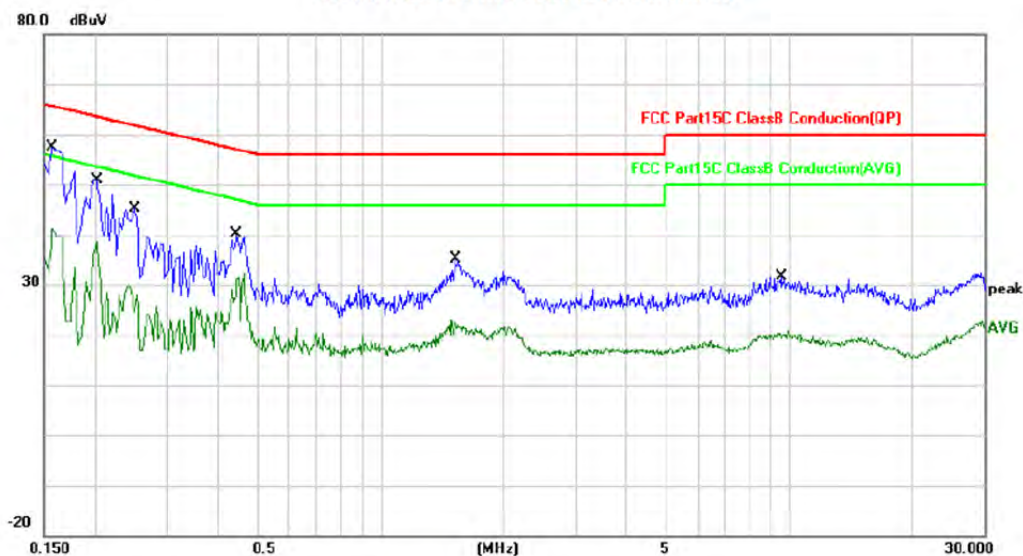


150kHz~30MHz

Worst Case Operating Mode: AX20 Channel 6

Neutral

### Conducted Emission Measurement



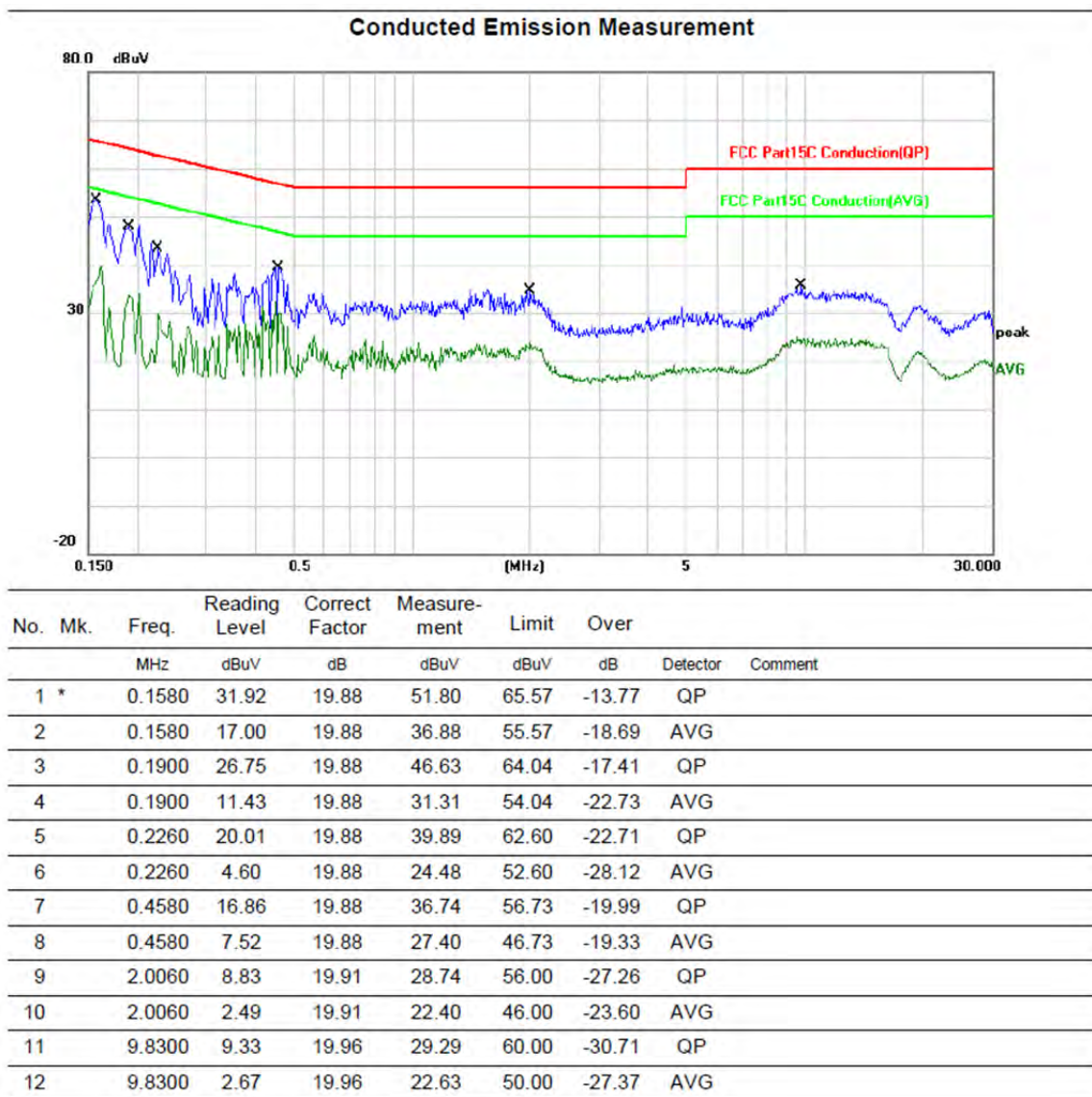
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   | *   | 0.1580       | 35.38                    | 19.88                   | 55.26                    | 65.57         | -10.31     | QP       |         |
| 2   |     | 0.1580       | 18.44                    | 19.88                   | 38.32                    | 55.57         | -17.25     | AVG      |         |
| 3   |     | 0.2020       | 28.24                    | 19.88                   | 48.12                    | 63.53         | -15.41     | QP       |         |
| 4   |     | 0.2020       | 12.89                    | 19.88                   | 32.77                    | 53.53         | -20.76     | AVG      |         |
| 5   |     | 0.2500       | 19.49                    | 19.88                   | 39.37                    | 61.76         | -22.39     | QP       |         |
| 6   |     | 0.2500       | 1.71                     | 19.88                   | 21.59                    | 51.76         | -30.17     | AVG      |         |
| 7   |     | 0.4460       | 16.26                    | 19.88                   | 36.14                    | 56.95         | -20.81     | QP       |         |
| 8   |     | 0.4460       | 6.51                     | 19.88                   | 26.39                    | 46.95         | -20.56     | AVG      |         |
| 9   |     | 1.5340       | 8.21                     | 19.90                   | 28.11                    | 56.00         | -27.89     | QP       |         |
| 10  |     | 1.5340       | 1.34                     | 19.90                   | 21.24                    | 46.00         | -24.76     | AVG      |         |
| 11  |     | 9.5580       | 4.84                     | 19.95                   | 24.79                    | 60.00         | -35.21     | QP       |         |
| 12  |     | 9.5580       | -1.01                    | 19.95                   | 18.94                    | 50.00         | -31.06     | AVG      |         |

For model mane: HT-360AXI

150kHz~30MHz

Worst Case Operating Mode: AX20 Channel 6

Line

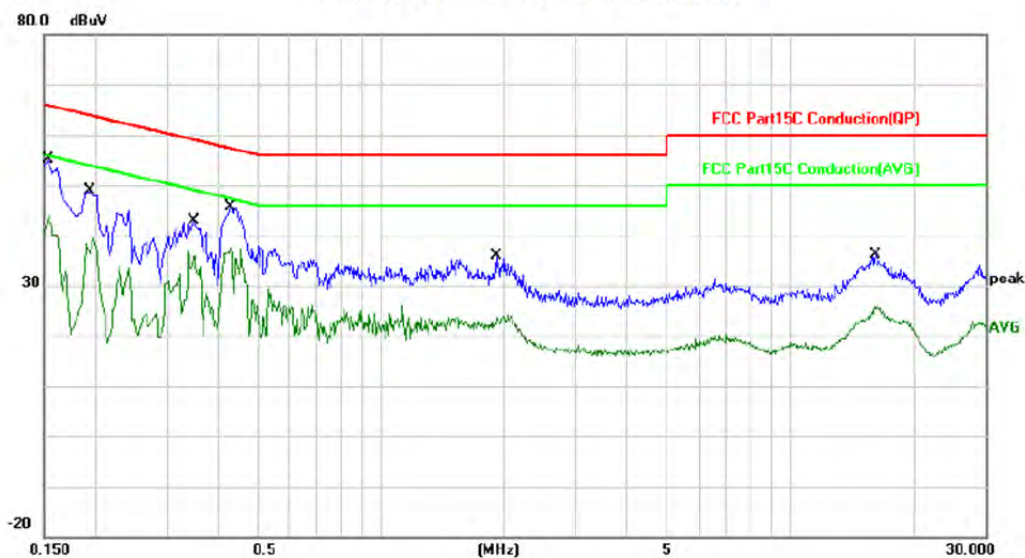


150kHz~30MHz

Worst Case Operating Mode: AX20 Channel 6

Neutral

### Conducted Emission Measurement



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   | *   | 0.1540       | 32.76                    | 19.88                   | 52.64                    | 65.78         | -13.14     | QP       |         |
| 2   |     | 0.1540       | 19.62                    | 19.88                   | 39.50                    | 55.78         | -16.28     | AVG      |         |
| 3   |     | 0.1940       | 26.17                    | 19.88                   | 46.05                    | 63.86         | -17.81     | QP       |         |
| 4   |     | 0.1940       | 16.18                    | 19.88                   | 36.06                    | 53.86         | -17.80     | AVG      |         |
| 5   |     | 0.3500       | 19.48                    | 19.88                   | 39.36                    | 58.96         | -19.60     | QP       |         |
| 6   |     | 0.3500       | 10.81                    | 19.88                   | 30.69                    | 48.96         | -18.27     | AVG      |         |
| 7   |     | 0.4300       | 23.94                    | 19.88                   | 43.82                    | 57.25         | -13.43     | QP       |         |
| 8   |     | 0.4300       | 13.23                    | 19.88                   | 33.11                    | 47.25         | -14.14     | AVG      |         |
| 9   |     | 1.9140       | 7.98                     | 19.91                   | 27.89                    | 56.00         | -28.11     | QP       |         |
| 10  |     | 1.9140       | 2.15                     | 19.91                   | 22.06                    | 46.00         | -23.94     | AVG      |         |
| 11  |     | 16.1860      | 9.53                     | 20.02                   | 29.55                    | 60.00         | -30.45     | QP       |         |
| 12  |     | 16.1860      | 3.80                     | 20.02                   | 23.82                    | 50.00         | -26.18     | AVG      |         |

## 3.2 Radiated Emission and Band Edge

### 3.2.1 Limit

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

| Frequency<br>(MHz) | Distance<br>Meters(m) | Field Strength Limit                                                                              |                                   |
|--------------------|-----------------------|---------------------------------------------------------------------------------------------------|-----------------------------------|
|                    |                       | $\mu\text{V}/\text{m}$                                                                            | $\text{dB}(\mu\text{V})/\text{m}$ |
| 0.009 – 0.49       | 300                   | 2400/F(kHz)                                                                                       | -                                 |
| 0.490 – 1.705      | 30                    | 24000/F(kHz)                                                                                      | -                                 |
| 1.705 – 30         | 30                    | 30                                                                                                | -                                 |
| 30~88              | 3                     | 100                                                                                               | 40.0                              |
| 88~216             | 3                     | 150                                                                                               | 43.5                              |
| 216~960            | 3                     | 200                                                                                               | 46.0                              |
| 960~1000           | 3                     | 500                                                                                               | 54.0                              |
| Above 1000         | 3                     | 74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak)<br>54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average) |                                   |

Note: (1) Emission level  $\text{dB}\mu\text{V} = 20 \log$  Emission level  $\mu\text{V}/\text{m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

### 3.2.2 Test Procedure

| Test Method                                                                   |                                                       |
|-------------------------------------------------------------------------------|-------------------------------------------------------|
| <input type="radio"/> Conducted Measurement                                   | <input checked="" type="radio"/> Radiated Measurement |
| Test Channels                                                                 |                                                       |
| <input checked="" type="radio"/> Lowest, Middle and Highest Channel           | <input type="radio"/> Lowest and Highest Channel      |
| Environmental conditions                                                      |                                                       |
| <input checked="" type="radio"/> Normal                                       | <input type="radio"/> Normal and Extreme              |
| Note: <input checked="" type="radio"/> : Test <input type="radio"/> : No Test |                                                       |

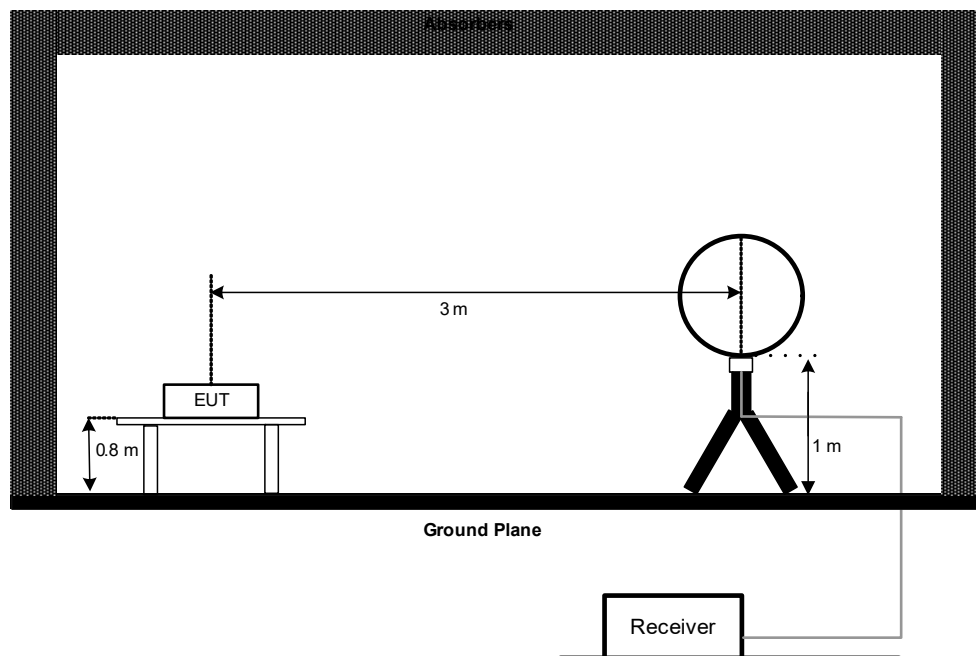
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- The measuring distance of 3 m or 1.5m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of

the antenna are set to make the measurement.

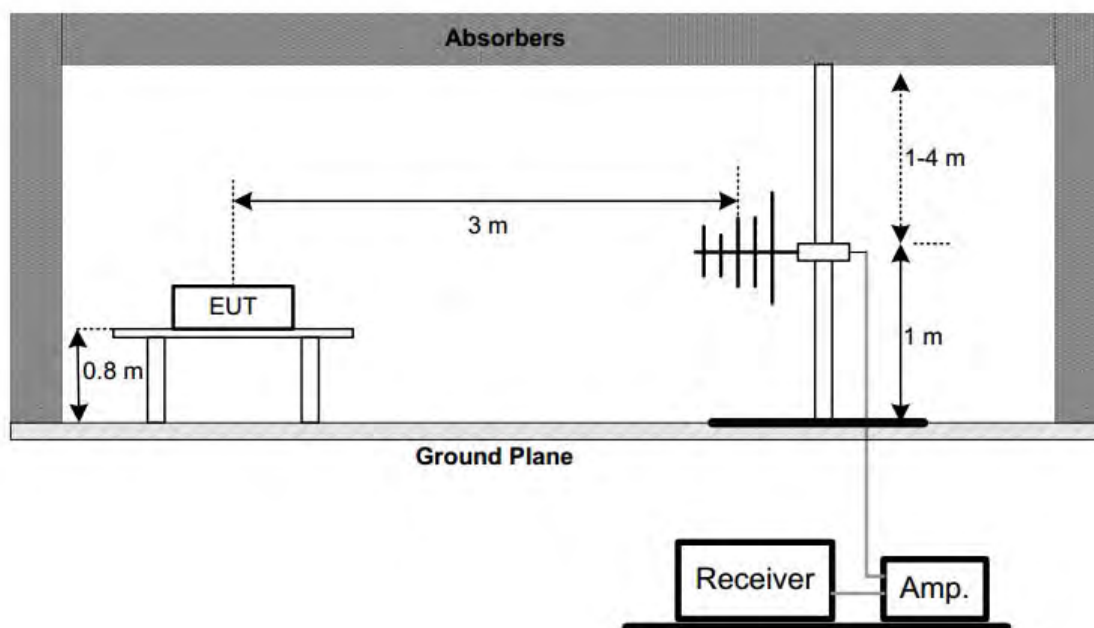
- d) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e) The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- f) The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g) All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1 GHz)
- h) All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- i) For the actual test configuration, please refer to the related Item -EUT Test Photos.

### 3.2.3 Test Setup

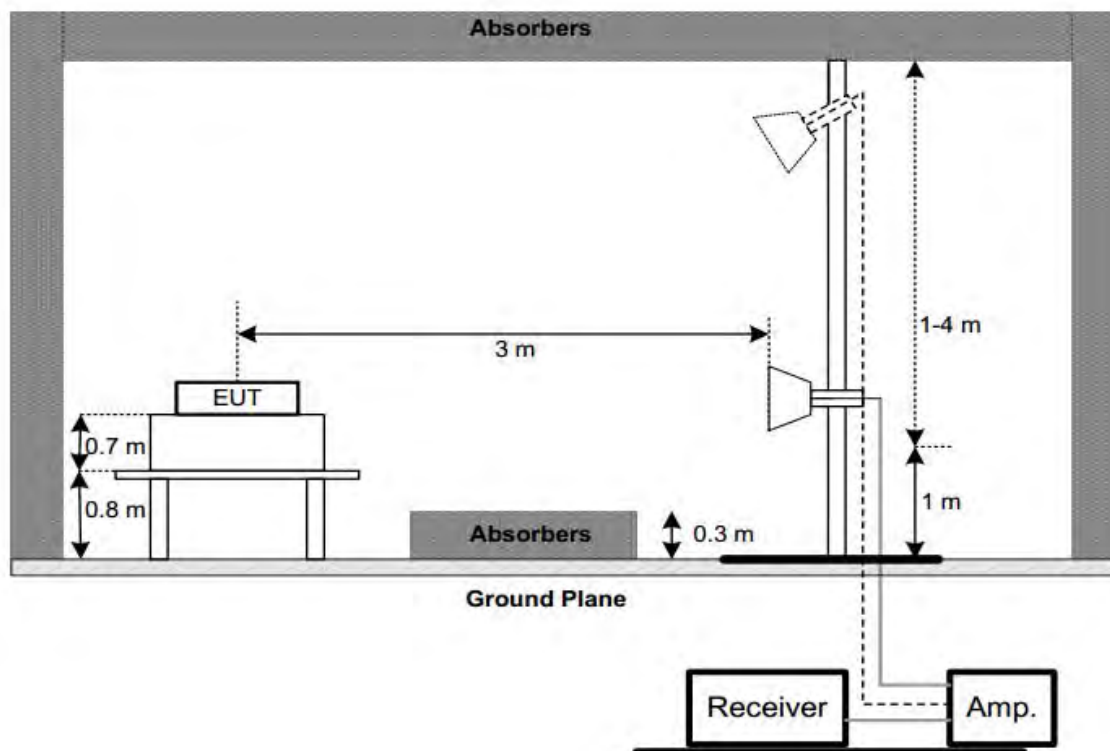
#### (A) Radiated Emission Test Set-Up Frequency Below 30 MHz



(B) Radiated Emission Test Set-Up Frequency 30 MHz-1000 MHz



(C) Radiated Emission Test Set-Up Frequency Above 1 GHz



### 3.2.4 Test Result

Pre-scan beamform mode and non-beamform mode, worst case for non-beamform mode is recorded.

