



# TEST REPORT

No.24T04N003078-008-WLAN 2G

for

**Realme Chongqing Mobile Telecommunications Corp., Ltd.**

**Mobile Phone**

**Model Name: RMX5085**

**with**

**Hardware Version: 11**

**Software Version: realme UI 6.0**

**FCC ID: 2AUYFRMX5085**

**Issued Date: 2025-03-26**

**Designation Number: CN1210**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

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No. 24T04N003078-008-WLAN 2G

## **REPORT HISTORY**

| <b>Report Number</b>     | <b>Revision</b> | <b>Description</b> | <b>Issue Date</b> |
|--------------------------|-----------------|--------------------|-------------------|
| 24T04N003078-008-WLAN 2G | Rev.0           | 1st edition        | 2025-03-26        |

Note: the latest revision of the test report supersedes all previous versions.

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## **1. Summary of Test Report**

### **1.1. Test Items**

|                     |  |
|---------------------|--|
| Description         | Mobile Phone   |
| Model Name          | RMX5085  |
| Applicant's name    | Realme Chongqing Mobile Telecommunications Corp., Ltd. |
| Manufacturer's Name | Realme Chongqing Mobile Telecommunications Corp., Ltd. |

### **1.2. Test Standards**

FCC Part15-2023; ANSI C63.10-2020/Cor 1-2023.

### **1.3. Test Result**

**Pass**

Please refer to "5.2. Test Results"

### **1.4. Testing Location**

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 51800

### **1.5. Project data**

|                     |            |
|---------------------|------------|
| Testing Start Date: | 2025-02-13 |
| Testing End Date:   | 2025-03-21 |

### **1.6. Signature**

Lin Zechuang  
(Prepared this test report)

An Ran  
(Reviewed this test report)

Zhang Bojun  
(Approved this test report)



## **2. Client Information**

### **2.1. Applicant Information**

Company Name: Realme Chongqing Mobile Telecommunications Corp., Ltd.  
Address: No.178 Yulong Avenue,Yufengshan,Yubei District,Chongqing,China  
Contact Person: HuangMinJiang  
E-Mail: mega@realme.com  
Telephone: (86)18502096102  
Fax: /

### **2.2. Manufacturer Information**

Company Name: Realme Chongqing Mobile Telecommunications Corp., Ltd.  
Address: No.178 Yulong Avenue,Yufengshan,Yubei District,Chongqing,China  
Contact Person: HuangMinJiang  
E-Mail: mega@realme.com  
Telephone: (86)18502096102  
Fax: /



### **3. Equipment Under Test (EUT) and Ancillary Equipment (AE)**

#### **3.1. About EUT**

|                              |  |
|------------------------------|--|
| Description                  | Mobile Phone   |
| Model Name                   | RMX5085  |
| RF Protocol                  | IEEE 802.11b/g/n-HT20/n-HT40/VHT20/VHT40/ax-HE20/ax-HE40 |
| Operating Frequency          | ISM 2412MHz~2462MHz                                      |
| Type of Modulation           | DSSS/CCK/OFDM/OFDMA                                      |
| Antenna Type                 | PIFA antenna   |
| Antenna Gain                 | Antenna 1:-0.05dBi; Antenna 2:-1.90dBi.                  |
| Power Supply                 | Battery  |
| FCC ID                       | 2AUYFRMX5085   |
| Condition of EUT as received | No abnormality in appearance                             |

Note1: Directional gain(correlated) =  $10\log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{dBi} = 2.1 \text{dBi}$ .

Note2: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

#### **3.2. Internal Identification of EUT used during the test**

| EUT ID* | SN or IMEI      | HW Version | SW Version    | Date of Receipt |
|---------|-----------------|------------|---------------|-----------------|
| UT11aa  | 862666070019679 | 11         | realme UI 6.0 | 2025-01-23      |
|         | 862666070019661 |            |               |                 |
| UT09aa  | 862666070019794 | 11         | realme UI 6.0 | 2025-01-23      |
|         | 862666070019786 |            |               |                 |
| UT18aa  | 862666070019851 | 11         | realme UI 6.0 | 2025-01-23      |
|         | 862666070019844 |            |               |                 |

\*EUT ID: is used to identify the test sample in the lab internally.

UT11aa is used for conduction test, UT09aa is used for radiation test, and UT18aa is used for AC Power line Conducted Emission test.

#### **3.3. Internal Identification of AE used during the test**

| AE No. | Description | AE ID* |
|--------|-------------|--------|
| AE1    | Battery     | /      |
| AE2    | Charger     | /      |
| AE3    | USB Cable   | /      |

#### AE1

|                 |                                  |
|-----------------|----------------------------------|
| Model           | BLPC47                           |
| Manufacturer    | Dongguan NVT Technology Co., Ltd |
| Capacity        | 3425mAh                          |
| Nominal Voltage | 7.66V                            |

#### AE2

|       |          |
|-------|----------|
| Model | VCBBOAUH |
|-------|----------|



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Manufacturer Dongguan Aohai Technology Co.,Ltd.  
Specification American Standard Charger  
AE3  
Model DL153  
Manufacturer /

\*AE ID: is used to identify the test sample in the lab internally.