#### 1) Radiated emission: 9kHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

#### 2) Radiated emission: 30MHz-1G

**Note:**

1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

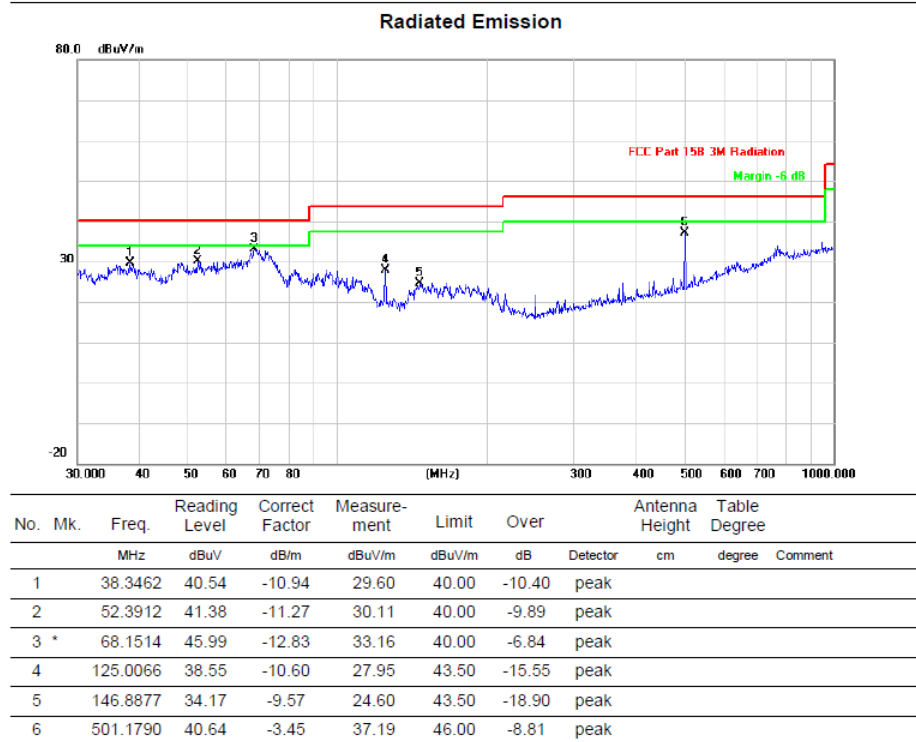
We only recorded the data of the worst mode. Please see the following:

For model mane: HT-360AXE

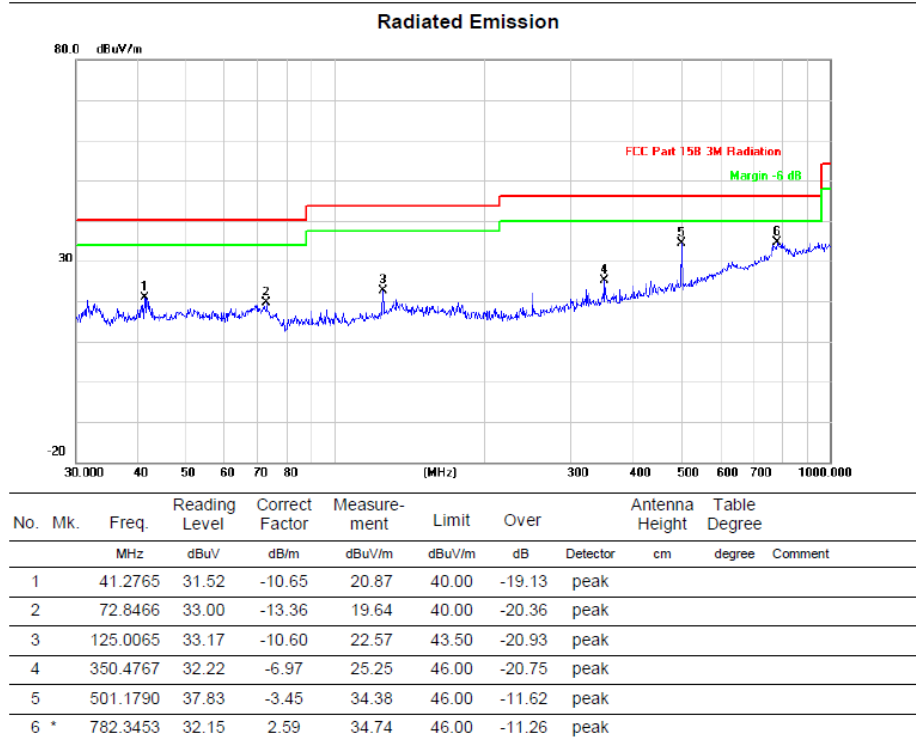
Below 1G (30MHz~1GHz)

Worst Case Operating Mode: AX20MIMO Channel 6

### VERTICAL



### HORIZONTAL

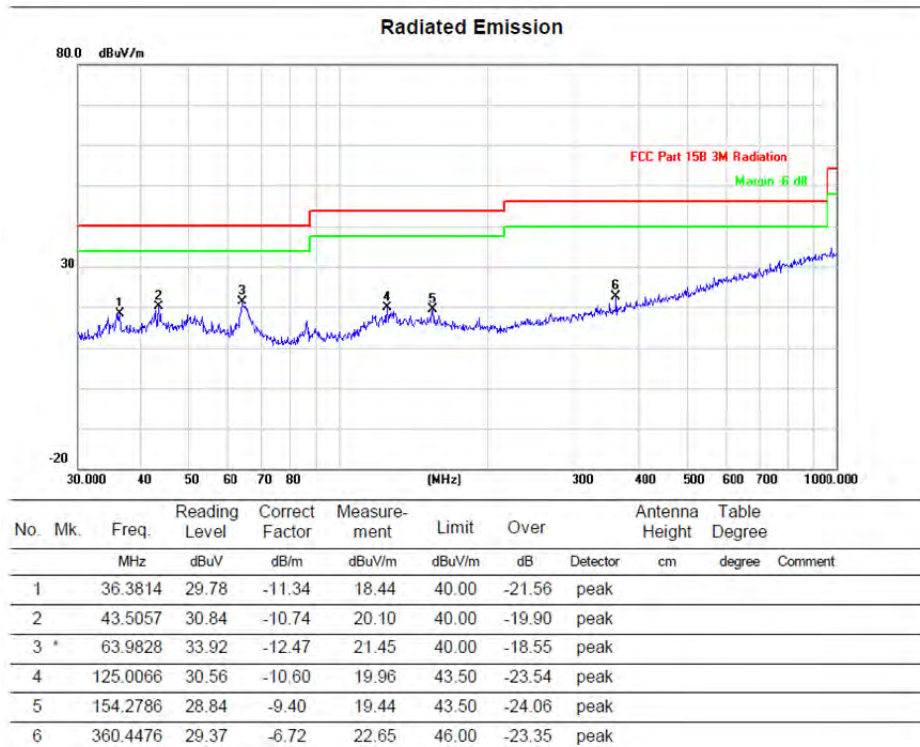


For model name: HT-360AXG

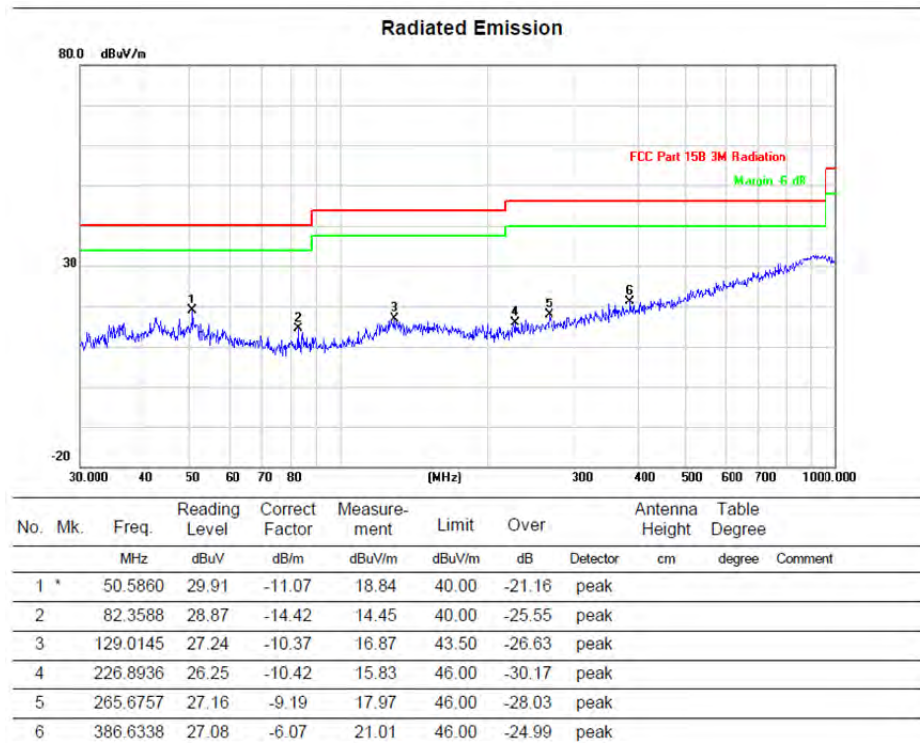
Below 1G (30MHz~1GHz)

Worst Case Operating Mode: AX20MIMO Channel 6

### VERTICAL



### HORIZONTAL

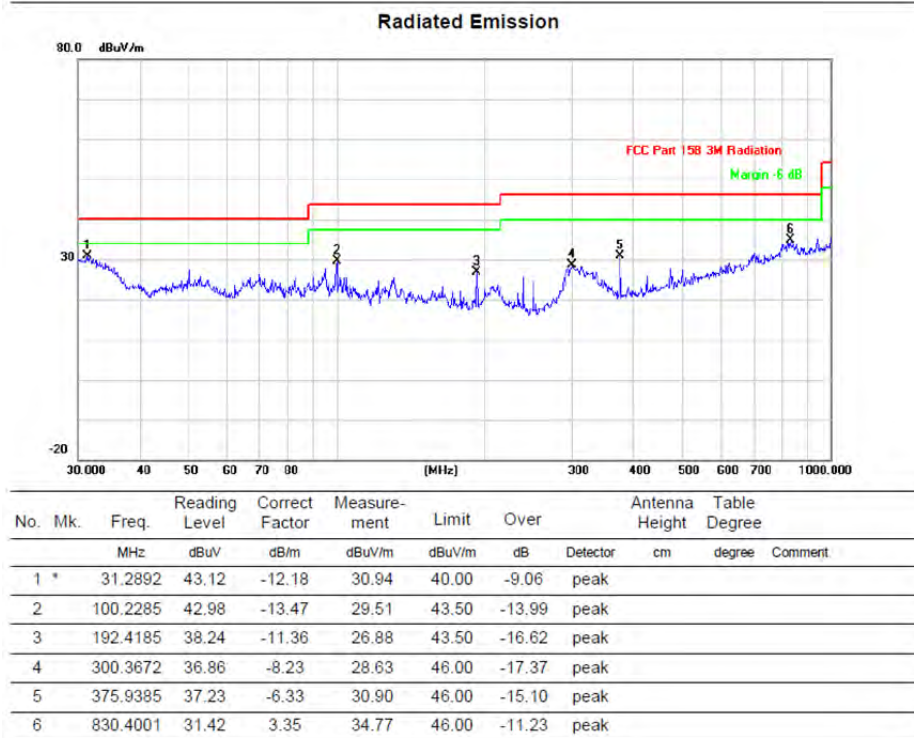


For model name: HT-360AXI

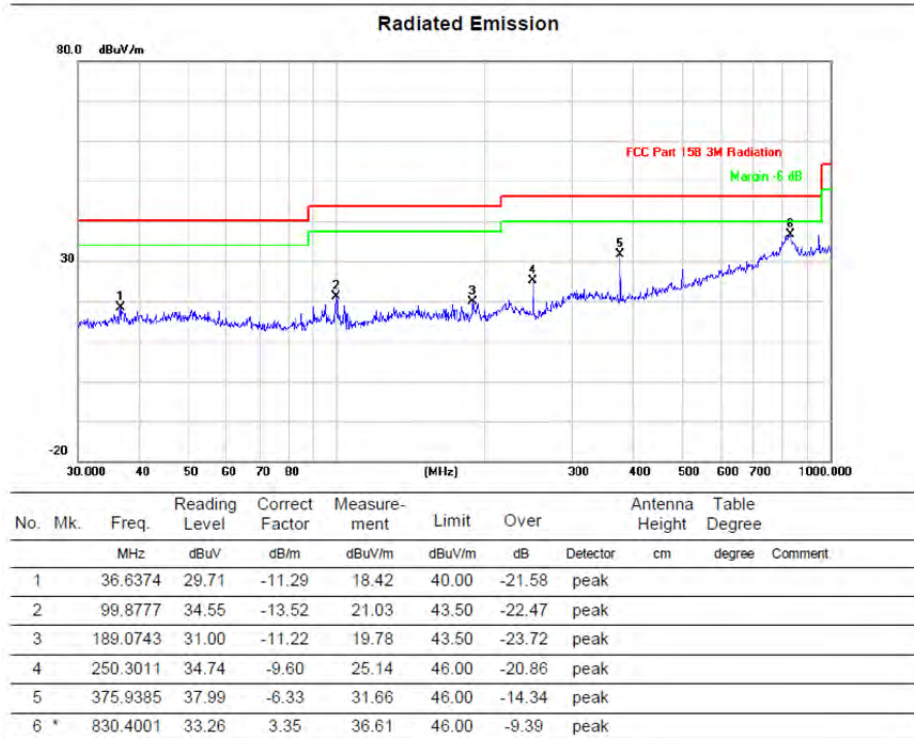
Below 1G (30MHz~1GHz)

Worst Case Operating Mode: AX20MIMO Channel 6

### VERTICAL



### HORIZONTAL



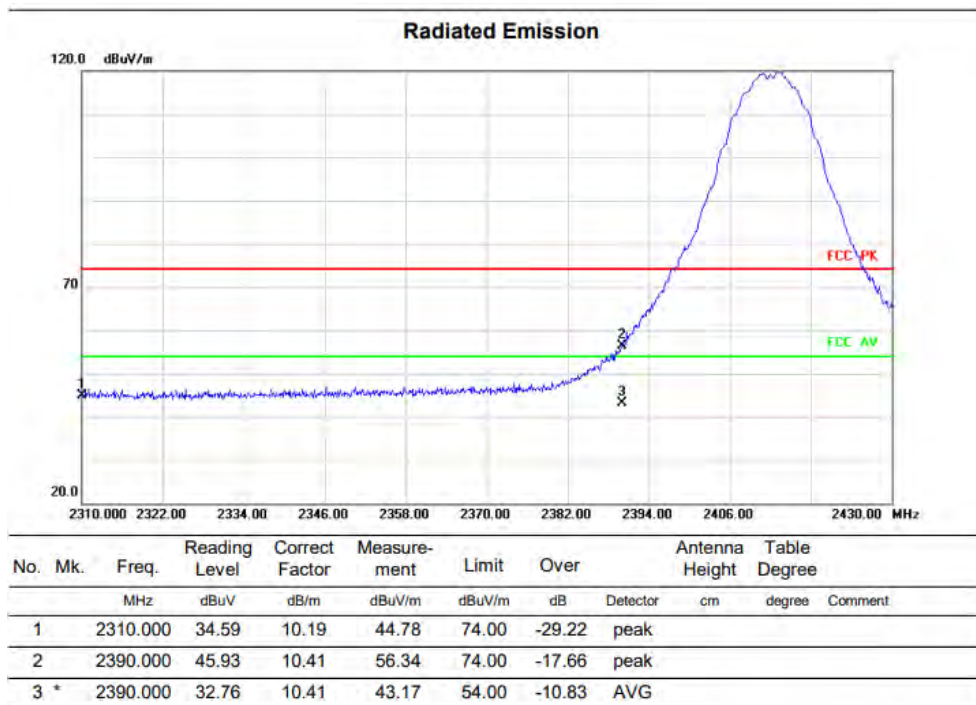
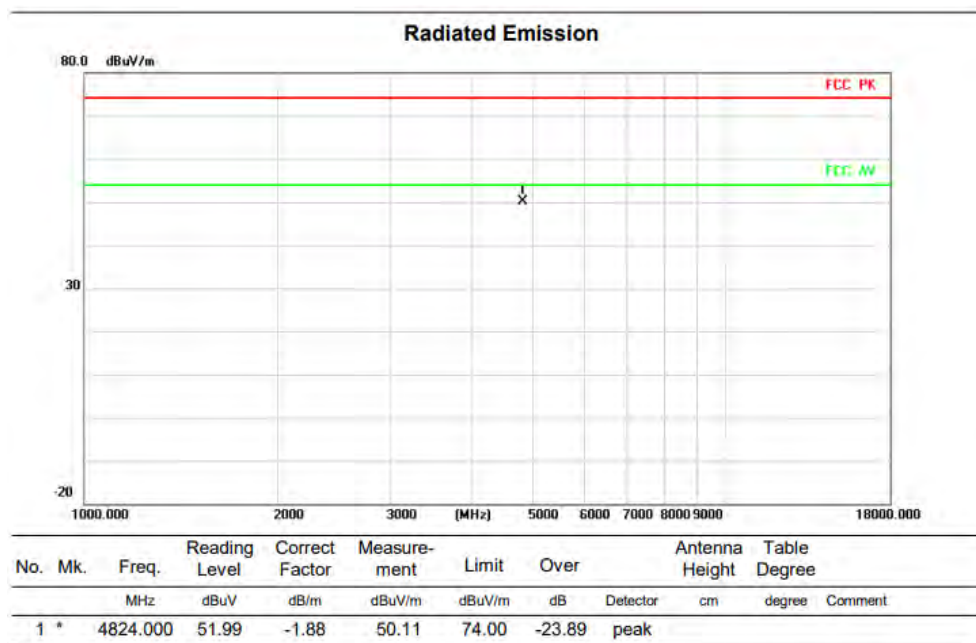
### 3) Radiated emission: Above 1G

#### Note:

1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

|                       |                   |                |
|-----------------------|-------------------|----------------|
| Above 1G (1GHz~18GHz) | Test mode:11B-CDD | Test Channel:1 |
|-----------------------|-------------------|----------------|

#### VERTICAL



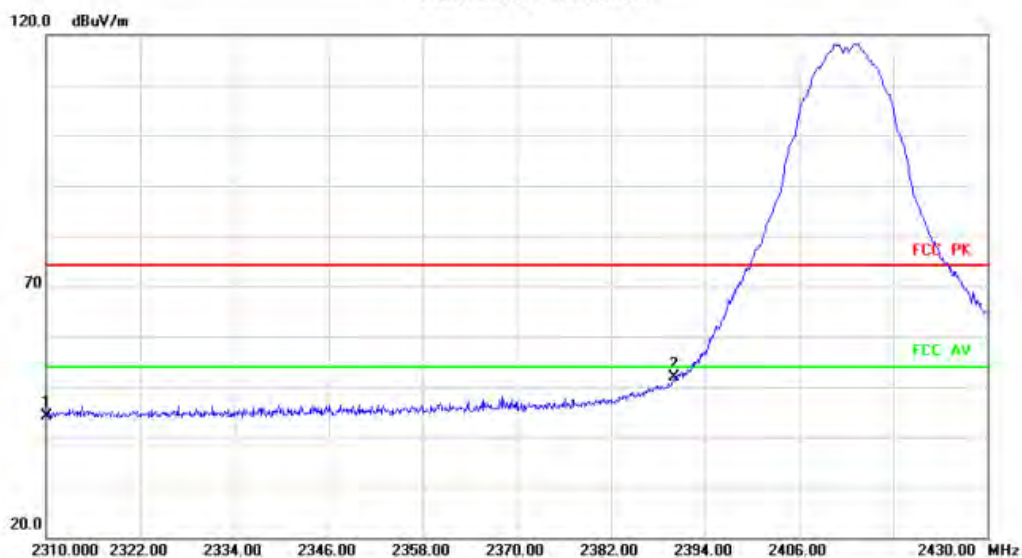
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 4824.000 | 49.11         | -1.88          | 47.23       | 74.00  | -26.77 | peak           |              |         |

### Radiated Emission



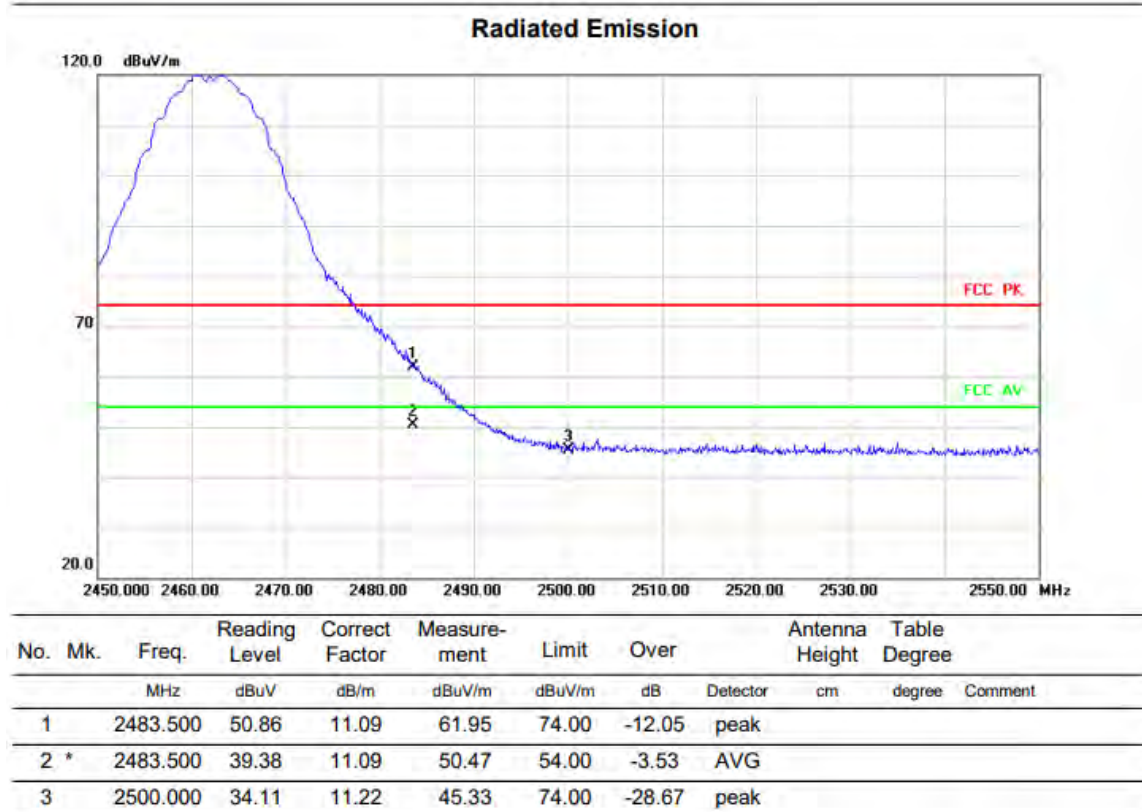
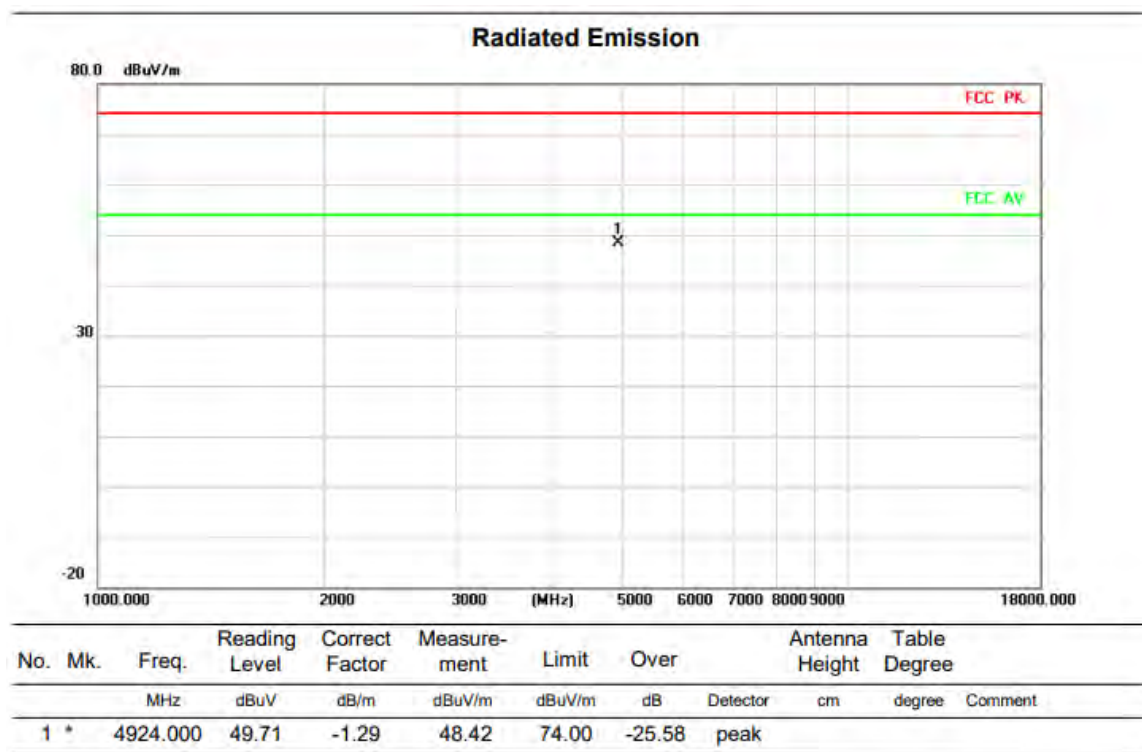
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 2310.000 | 33.98         | 10.19          | 44.17       | 74.00  | -29.83 | peak           |              |         |
| 2   | *   | 2390.000 | 41.45         | 10.41          | 51.86       | 74.00  | -22.14 | peak           |              |         |

Above 1G (1GHz~18GHz)

Test mode: 11B-CDD

Test Channel:11

VERTICAL



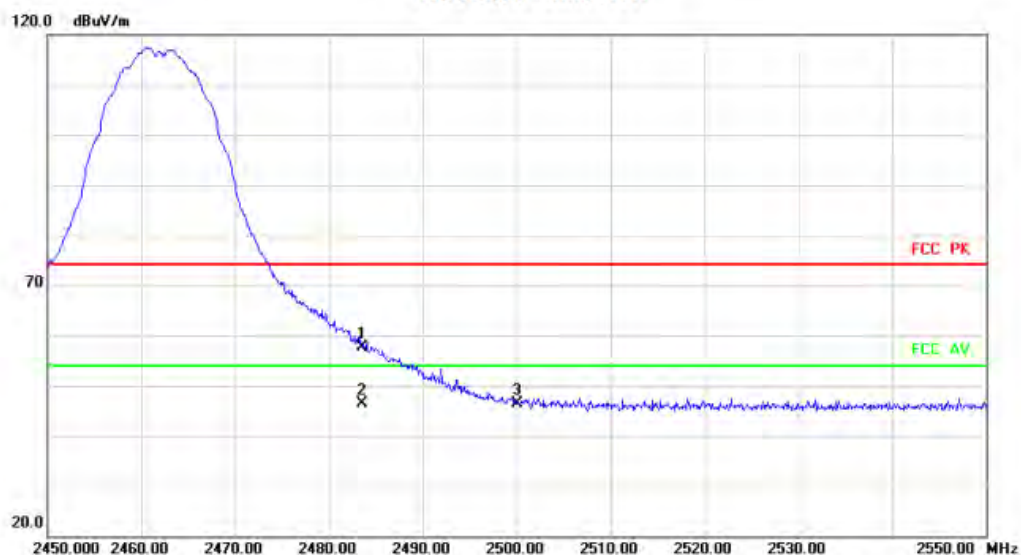
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 4924.000 | 46.72         | -1.29          | 45.43       | 74.00  | -28.57 | peak           |              |         |

### Radiated Emission



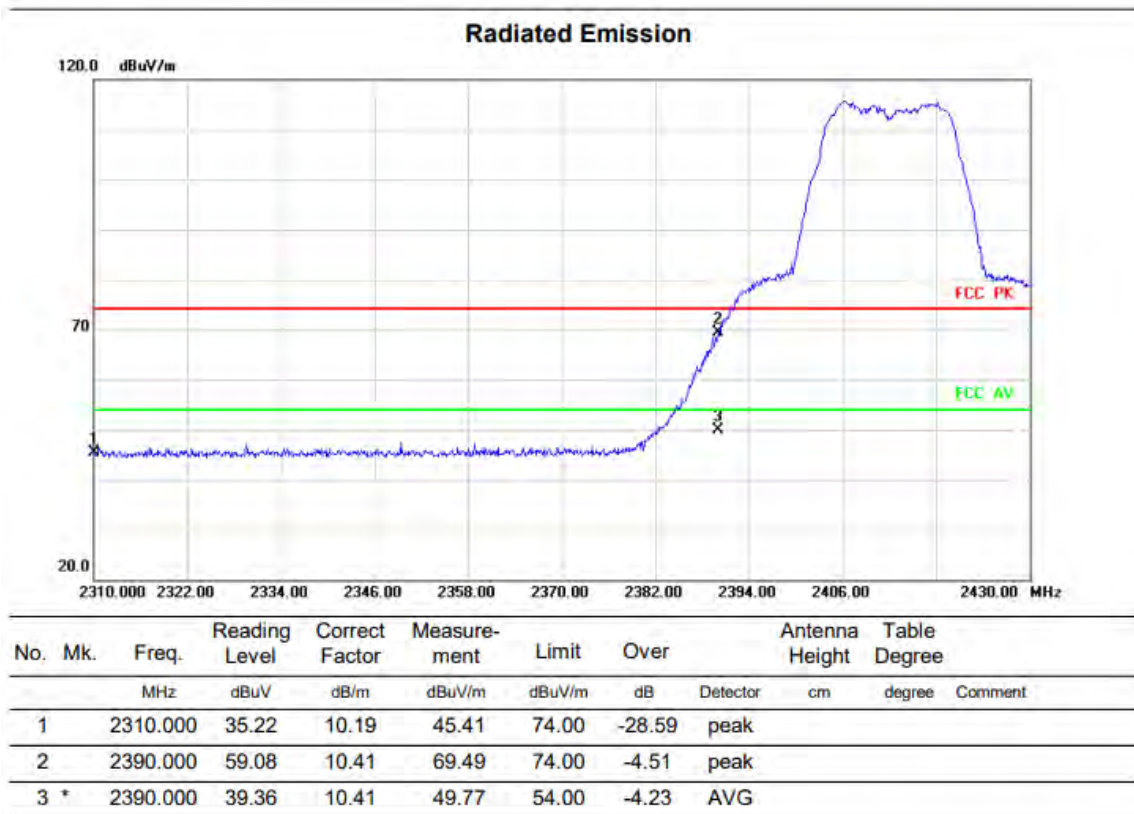
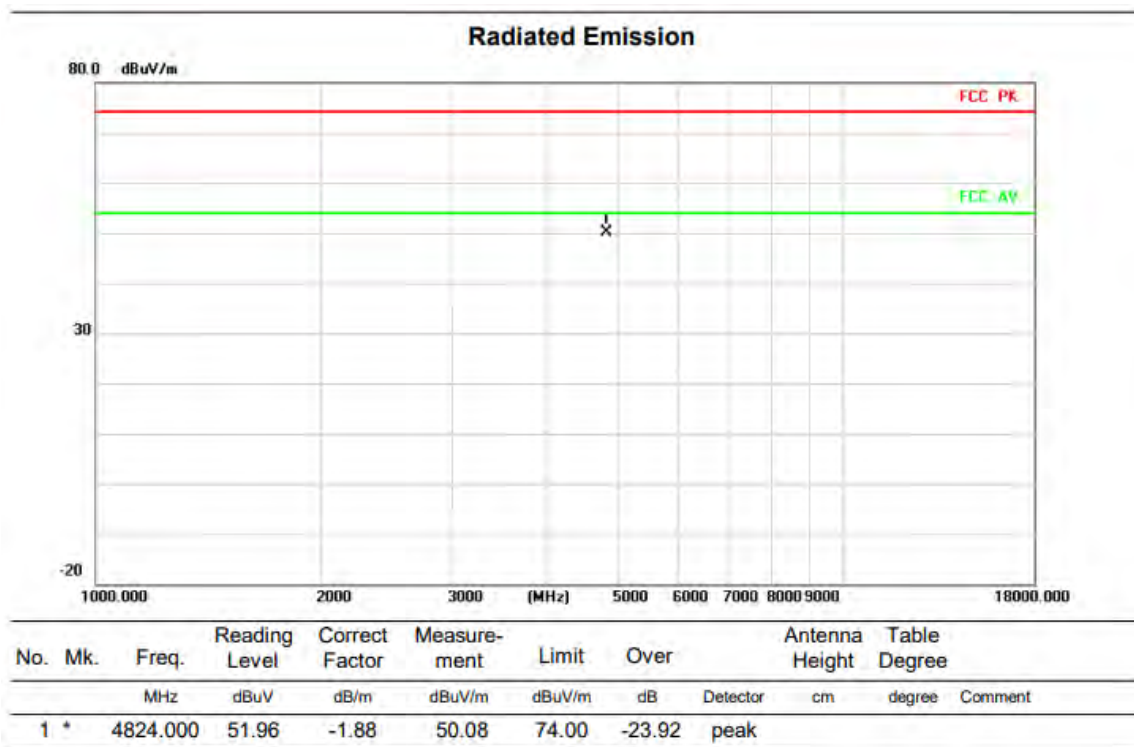
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 2483.500 | 46.44         | 11.09          | 57.53       | 74.00  | -16.47 | peak           |              |         |
| 2   | *   | 2483.500 | 35.24         | 11.09          | 46.33       | 54.00  | -7.67  | AVG            |              |         |
| 3   |     | 2500.000 | 35.18         | 11.22          | 46.40       | 74.00  | -27.60 | peak           |              |         |

Above 1G (1GHz~18GHz)

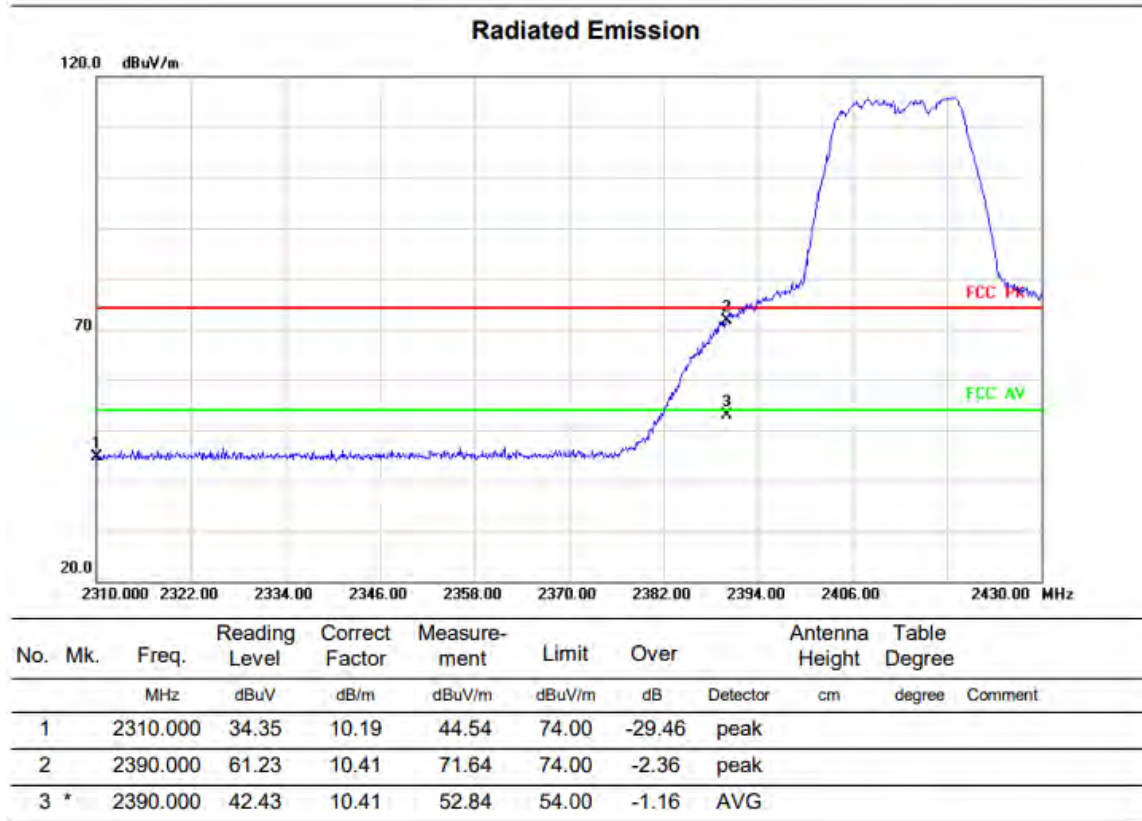
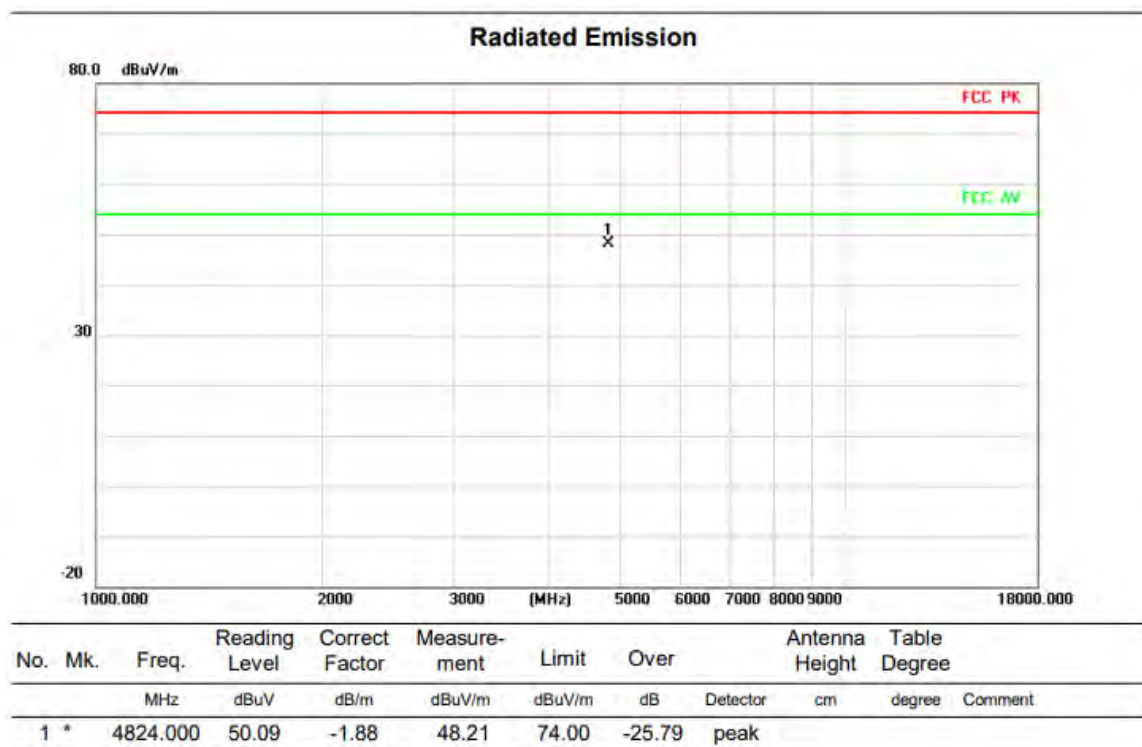
Test mode:11G-CDD

Test Channel:1

VERTICAL



## HORIZONTAL

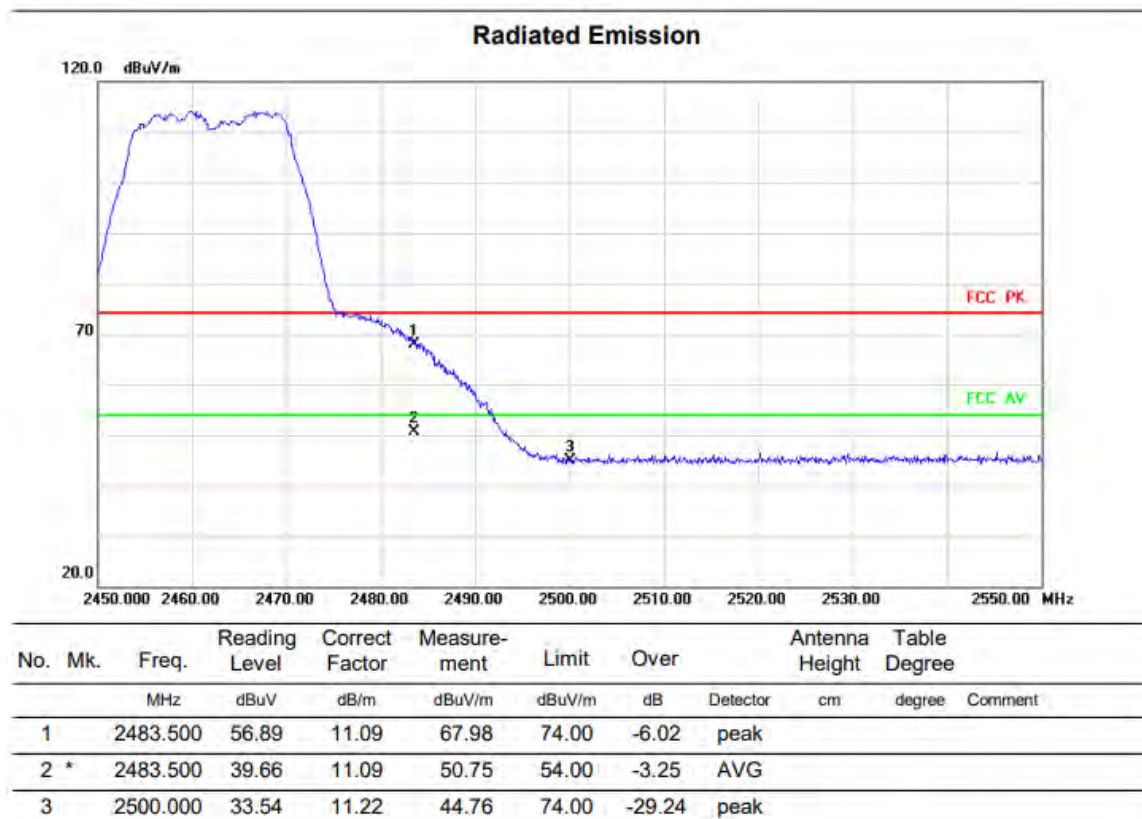
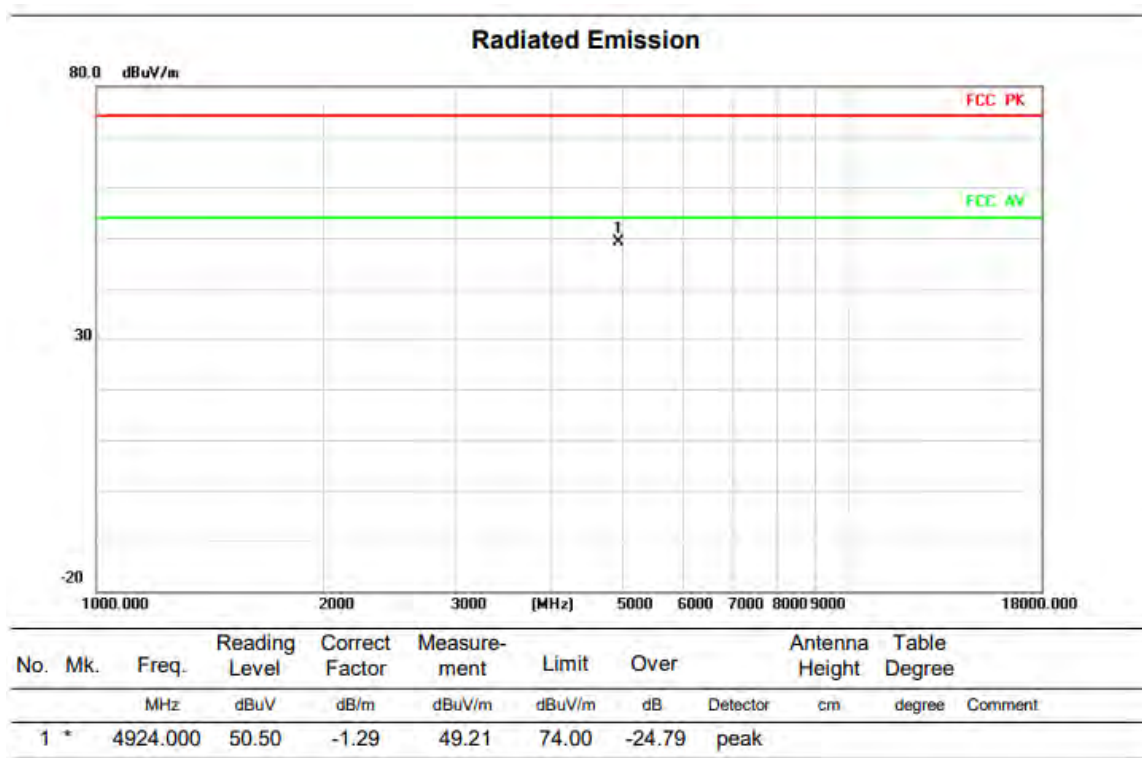


Above 1G (1GHz~18GHz)

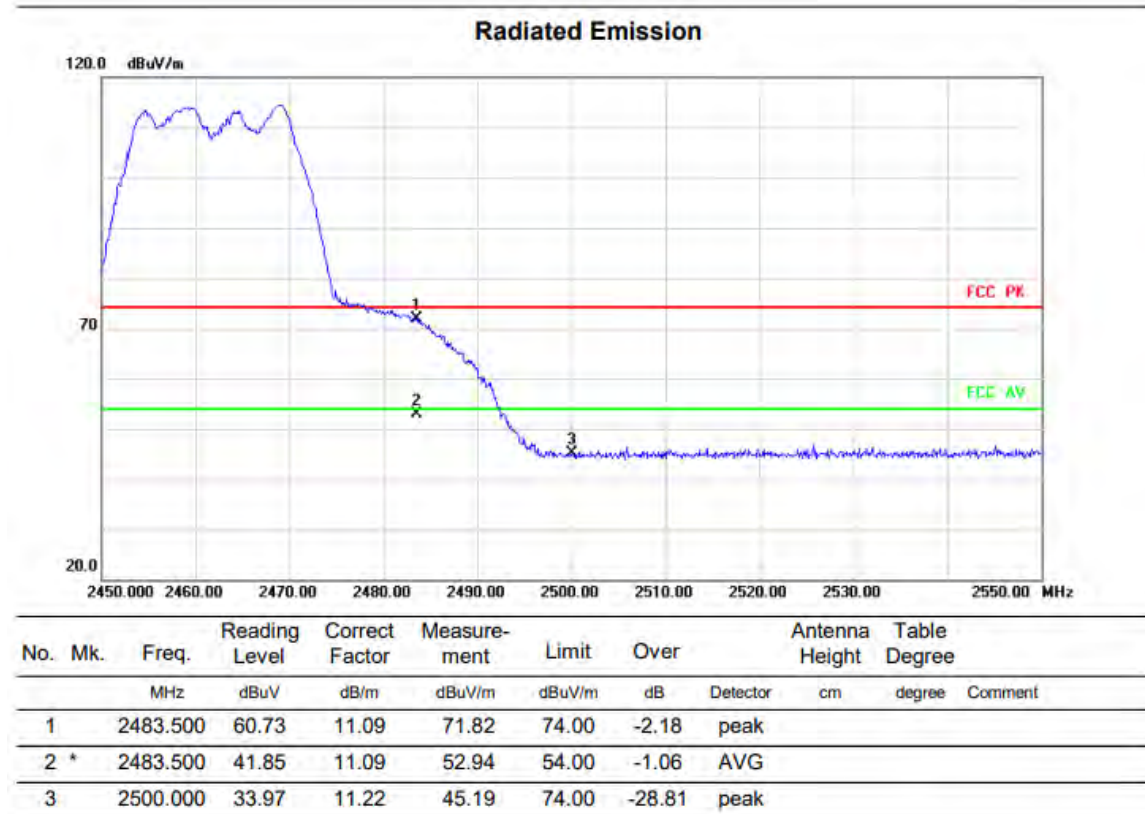
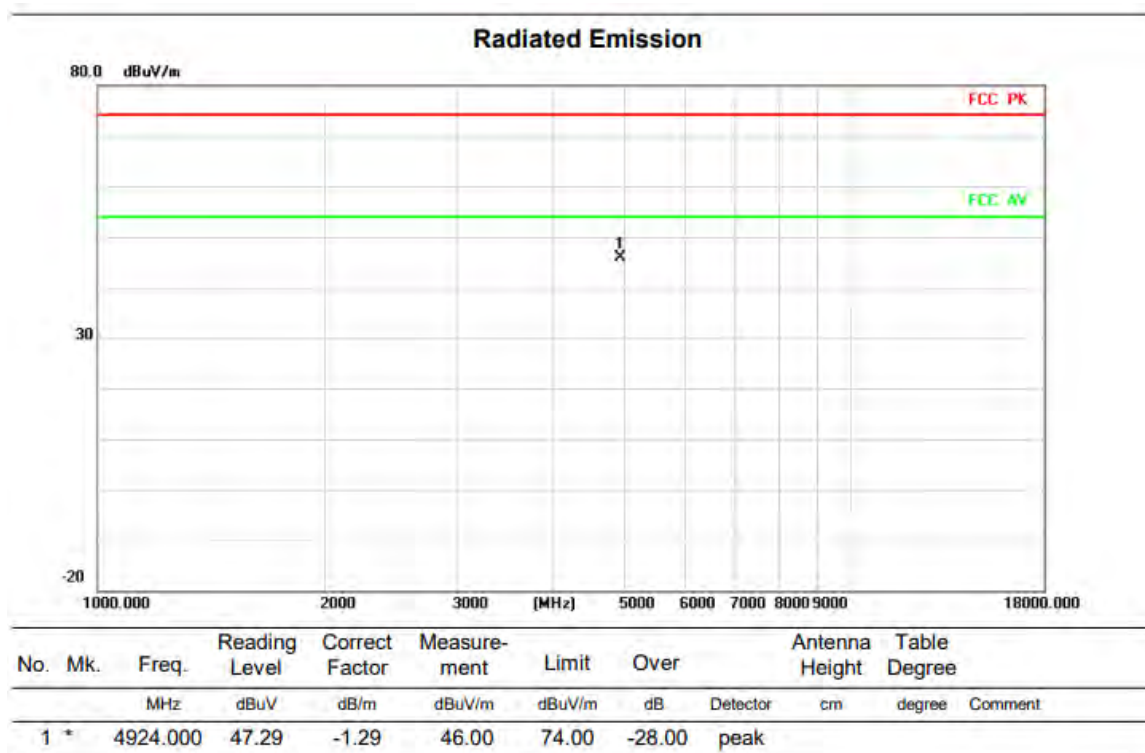
Test mode: 11G-CDD