### **3.4. General Description**

The Equipment under Test (EUT) is a model of Mobile Phone with PIFA antenna and battery.

It consists of normal options: Lithium Battery, Charger and USB Cable.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.



## **4. Reference Documents**

### **4.1. Documents supplied by applicant**

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

### **4.2. Reference Documents for testing**

The following documents listed in this section are referred for testing.

| <b>Reference</b> | <b>Title</b>  | <b>Version</b>      |
|------------------|---|---------------------|
| FCC Part15       | FCC CFR 47, Part 15, Subpart C:<br>15.205 Restricted bands of operation;<br>15.209 Radiated emission limits, general requirements;<br>15.247 Operation within the bands 902–928MHz,<br>2400–2483.5 MHz, and 5725–5850 MHz | 2023                |
| ANSI C63.10      | American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices  | 2020/<br>Cor 1-2023 |

## 5. Test Results

### 5.1. Testing Environment

Normal Temperature: 15~35°C

Relative Humidity: 20~75%

### 5.2. Test Results

| No | Test cases                  | Sub-clause of Part 15C | Verdict |
|----|-----------------------------|------------------------|---------|
| 0  | Antenna Requirement         | 15.203                 | P       |
| 1  | Maximum Output Power        | 15.247 (b)             | P       |
| 2  | Peak Power Spectral Density | 15.247 (e)             | P       |
| 3  | 6dB Bandwidth               | 15.247 (a)             | P       |
| 4  | Band Edges Compliance       | 15.247 (d)             | P       |
| 5  | Conducted Emission          | 15.247 (d)             | P       |
| 6  | Radiated Emission           | 15.247, 15.205, 15.209 | P       |
| 7  | AC Power line Conducted     | 15.207                 | P       |

See **ANNEX A** for details.

### 5.3. Statements

SAICT has evaluated the test cases requested by the applicant/manufacturer as listed in section 5.2 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.

Disclaimer:

A. After confirmation with the customer, the sample information provided by the customer may affect the validity of the measurement results in this report, and the impact and consequences arising therefrom shall be borne by the customer.

B. The samples in this report are provided by the customer, and the test results are only applicable to the samples received.



## 6. Test Equipments Utilized

### Conducted test system

| No. | Equipment              | Model    | Serial Number | Manufacturer    | Calibration Due date | Calibration Period |
|-----|------------------------|----------|---------------|-----------------|----------------------|--------------------|
| 1   | Vector Signal Analyzer | FSV40    | 100903        | Rohde & Schwarz | 2025-12-26           | 1 year             |
| 2   | Power Sensor           | U2021XA  | MY55430013    | Keysight        | 2025-12-26           | 1 year             |
| 3   | RF Control Unit        | JS0806-2 | 21C8060398    | Tonscend        | 2025-05-06           | 1 year             |
| 4   | Shielding Room         | S81      | CT000986-1344 | ETS-Lindgren    | 2026-09-12           | 5 years            |

### Radiated test system

| No. | Equipment         | Model             | Serial Number | Manufacturer    | Calibration Due date | Calibration Period |
|-----|-------------------|-------------------|---------------|-----------------|----------------------|--------------------|
| 1   | Test Receiver     | ESR7              | 101676        | Rohde & Schwarz | 2025-11-21           | 1 year             |
| 2   | BiLog Antenna     | 3142E             | 00224831      | ETS-Lindgren    | 2027-10-23           | 3 years            |
| 3   | Horn Antenna      | 3117              | 00066577      | ETS-Lindgren    | 2025-04-17           | 3 years            |
| 4   | Anechoic Chamber  | FACT3-2.0         | 1285          | ETS-Lindgren    | 2025-05-28           | 2 years            |
| 5   | Spectrum Analyzer | FSV40             | 101192        | Rohde & Schwarz | 2026-01-09           | 1 year             |
| 6   | Loop Antenna      | HLA6120           | 35779         | TESEQ           | 2025-05-10           | 3 years            |
| 7   | Horn Antenna      | QSH-SL-18-26-S-20 | 17013         | Q-par           | 2026-02-01           | 3 years            |
| 8   | Test Receiver     | ESCI              | 100702        | Rohde & Schwarz | 2026-01-09           | 1 year             |
| 9   | LISN              | ENV216            | 102067        | Rohde & Schwarz | 2025-10-07           | 1 year             |

### Test software

| No. | Equipment | Manufacturer    | Version  |
|-----|-----------|-----------------|----------|
| 1   | JS1120-3  | Tonscend        | 3.5      |
| 2   | EMC32     | Rohde & Schwarz | 10.50.40 |

EUT is engineering software provided by the customer to control the transmitting signal. The EUT was programmed to be in continuously transmitting mode.