Test Channel:11

VERTICAL



## HORIZONTAL

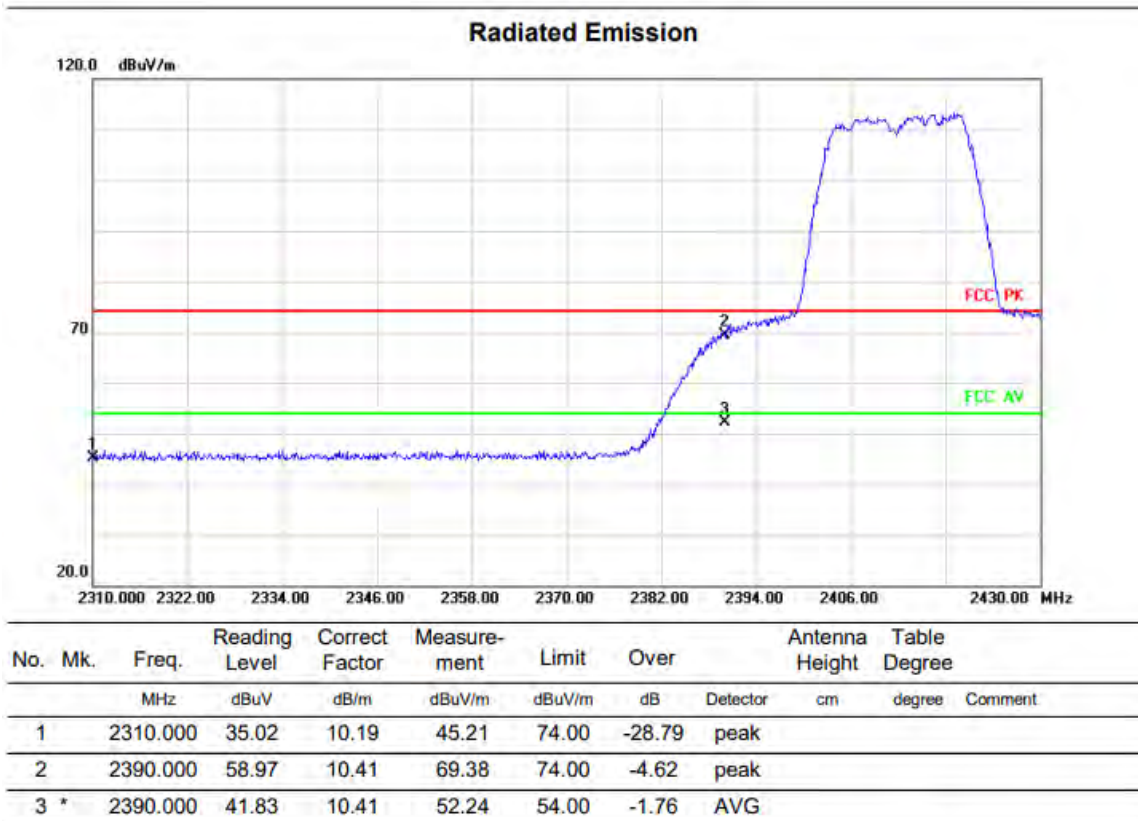
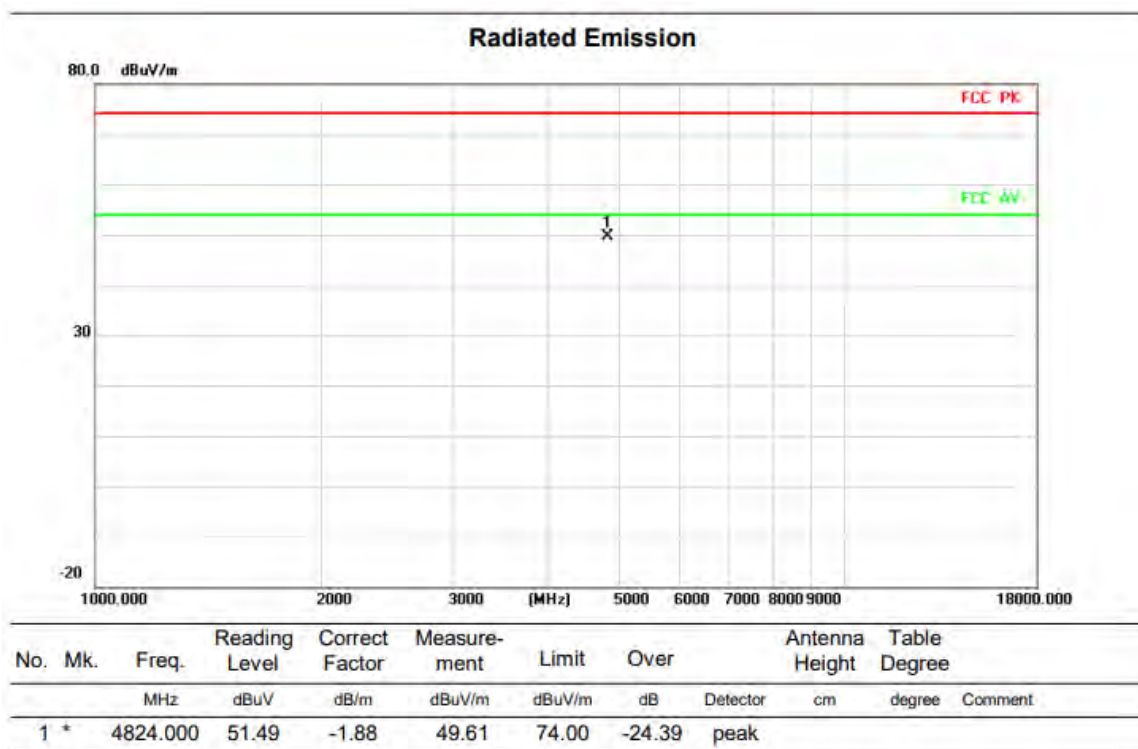


Above 1G (1GHz~18GHz)

Test mode: 11N20MIMO

Test Channel:1

VERTICAL



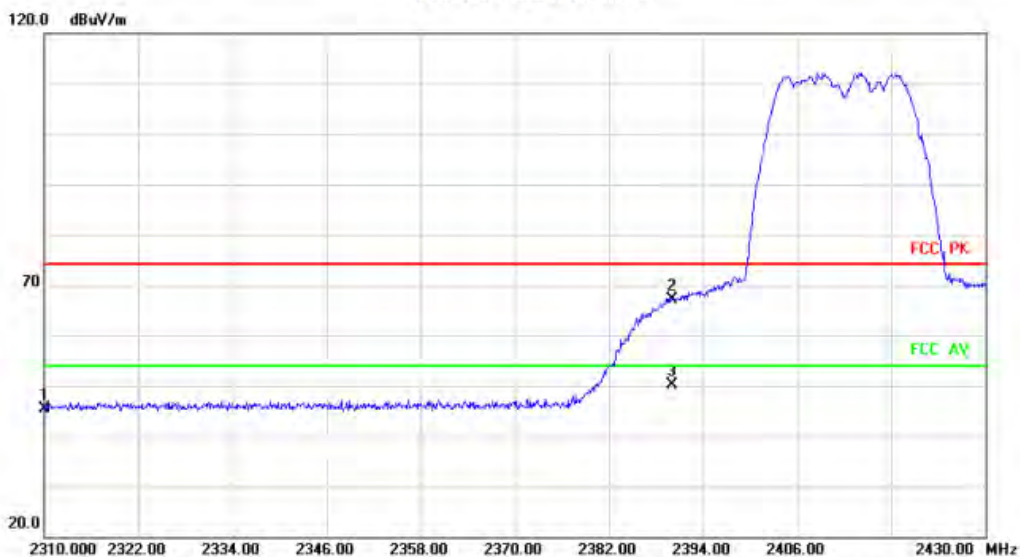
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 4824.000 | 48.94         | -1.88          | 47.06       | 74.00  | -26.94 | peak           |              |         |

### Radiated Emission



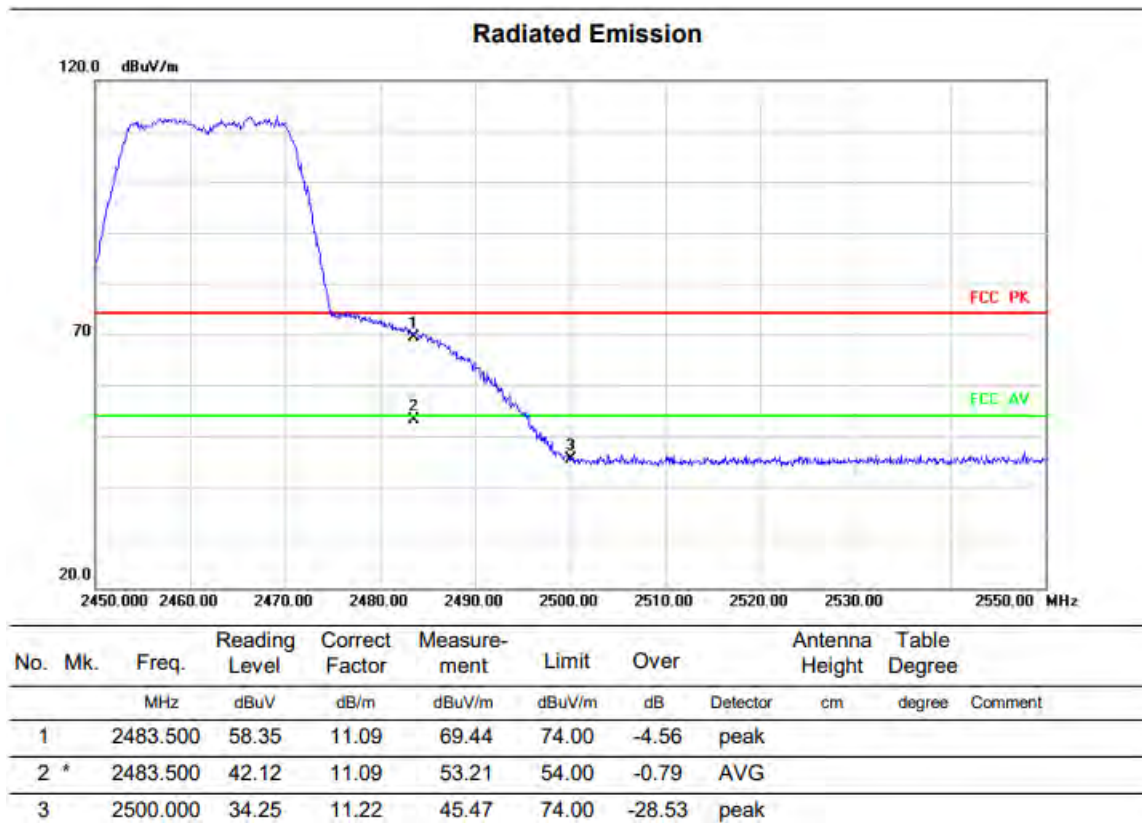
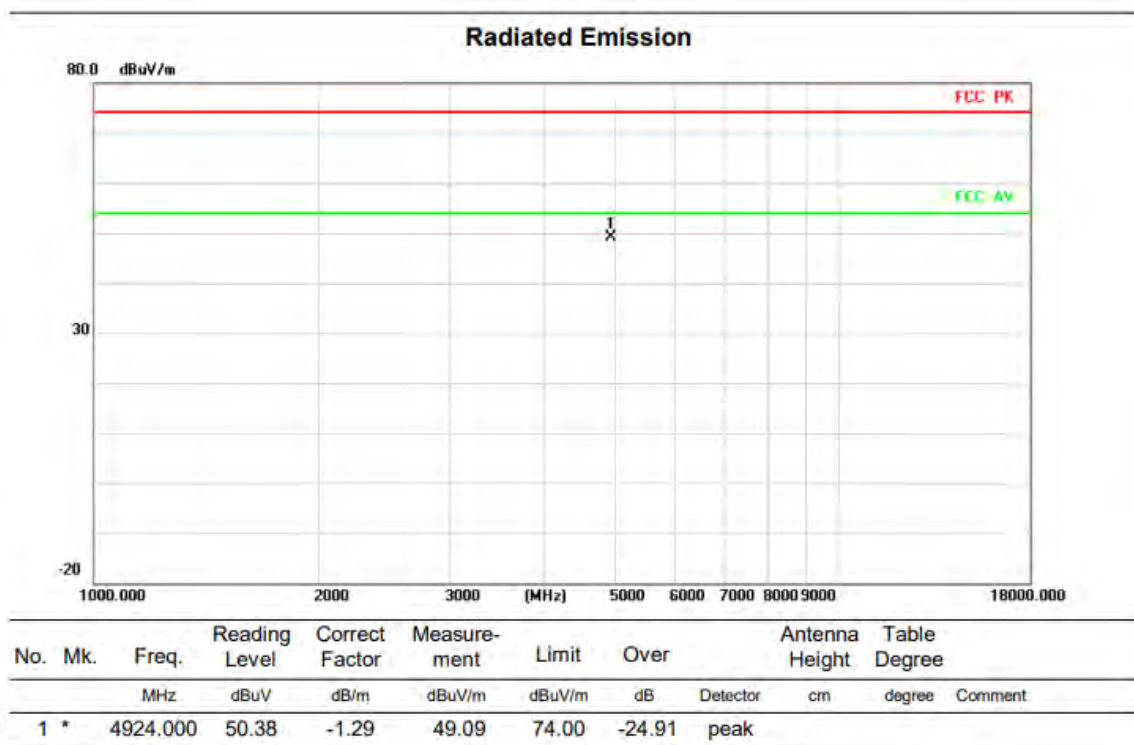
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 2310.000 | 35.12         | 10.19          | 45.31       | 74.00  | -28.69 | peak           |              |         |
| 2   |     | 2390.000 | 56.69         | 10.41          | 67.10       | 74.00  | -6.90  | peak           |              |         |
| 3   | *   | 2390.000 | 39.66         | 10.41          | 50.07       | 54.00  | -3.93  | AVG            |              |         |

Above 1G (1GHz~18GHz)

Test mode: 11N20MIMO

Test Channel:11

VERTICAL



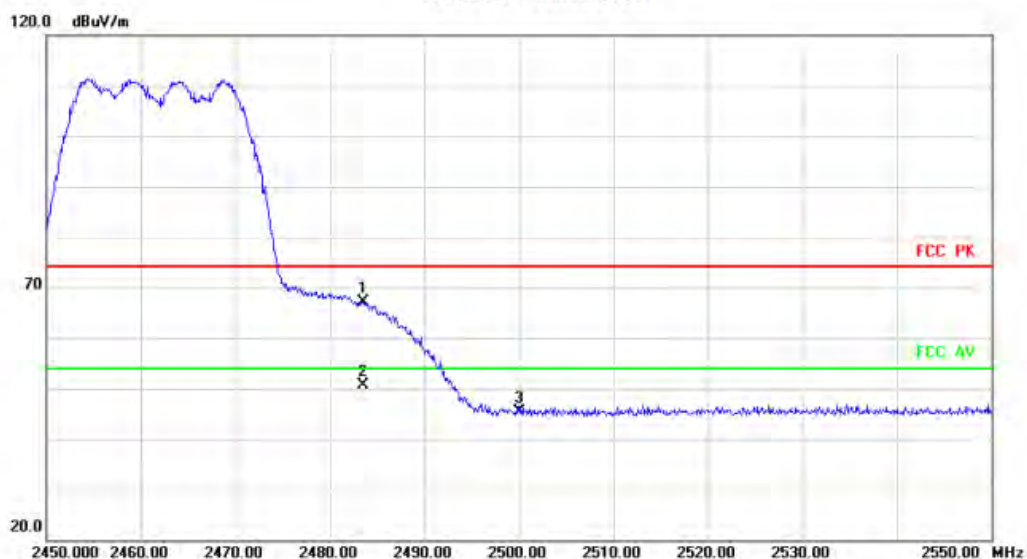
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | Detector       | cm           | degree  |
| 1   | *   | 4924.000 | 47.79         | -1.29          | 46.50       | 74.00  | -27.50 | peak           |              | Comment |

### Radiated Emission



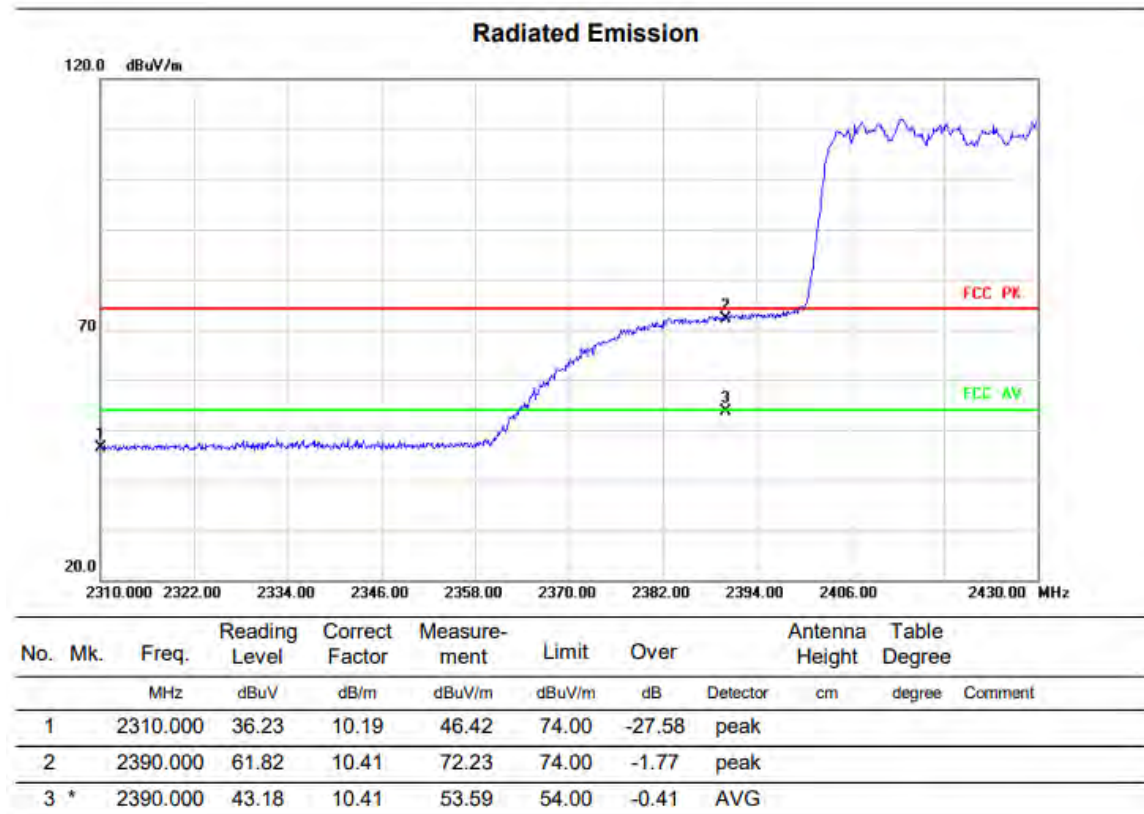
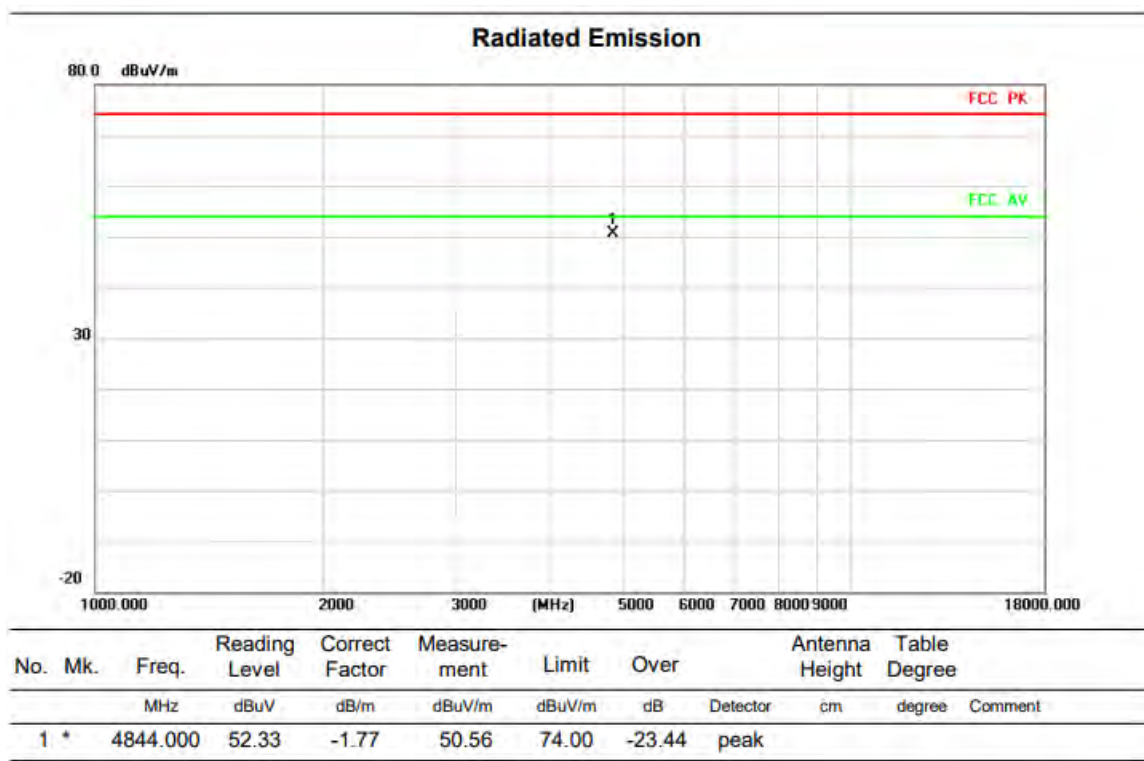
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | Detector       | cm           | degree  |
| 1   |     | 2483.500 | 56.15         | 11.09          | 67.24       | 74.00  | -6.76  | peak           |              | Comment |
| 2   | *   | 2483.500 | 39.53         | 11.09          | 50.62       | 54.00  | -3.38  | AVG            |              |         |
| 3   |     | 2500.000 | 34.23         | 11.22          | 45.45       | 74.00  | -28.55 | peak           |              |         |

Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:3

VERTICAL



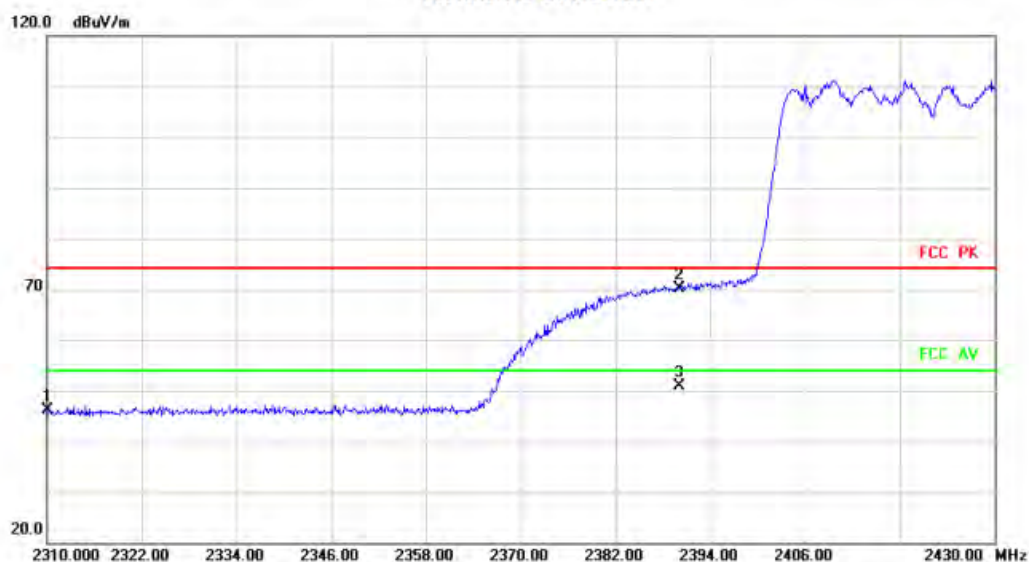
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 4844.000 | 49.02         | -1.77          | 47.25       | 74.00  | -26.75 | peak           |              |         |

### Radiated Emission



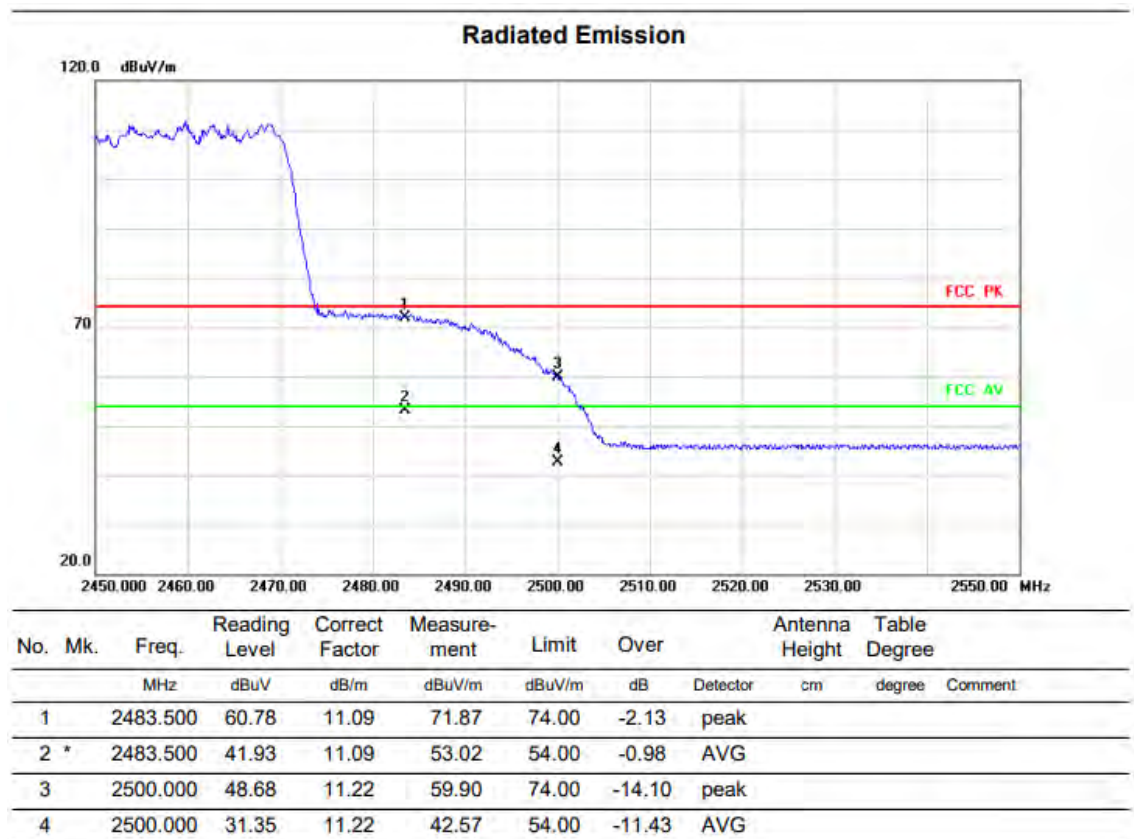
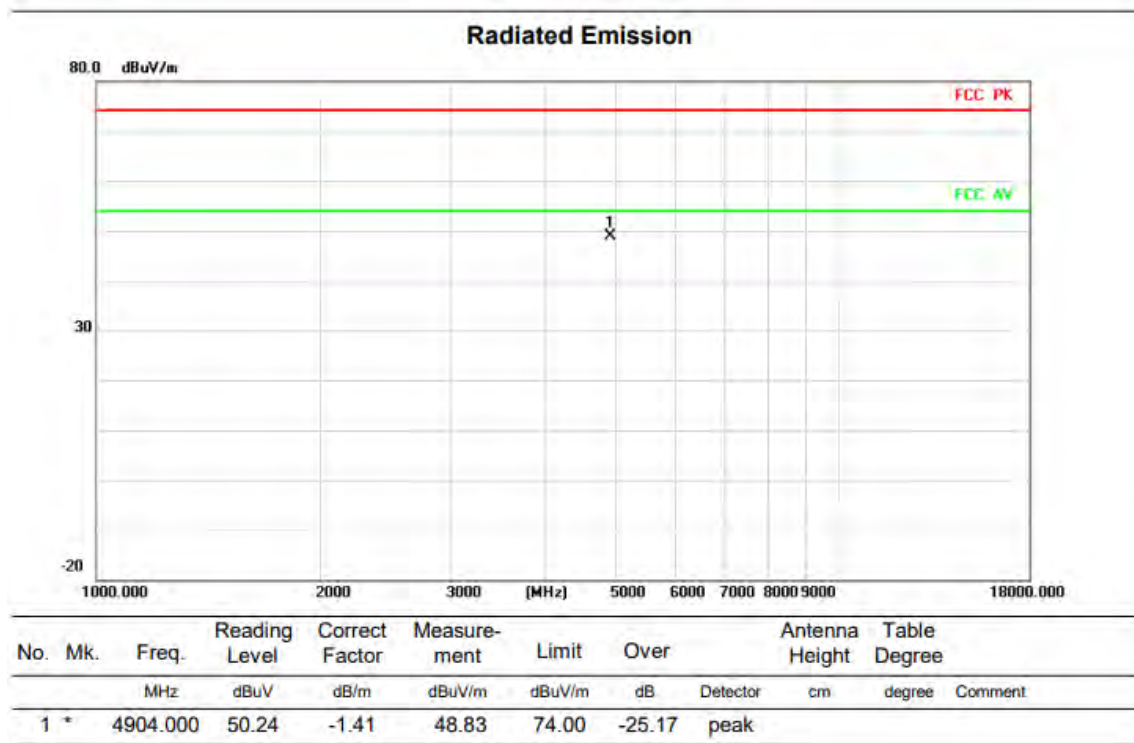
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 2310.000 | 35.84         | 10.19          | 46.03       | 74.00  | -27.97 | peak           |              |         |
| 2   |     | 2390.000 | 59.74         | 10.41          | 70.15       | 74.00  | -3.85  | peak           |              |         |
| 3   | *   | 2390.000 | 40.43         | 10.41          | 50.84       | 54.00  | -3.16  | AVG            |              |         |

Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

Test Channel:9

VERTICAL



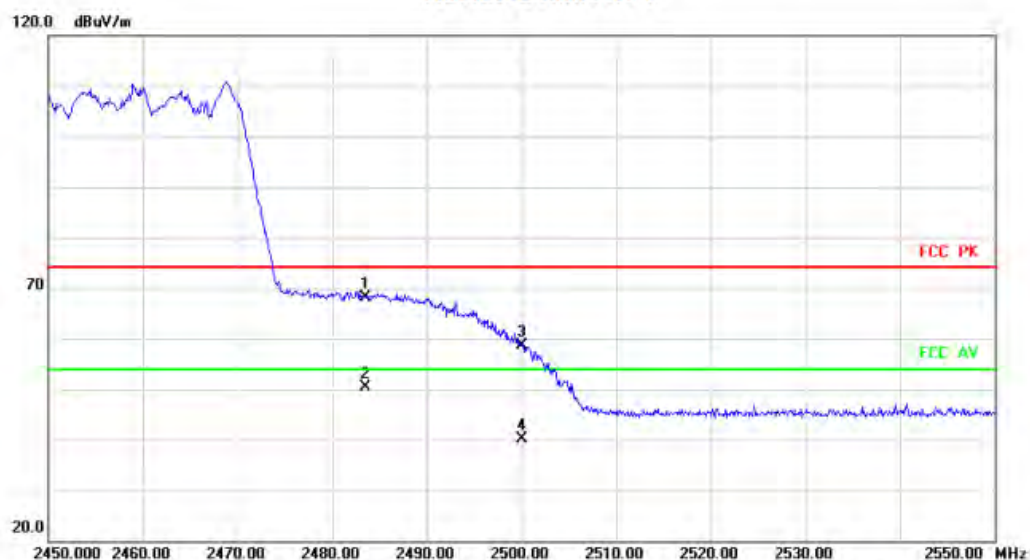
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | Detector       | cm           | degree  |
| 1   | *   | 4904.000 | 46.89         | -1.41          | 45.48       | 74.00  | -28.52 | peak           |              | Comment |

### Radiated Emission



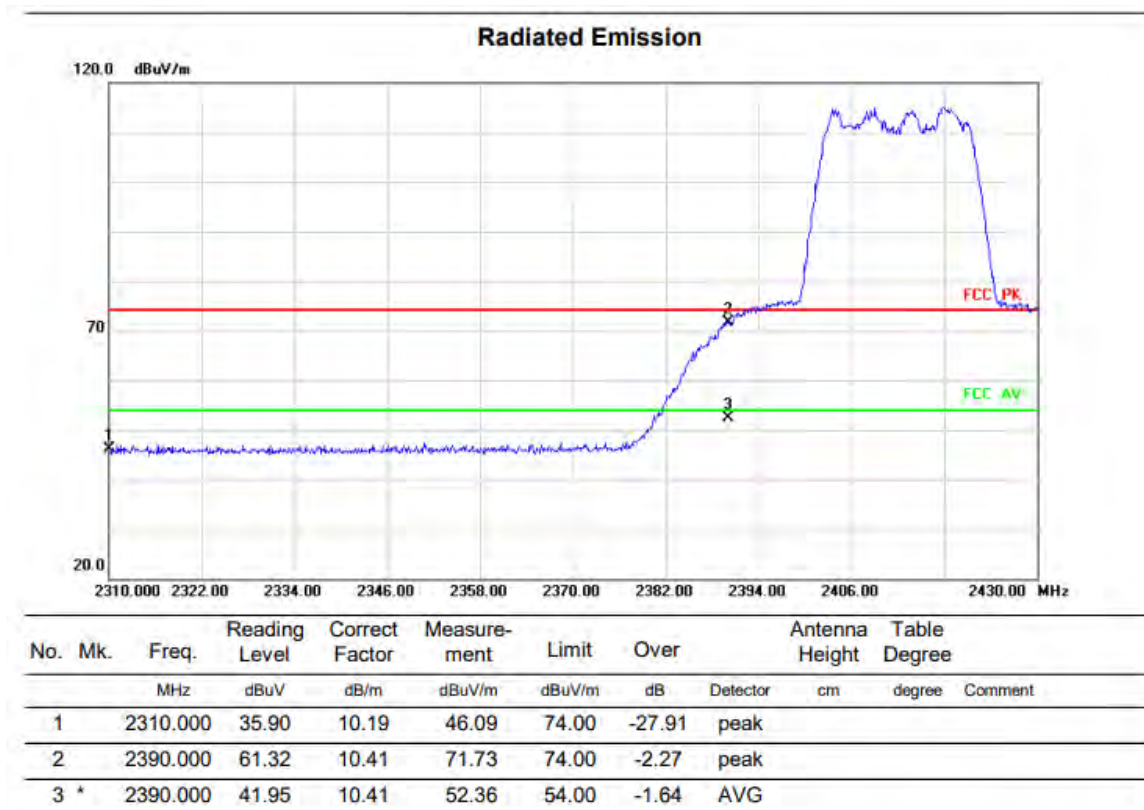
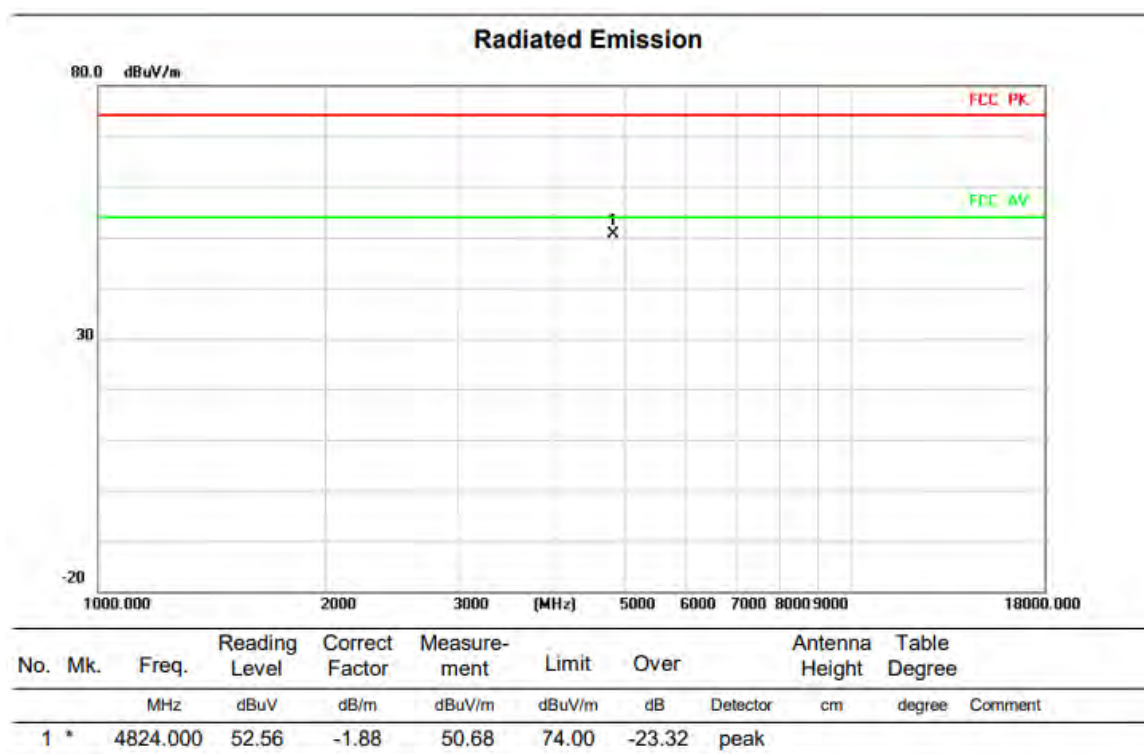
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | Detector       | cm           | degree  |
| 1   |     | 2483.500 | 57.03         | 11.09          | 68.12       | 74.00  | -5.88  | peak           |              | Comment |
| 2   | *   | 2483.500 | 39.34         | 11.09          | 50.43       | 54.00  | -3.57  | AVG            |              |         |
| 3   |     | 2500.000 | 47.38         | 11.22          | 58.60       | 74.00  | -15.40 | peak           |              |         |
| 4   |     | 2500.000 | 28.89         | 11.22          | 40.11       | 54.00  | -13.89 | AVG            |              |         |

Above 1G (1GHz~18GHz)

Test mode: 11AX20MIMO

Test Channel:1

VERTICAL



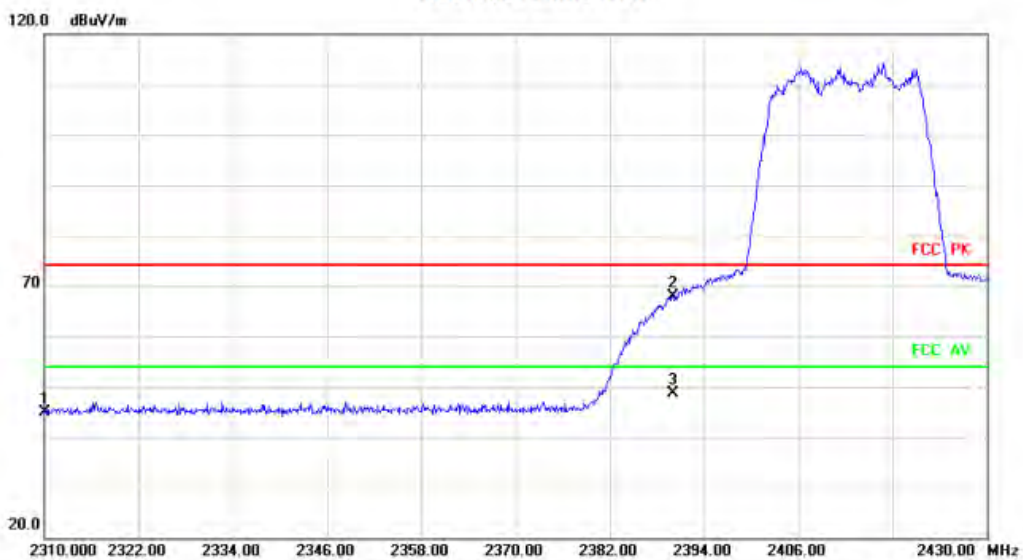
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 4824.000 | 49.73         | -1.88          | 47.85       | 74.00  | -26.15 | peak           |              |         |

### Radiated Emission



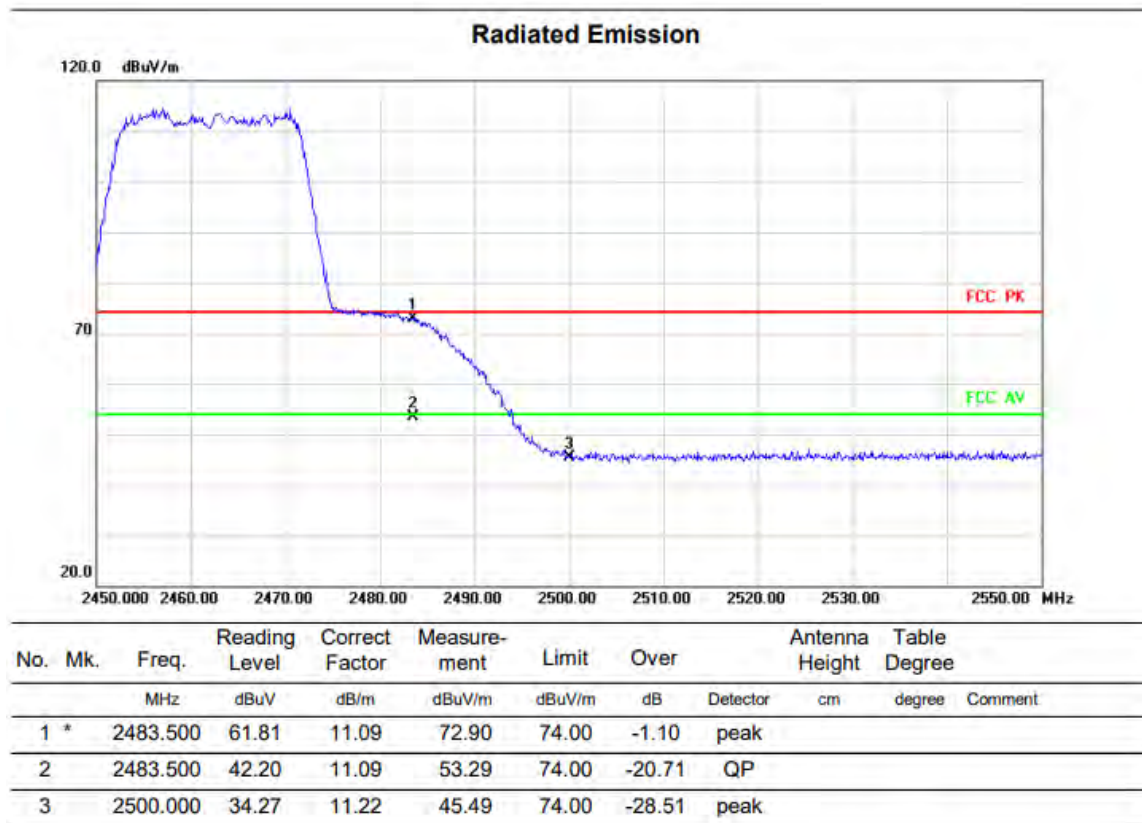
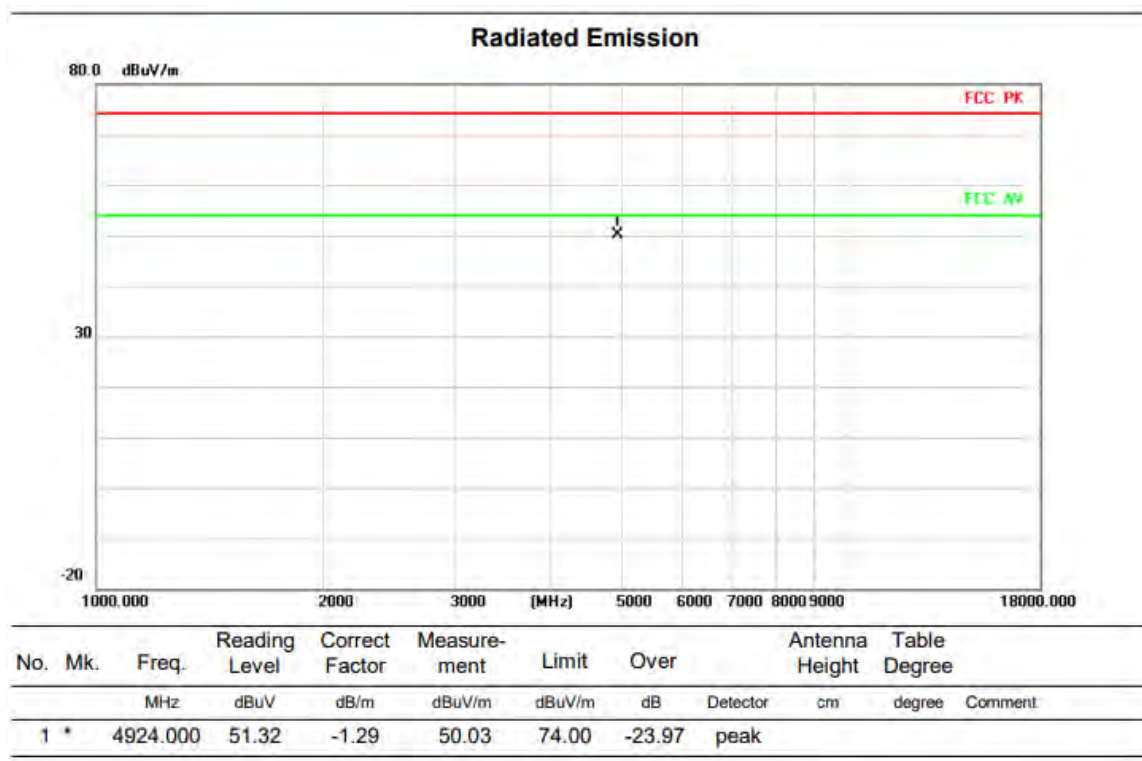
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 2310.000 | 34.61         | 10.19          | 44.80       | 74.00  | -29.20 | peak           |              |         |
| 2   |     | 2390.000 | 57.45         | 10.41          | 67.86       | 74.00  | -6.14  | peak           |              |         |
| 3   | *   | 2390.000 | 38.16         | 10.41          | 48.57       | 54.00  | -5.43  | AVG            |              |         |

Above 1G (1GHz~18GHz)

Test mode: 11AX20MIMO

Test Channel:11

VERTICAL



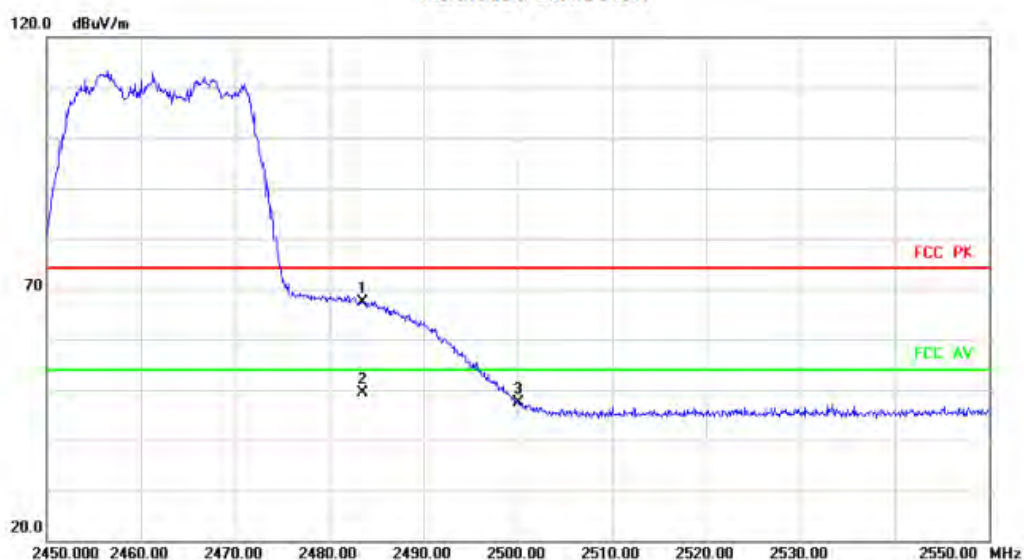
## HORIZONTAL

### Radiated Emission



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 4924.000 | 48.33         | -1.29          | 47.04       | 74.00  | -26.96 | peak           |              |         |

### Radiated Emission



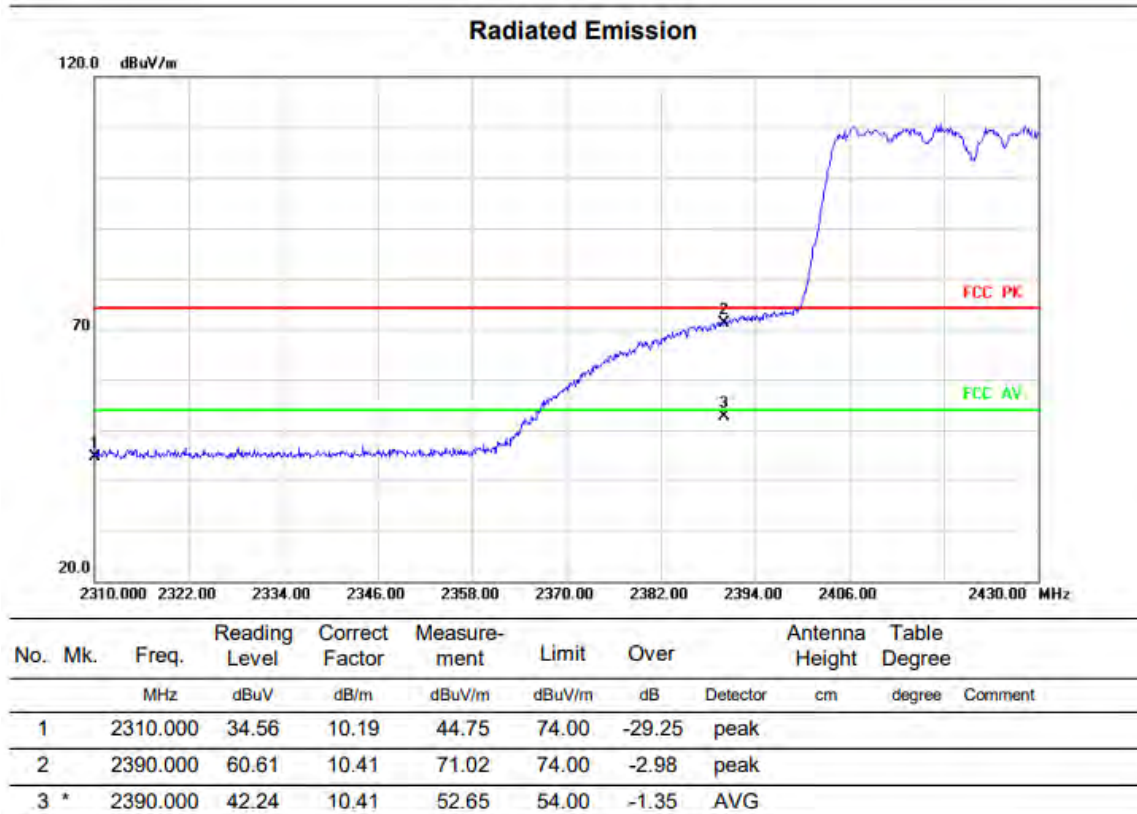
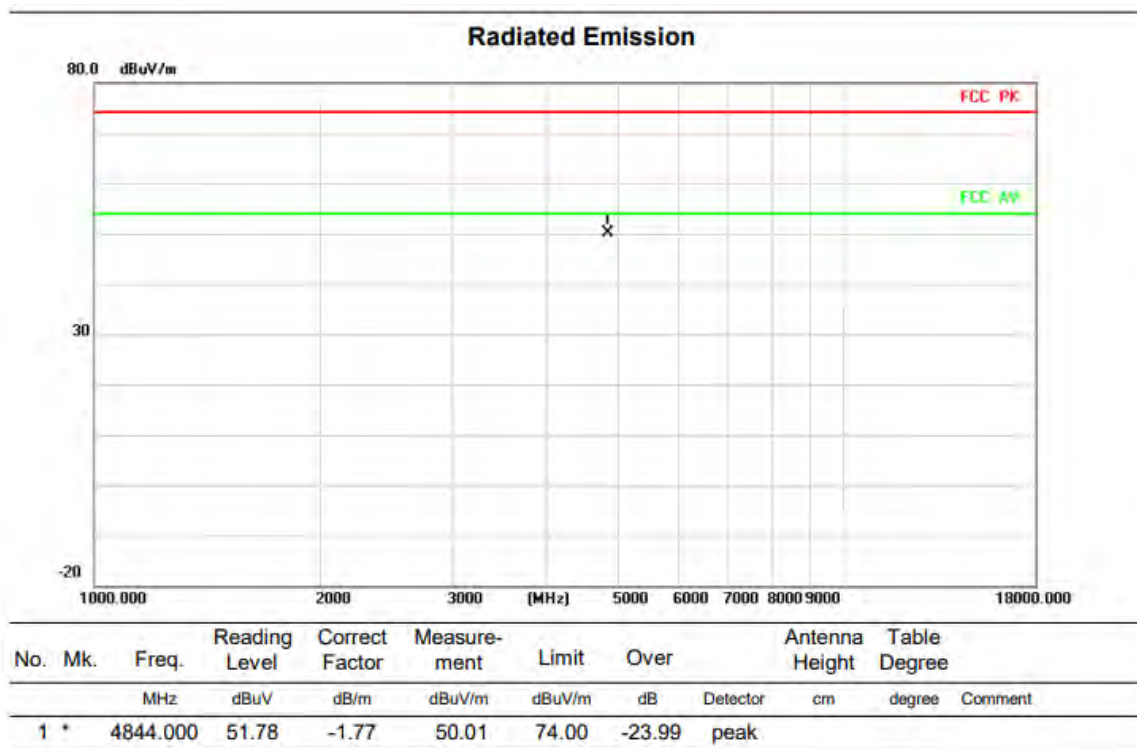
| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 2483.500 | 56.22         | 11.09          | 67.31       | 74.00  | -6.69  | peak           |              |         |
| 2   | *   | 2483.500 | 38.18         | 11.09          | 49.27       | 54.00  | -4.73  | AVG            |              |         |
| 3   |     | 2500.000 | 36.20         | 11.22          | 47.42       | 74.00  | -26.58 | peak           |              |         |

Above 1G (1GHz~18GHz)

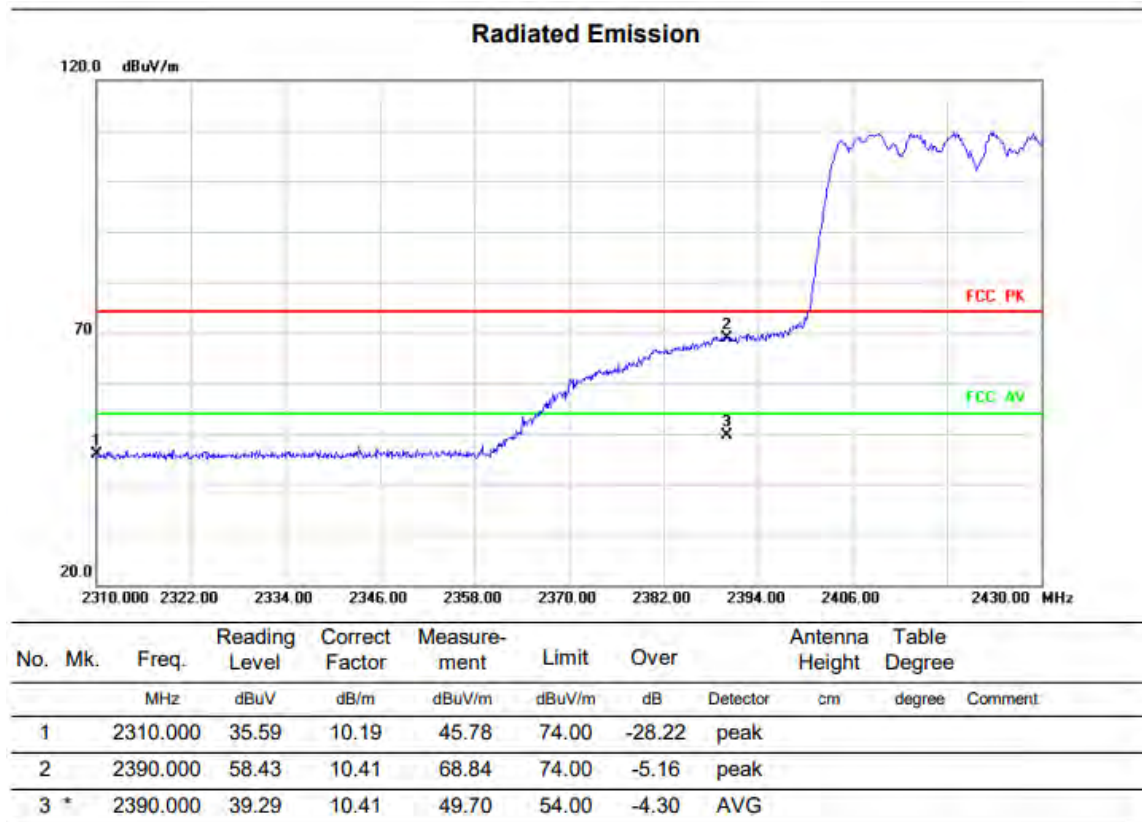
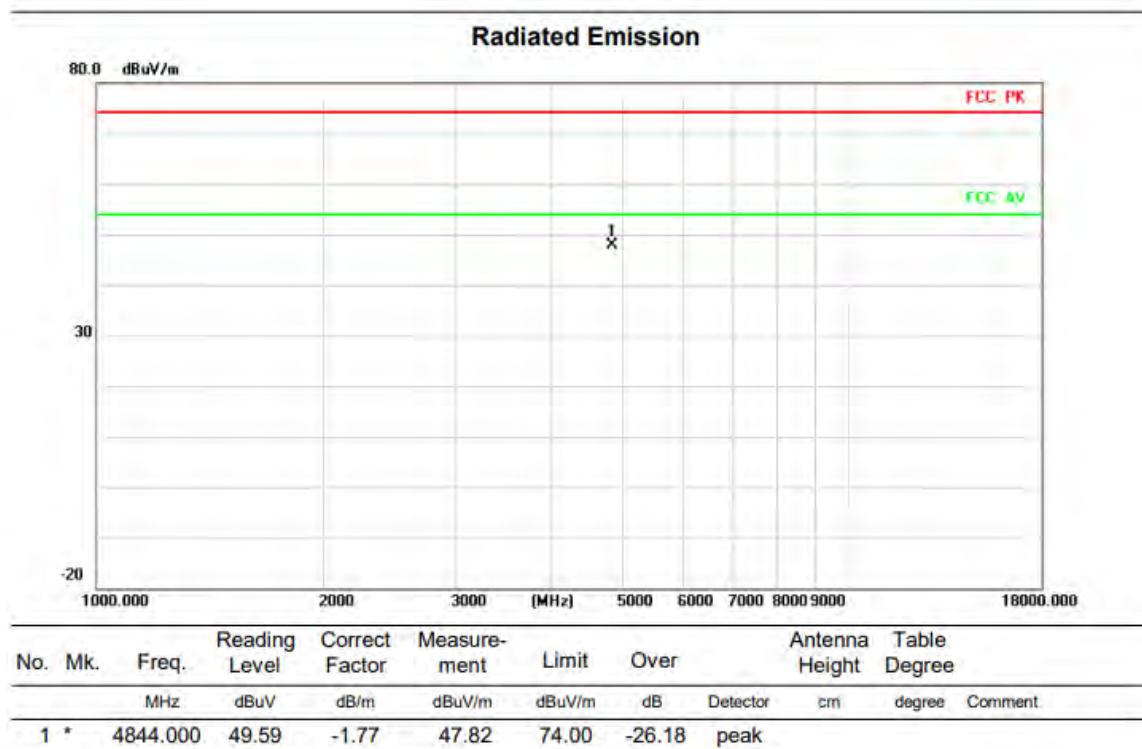
Test mode: 11AX40MIMO

Test Channel:3

VERTICAL



## HORIZONTAL

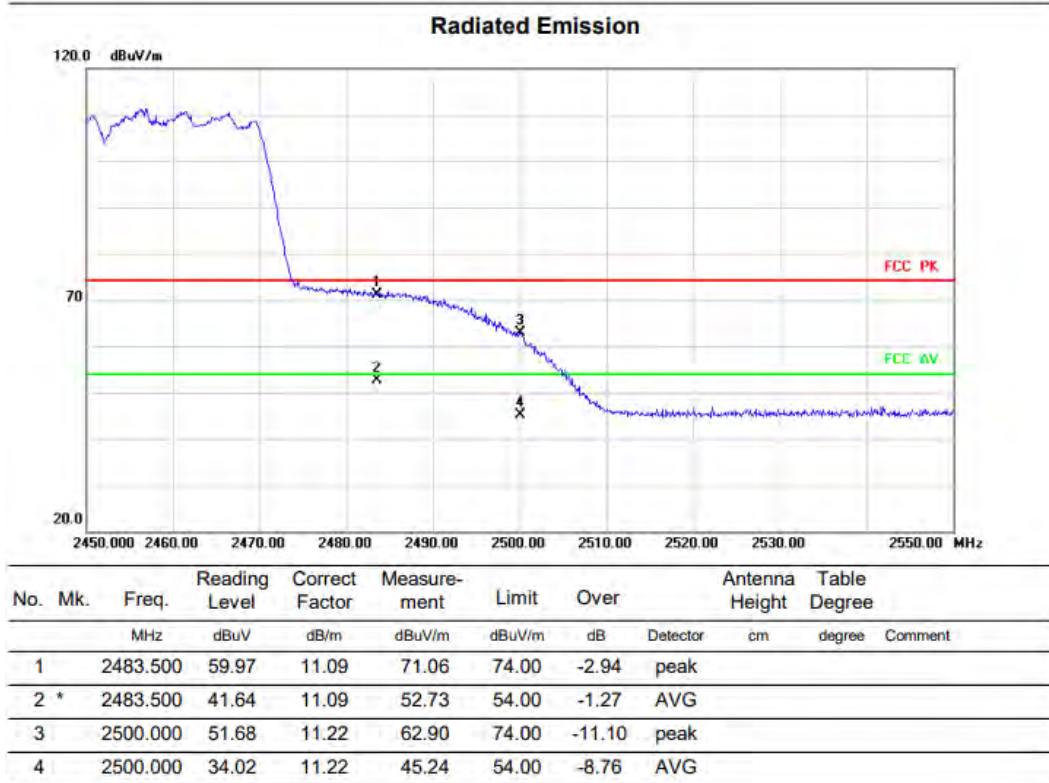
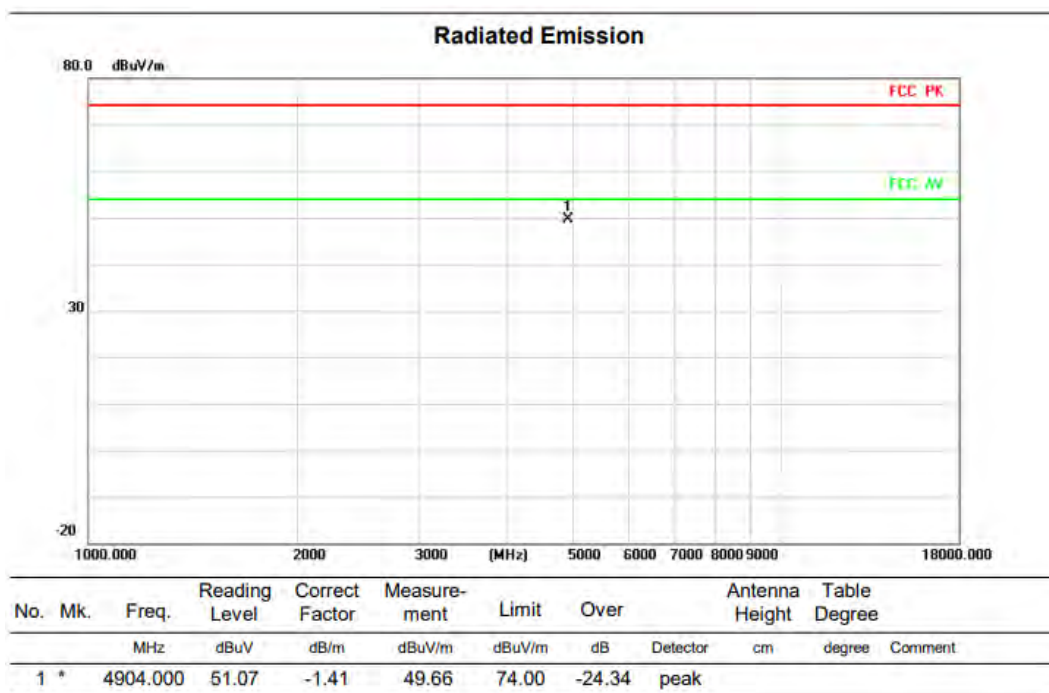


Above 1G (1GHz~18GHz)

Test mode: 11N40MIMO

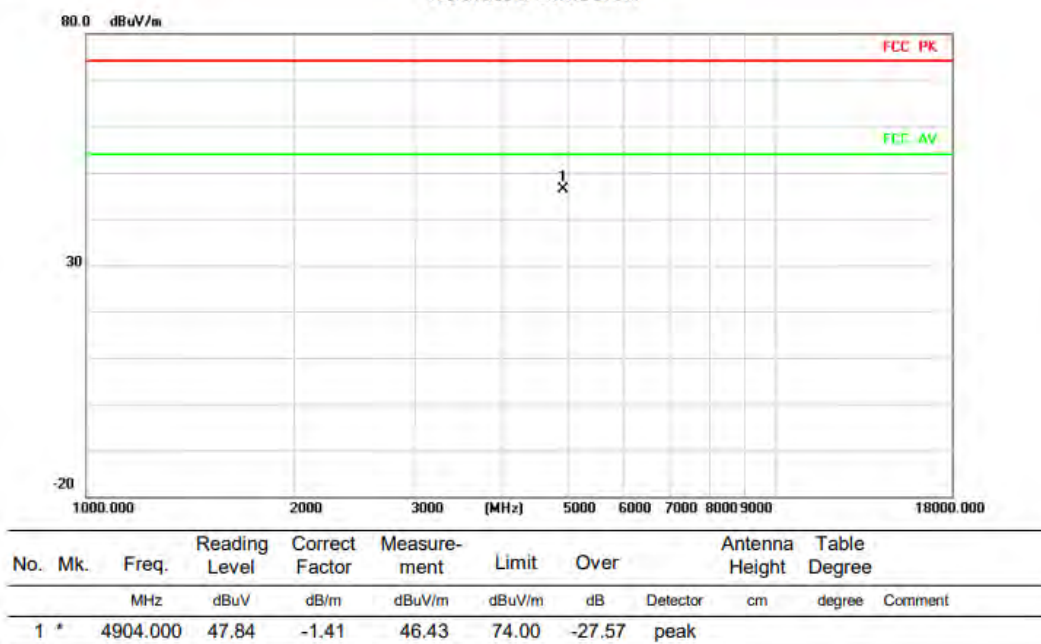
Test Channel:9

VERTICAL

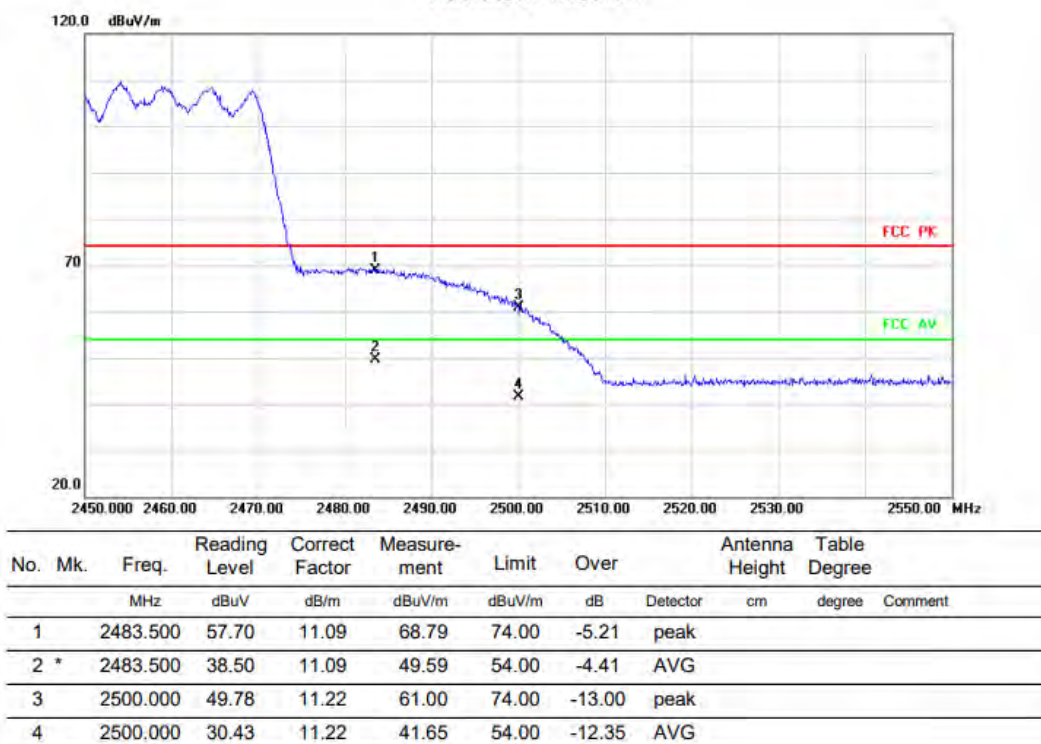


## HORIZONTAL

### Radiated Emission



### Radiated Emission



The high frequency, which started from 18GHz to 25GHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

### 3.3 Spurious Emission at Antenna Port

#### 3.3.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

#### 3.3.2 Test Procedure

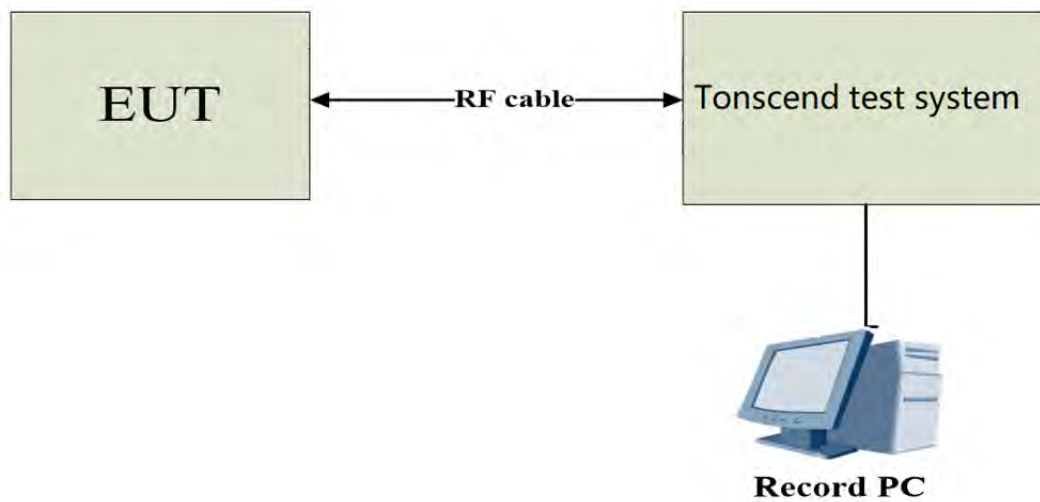
| Test Method                                                                   |                                                  |
|-------------------------------------------------------------------------------|--------------------------------------------------|
| <input checked="" type="radio"/> Conducted Measurement                        | <input type="radio"/> Radiated Measurement       |
| Test Channels                                                                 |                                                  |
| <input checked="" type="radio"/> Lowest, Middle and Highest Channel           | <input type="radio"/> Lowest and Highest Channel |
| Environmental conditions                                                      |                                                  |
| <input checked="" type="radio"/> Normal                                       | <input type="radio"/> Normal and Extreme         |
| Note: <input checked="" type="radio"/> : Test <input type="radio"/> : No Test |                                                  |

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.

b) Spectrum Setting as below:

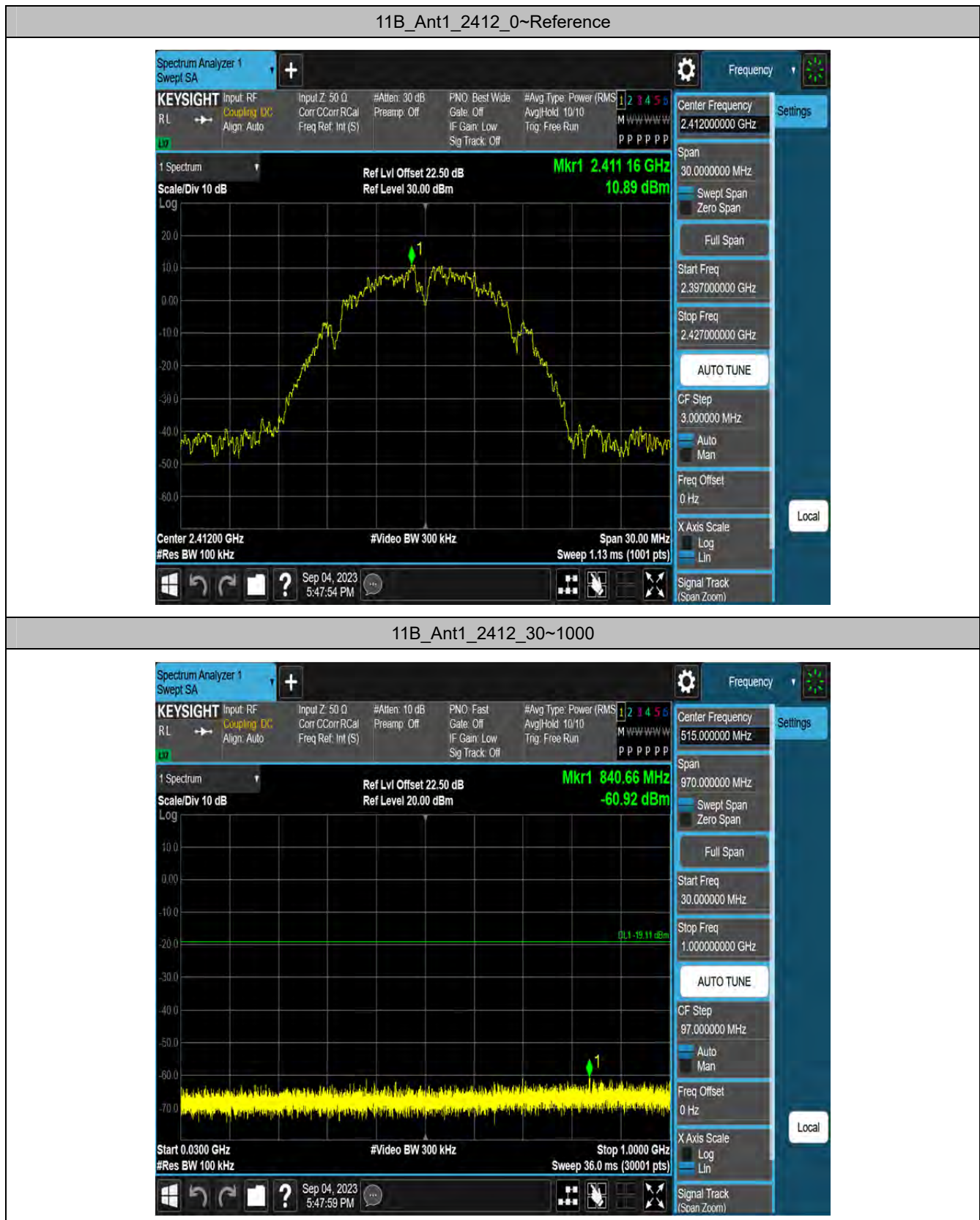
|                     |                                                |
|---------------------|------------------------------------------------|
| Centre Frequency    | The centre frequency of the channel under test |
| Spectrum Parameters | Setting                                        |
| Start Frequency     | 30 MHz                                         |
| Stop Frequency      | 26.5 GHz                                       |
| RBW                 | 100 kHz                                        |
| VBW                 | 300 kHz                                        |
| Detector            | Peak                                           |
| Trace               | Max Hold                                       |
| Sweep Time          | Auto                                           |

### 3.3.3 Test Setup



### 3.3.4 The Result

#### Conducted Spurious Emission



### 11B\_Ant1\_2412\_1000~26500



### 11B\_Ant2\_2412\_0~Reference



### 11B\_Ant2\_2412\_30~1000



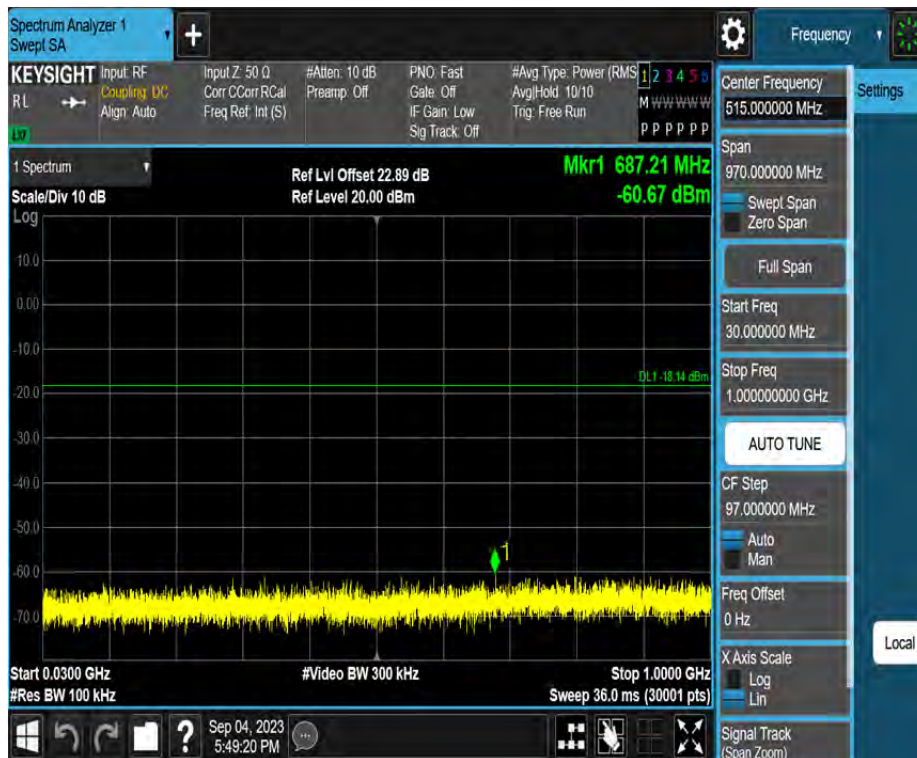
### 11B\_Ant2\_2412\_1000~26500



### 11B\_Ant3\_2412\_0~Reference



### 11B\_Ant3\_2412\_30~1000



### 11B\_Ant3\_2412\_1000~26500



### 11B\_Ant1\_2437\_0~Reference



# 11B\_Ant1\_2437\_30~1000



# 11B\_Ant1\_2437\_1000~26500



# 11B\_Ant2\_2437\_0~Reference



# 11B\_Ant2\_2437\_30~1000



### 11B\_Ant2\_2437\_1000~26500



### 11B\_Ant3\_2437\_0~Reference



# 11B\_Ant3\_2437\_30~1000



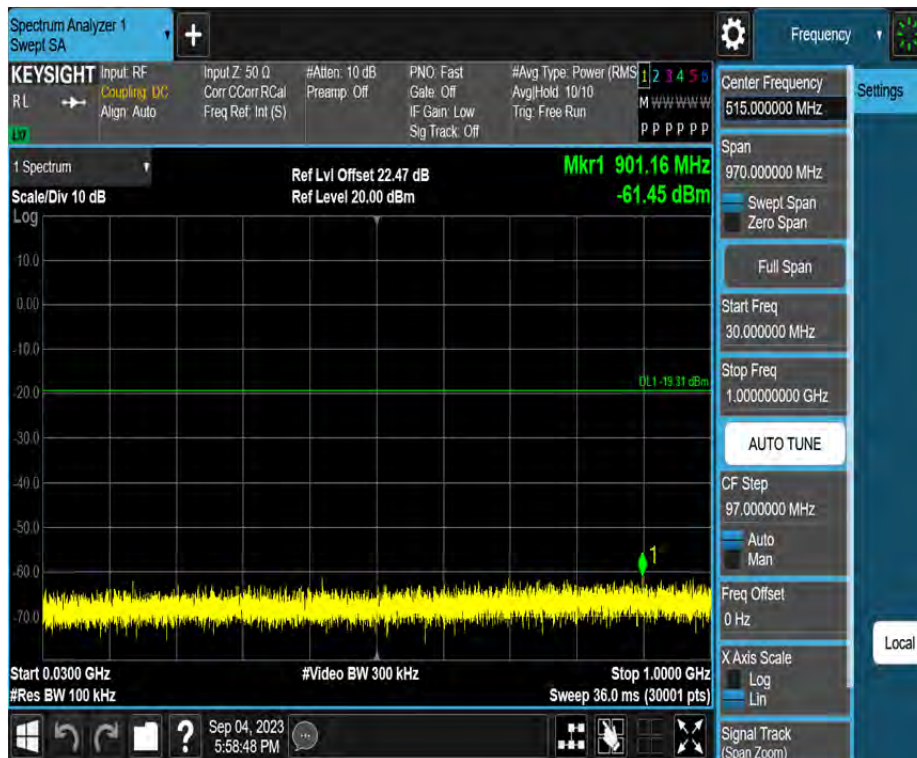
# 11B\_Ant3\_2437\_1000~26500



11B\_Ant1\_2462\_0~Reference



11B\_Ant1\_2462\_30~1000



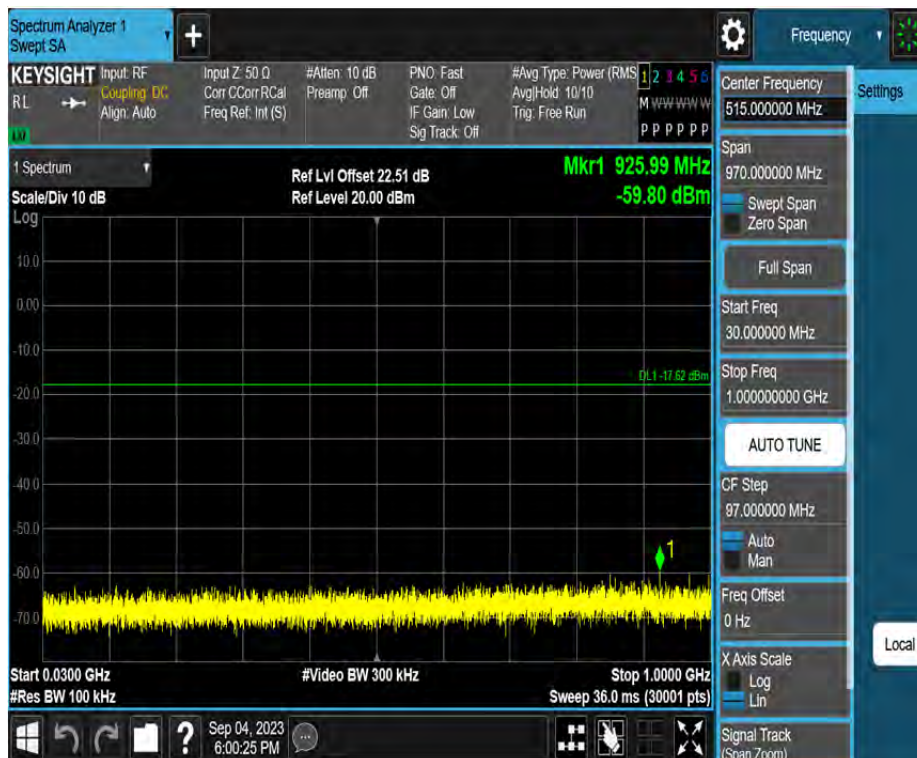
### 11B\_Ant1\_2462\_1000~26500



### 11B\_Ant2\_2462\_0~Reference



11B\_Ant2\_2462\_30~1000



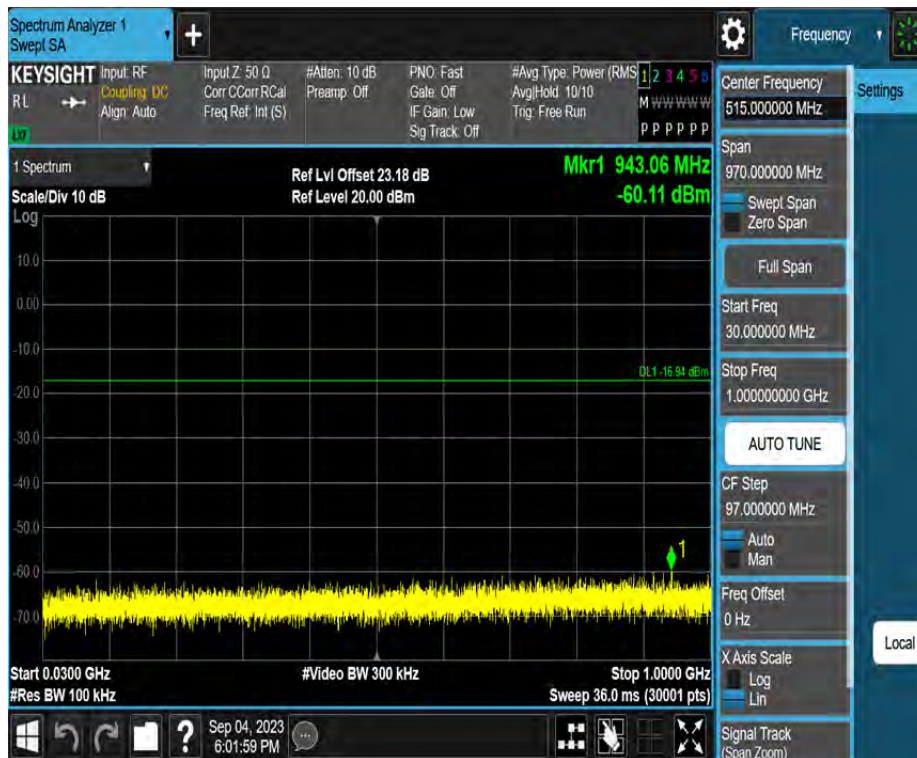
11B\_Ant2\_2462\_1000~26500



### 11B\_Ant3\_2462\_0~Reference



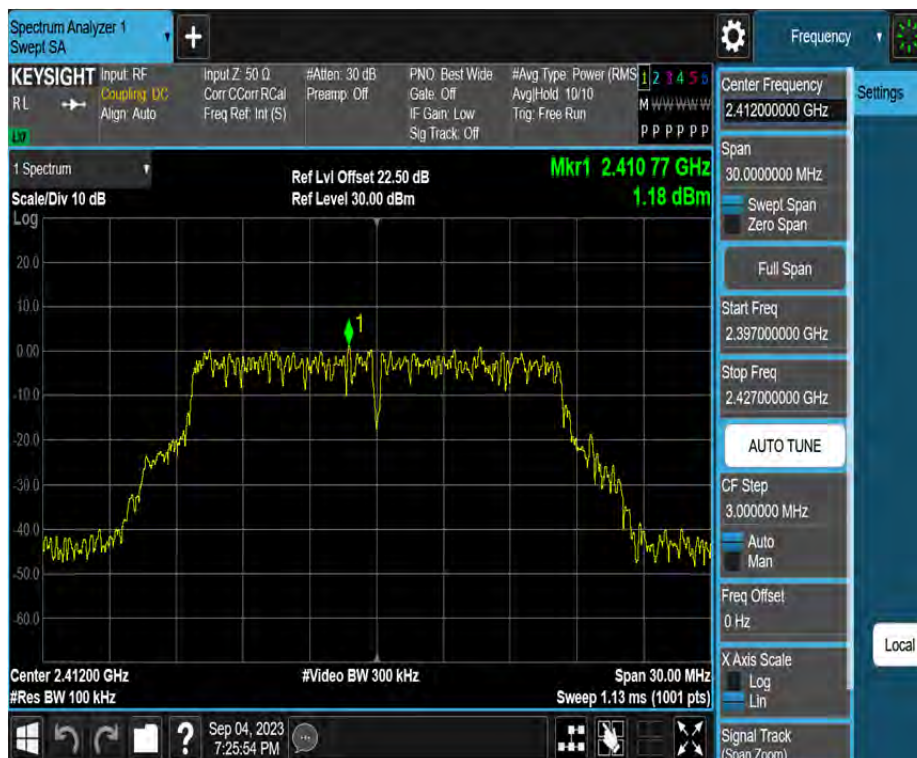
### 11B\_Ant3\_2462\_30~1000



### 11B\_Ant3\_2462\_1000~26500



### 11G\_Ant1\_2412\_0~Reference



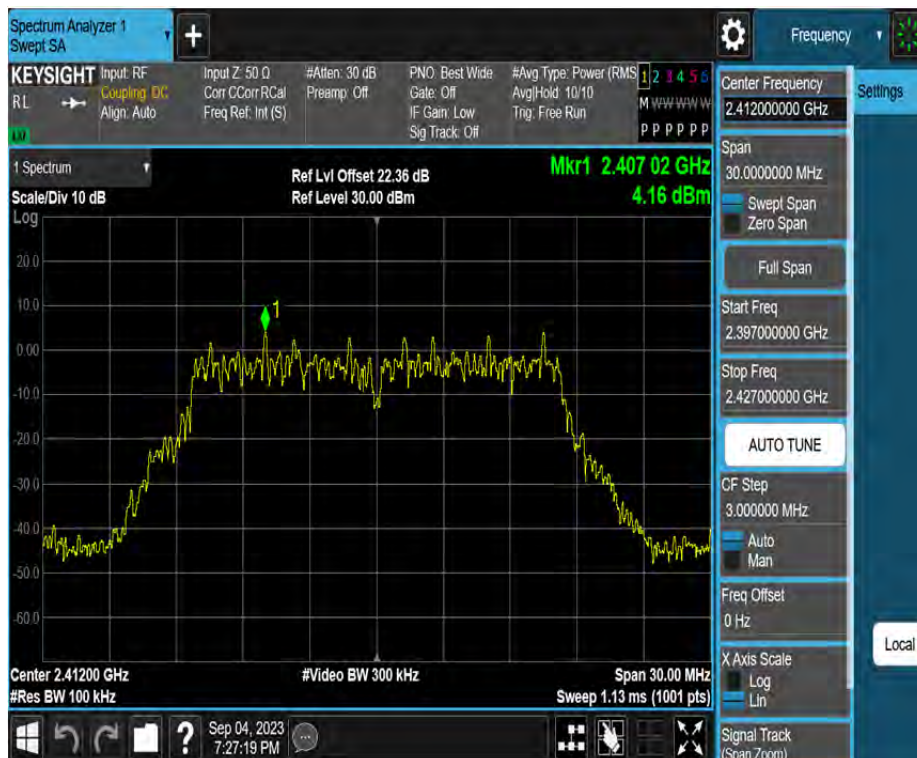
### 11G\_Ant1\_2412\_30~1000



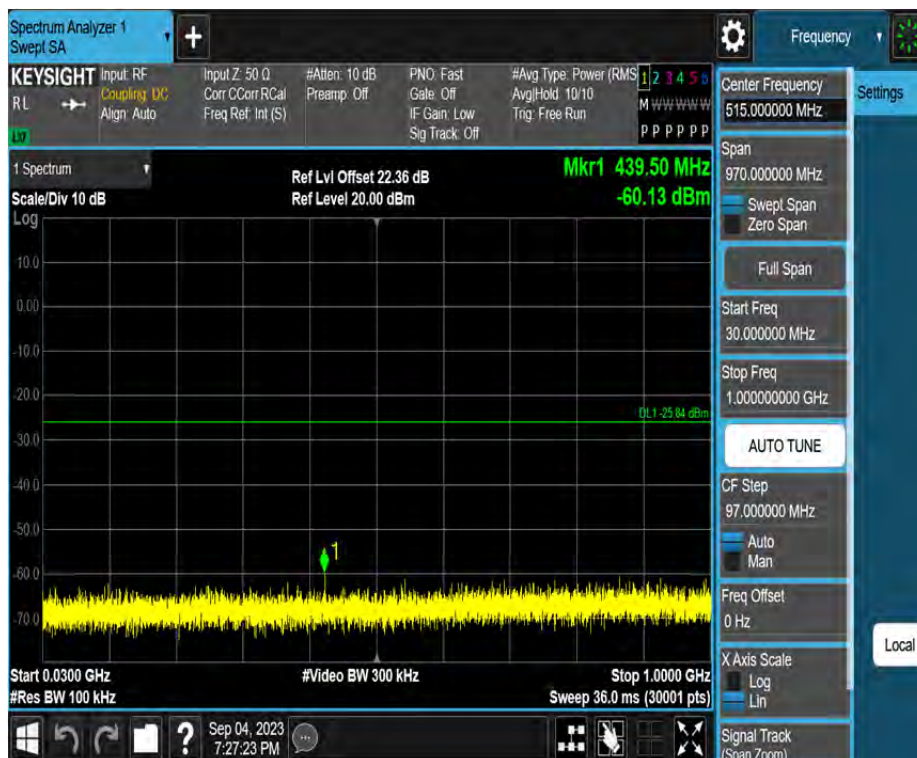
### 11G\_Ant1\_2412\_1000~26500



### 11G\_Ant2\_2412\_0~Reference



### 11G\_Ant2\_2412\_30~1000



### 11G\_Ant2\_2412\_1000~26500



### 11G\_Ant3\_2412\_0~Reference



### 11G\_Ant3\_2412\_30~1000



### 11G\_Ant3\_2412\_1000~26500



### 11G\_Ant1\_2437\_0~Reference



### 11G\_Ant1\_2437\_30~1000



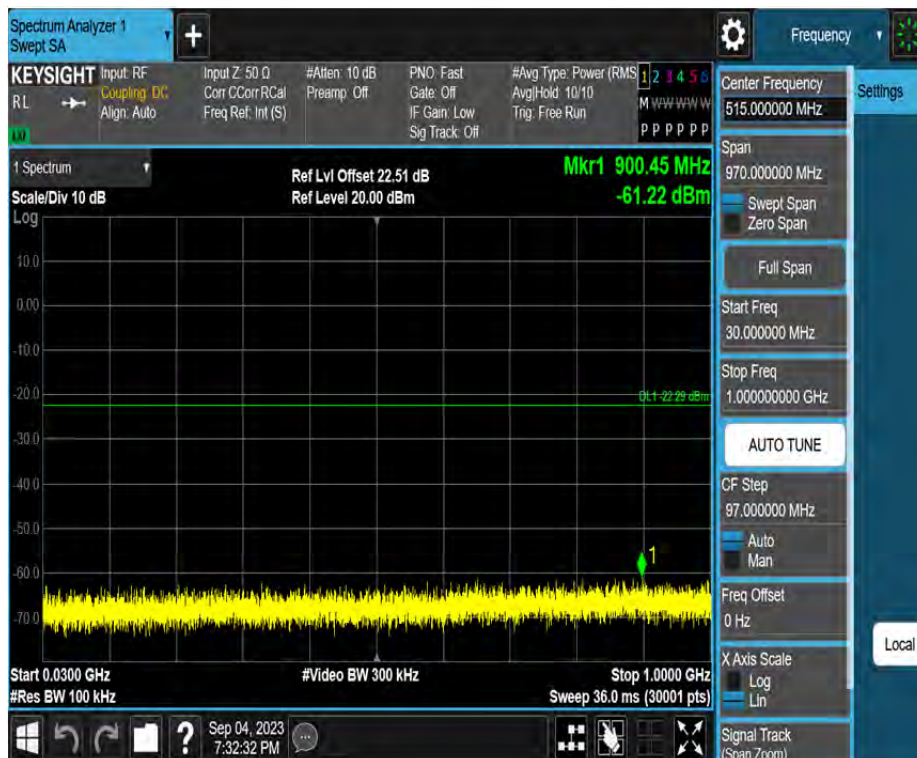
### 11G\_Ant1\_2437\_1000~26500



### 11G\_Ant2\_2437\_0~Reference



# 11G\_Ant2\_2437\_30~1000



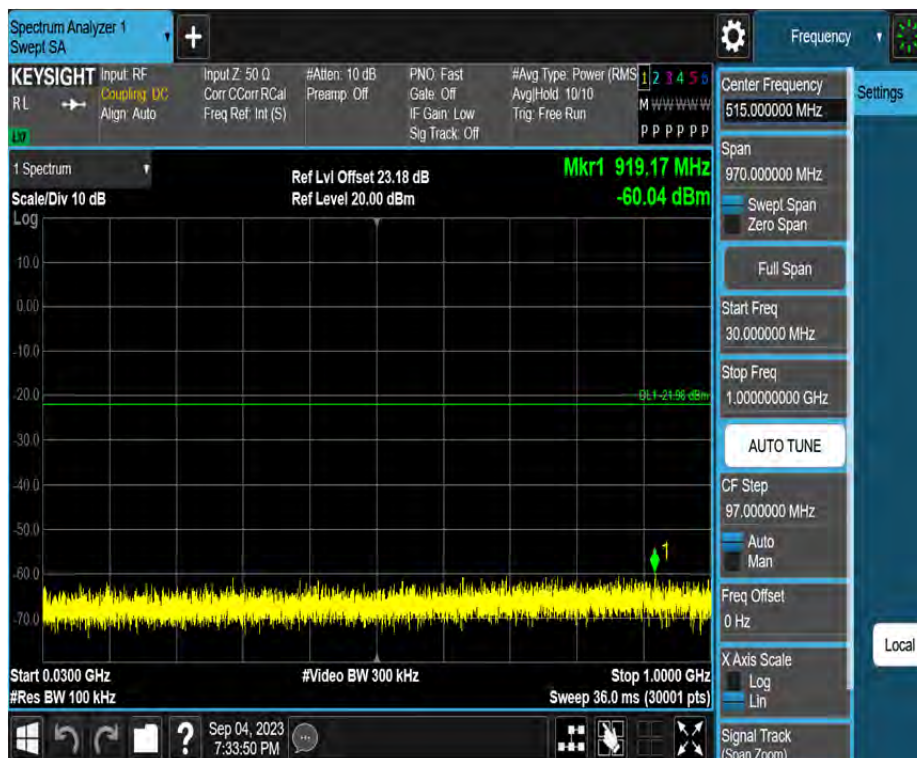
# 11G\_Ant2\_2437\_1000~26500



### 11G\_Ant3\_2437\_0~Reference



### 11G\_Ant3\_2437\_30~1000



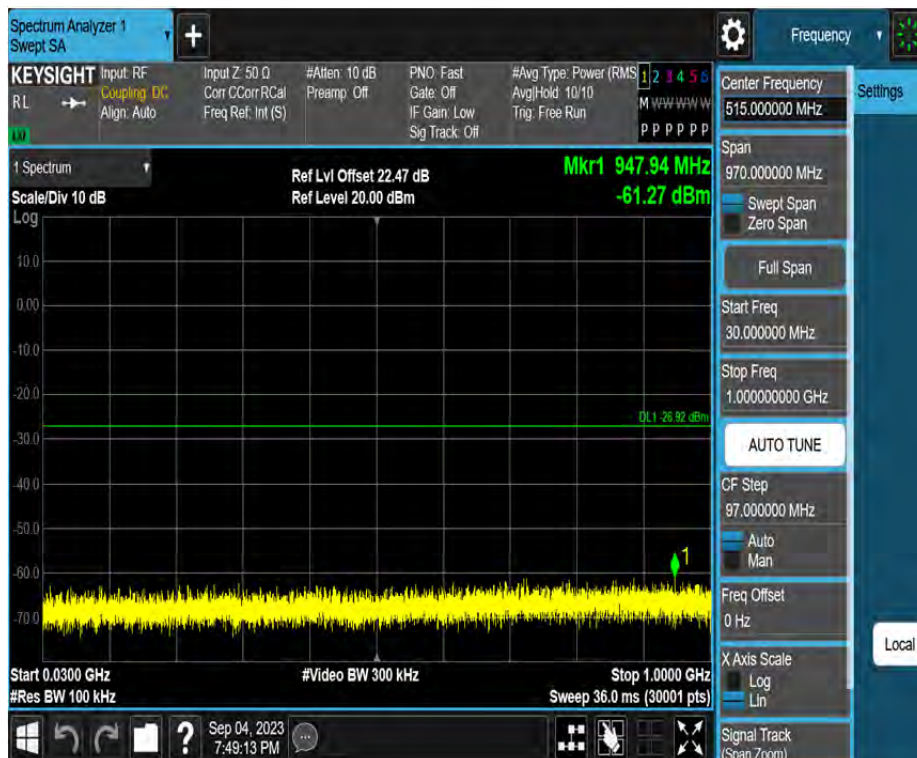
### 11G\_Ant3\_2437\_1000~26500



### 11G\_Ant1\_2462\_0~Reference



# 11G\_Ant1\_2462\_30~1000



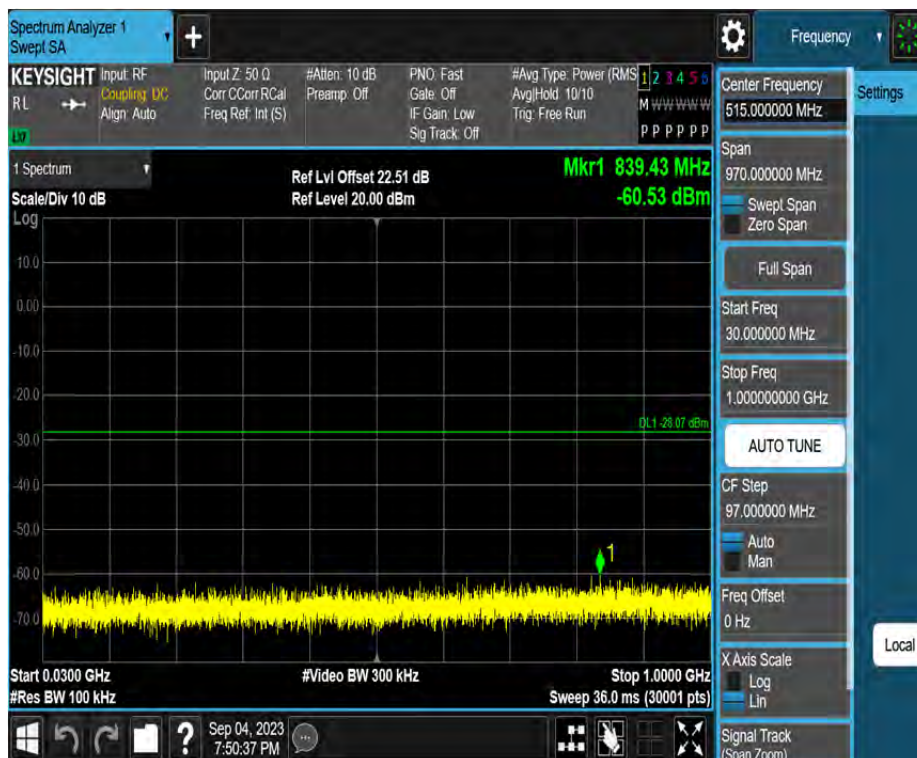
# 11G\_Ant1\_2462\_1000~26500



### 11G\_Ant2\_2462\_0~Reference



### 11G\_Ant2\_2462\_30~1000



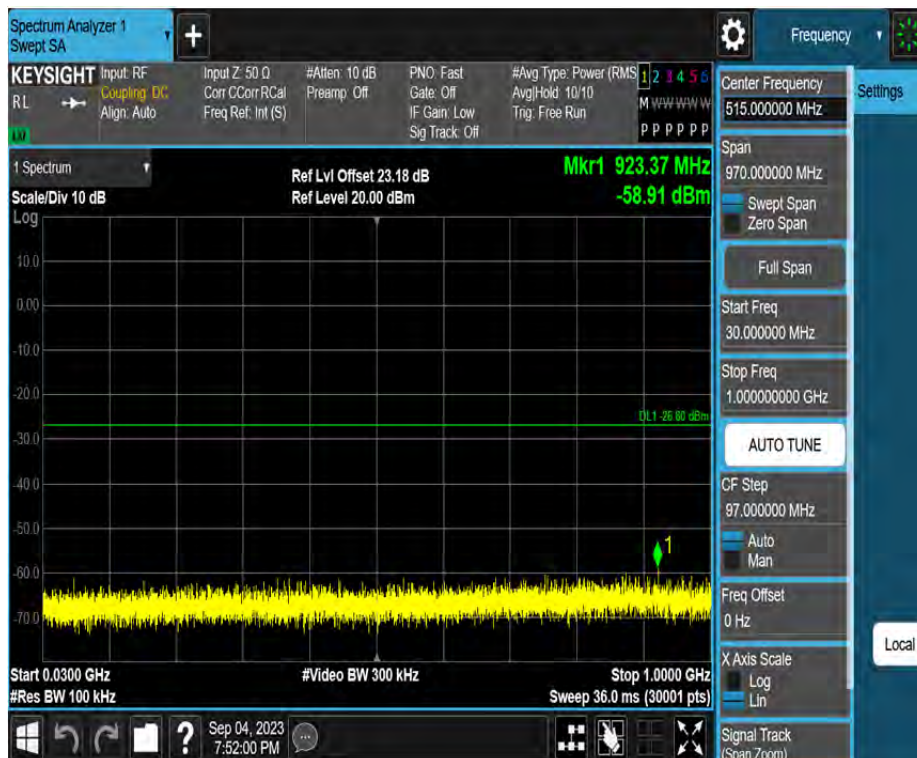
### 11G\_Ant2\_2462\_1000~26500



### 11G\_Ant3\_2462\_0~Reference



### 11G\_Ant3\_2462\_30~1000



### 11G\_Ant3\_2462\_1000~26500



### 11N20MIMO\_Ant1\_2412\_0~Reference



### 11N20MIMO\_Ant1\_2412\_30~1000



### 11N20MIMO\_Ant1\_2412\_1000~26500



### 11N20MIMO\_Ant2\_2412\_0~Reference



# 11N20MIMO\_Ant2\_2412\_30~1000



# 11N20MIMO\_Ant2\_2412\_1000~26500



### 11N20MIMO\_Ant3\_2412\_0~Reference



### 11N20MIMO\_Ant3\_2412\_30~1000



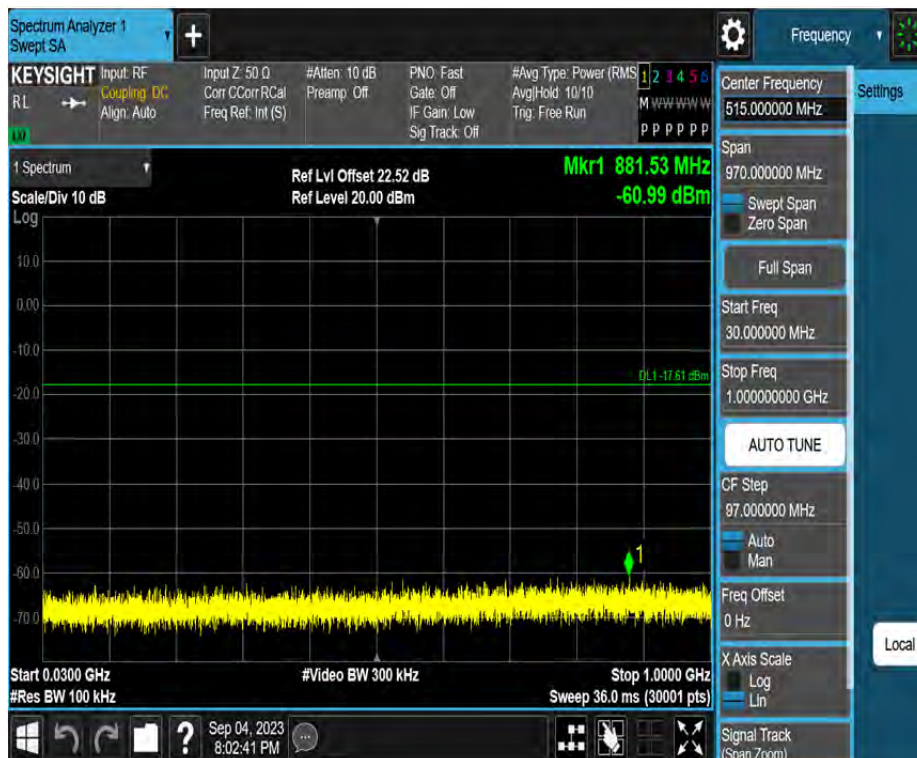
### 11N20MIMO\_Ant3\_2412\_1000~26500



### 11N20MIMO\_Ant1\_2437\_0~Reference



# 11N20MIMO\_Ant1\_2437\_30~1000



# 11N20MIMO\_Ant1\_2437\_1000~26500



### 11N20MIMO\_Ant2\_2437\_0~Reference



### 11N20MIMO\_Ant2\_2437\_30~1000



### 11N20MIMO\_Ant2\_2437\_1000~26500



### 11N20MIMO\_Ant3\_2437\_0~Reference



# 11N20MIMO\_Ant3\_2437\_30~1000



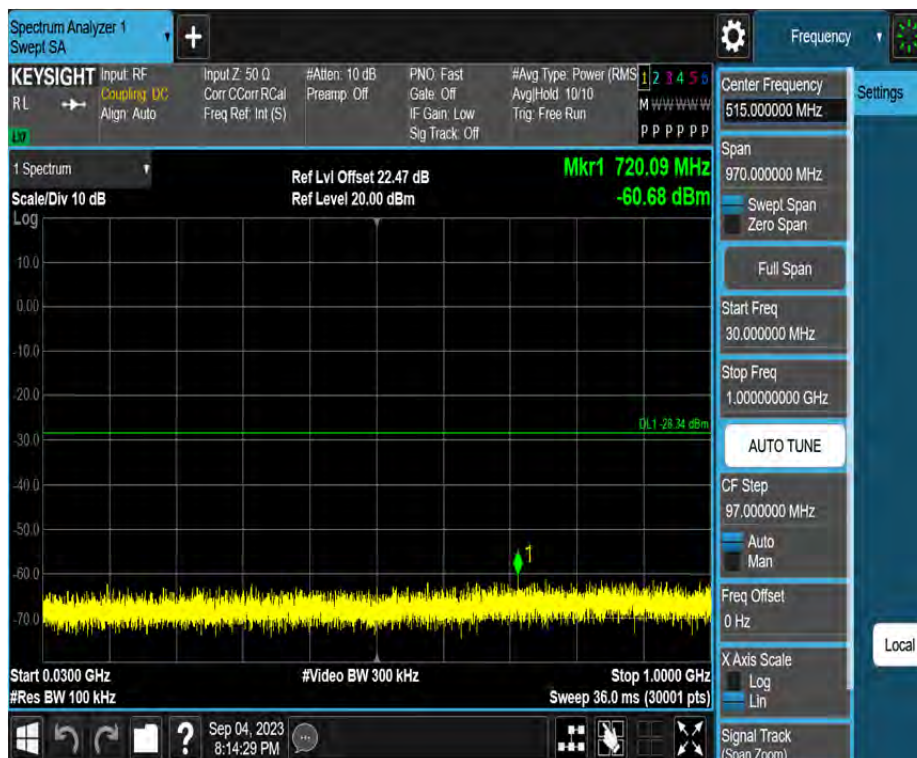
# 11N20MIMO\_Ant3\_2437\_1000~26500



### 11N20MIMO\_Ant1\_2462\_0~Reference



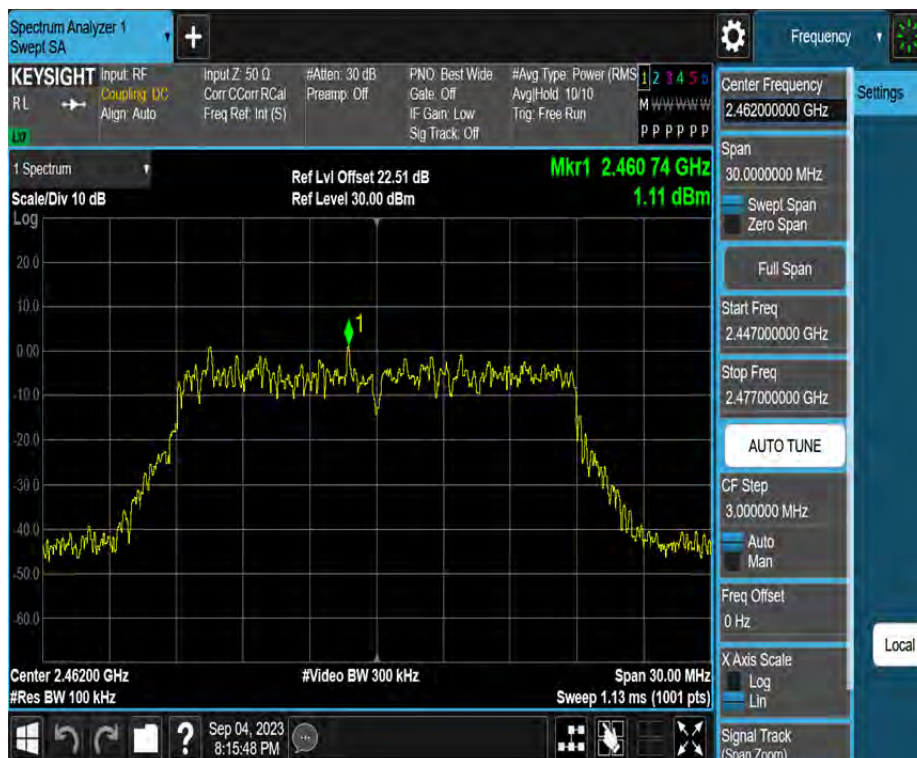
### 11N20MIMO\_Ant1\_2462\_30~1000



### 11N20MIMO\_Ant1\_2462\_1000~26500



### 11N20MIMO\_Ant2\_2462\_0~Reference



# 11N20MIMO\_Ant2\_2462\_30~1000



# 11N20MIMO\_Ant2\_2462\_1000~26500



### 11N20MIMO\_Ant3\_2462\_0~Reference



### 11N20MIMO\_Ant3\_2462\_30~1000