## 7. Laboratory Environment

### Shielded room

|                          |  |
|--------------------------|--|
| Temperature              | Min. = 15 °C, Max. = 35 °C                   |
| Relative humidity        | Min. = 20 %, Max. = 75 %                     |
| Shielding effectiveness  | 0.014MHz-1MHz > 60 dB; 1MHz-18000MHz > 90 dB |
| Electrical insulation    | > 2MΩ  |
| Ground system resistance | < 4 Ω  |

### Anechoic chamber

|                                    |  |
|------------------------------------|--|
| Temperature                        | Min. = 15 °C, Max. = 35 °C                   |
| Relative humidity                  | Min. = 20 %, Max. = 75 %                     |
| Shielding effectiveness            | 0.014MHz-1MHz > 60 dB; 1MHz-18000MHz > 90 dB |
| Electrical insulation              | > 2MΩ  |
| Ground system resistance           | < 4 Ω  |
| Normalised site attenuation (NSA)  | < ±4 dB, 3 m distance, from 30 to 1000 MHz   |
| Voltage Standing Wave Ratio (VSWR) | ≤ 6 dB, from 1 to 18 GHz, 3m distance        |
| Uniformity of field strength       | Between 0 and 6 dB, from 80 to 6000 MHz      |

## 8. Measurement Uncertainty

| Test Name                                    | Uncertainty ( $k=2$ )        |        |
|--|------------------------------|--------|
| 1. Maximum Peak Output Power                 | 1.32dB                       |        |
| 2. Peak Power Spectral Density               | 1.32dB                       |        |
| 3. 6dB Bandwidth                             | 4.56kHz                      |        |
| 4. Band Edges Compliance                     | 1.92dB                       |        |
| 5. Transmitter Spurious Emission - Conducted | 30MHz $\leq$ f < 1GHz        | 1.41dB |
|  | 1GHz $\leq$ f < 7GHz         | 1.92dB |
|  | 7GHz $\leq$ f < 13GHz        | 2.31dB |
|  | 13GHz $\leq$ f < 26GHz       | 2.61dB |
| 6. Transmitter Spurious Emission - Radiated  | 9kHz $\leq$ f < 30MHz        | 1.79dB |
|  | 30MHz $\leq$ f < 1GHz        | 4.86dB |
|  | 1GHz $\leq$ f < 18GHz        | 4.82dB |
|  | 18GHz $\leq$ f < 40GHz       | 2.90dB |
| 7. AC Power line Conducted Emission          | 150kHz $\leq$ f $\leq$ 30MHz | 2.68dB |

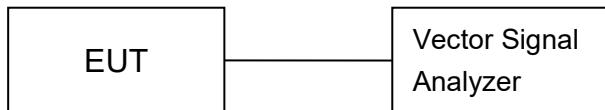
## **ANNEX A: Detailed Test Results**

### **Test Configuration**

The measurement is made according to ANSI C63.10.

#### **1) Conducted Measurements**

1. Connect the EUT to the test system correctly.
2. Set the EUT to the required work mode.
3. Set the EUT to the required channel.
4. Set the spectrum analyzer to start measurement.
5. Record the values.



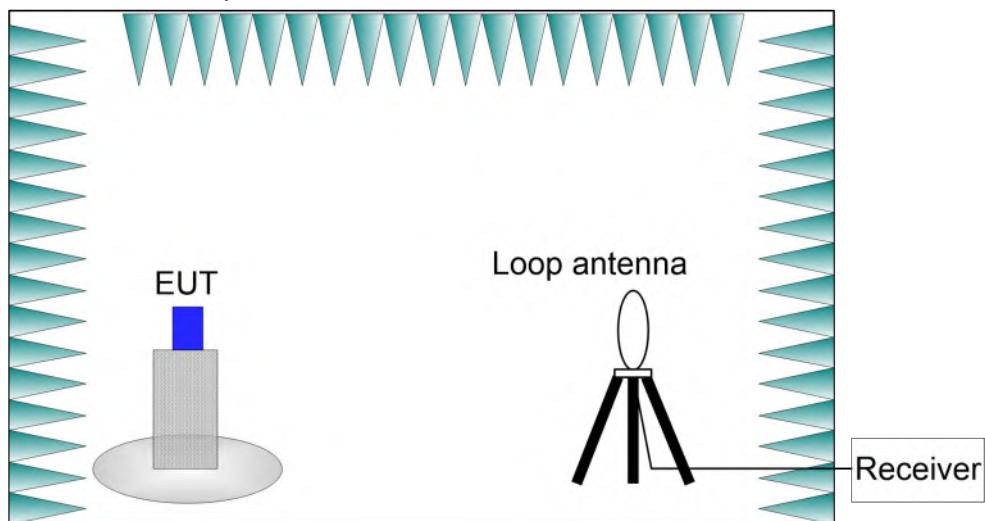
#### **2) Radiated Measurements**

##### **Test setup:**

##### **9kHz-30MHz:**

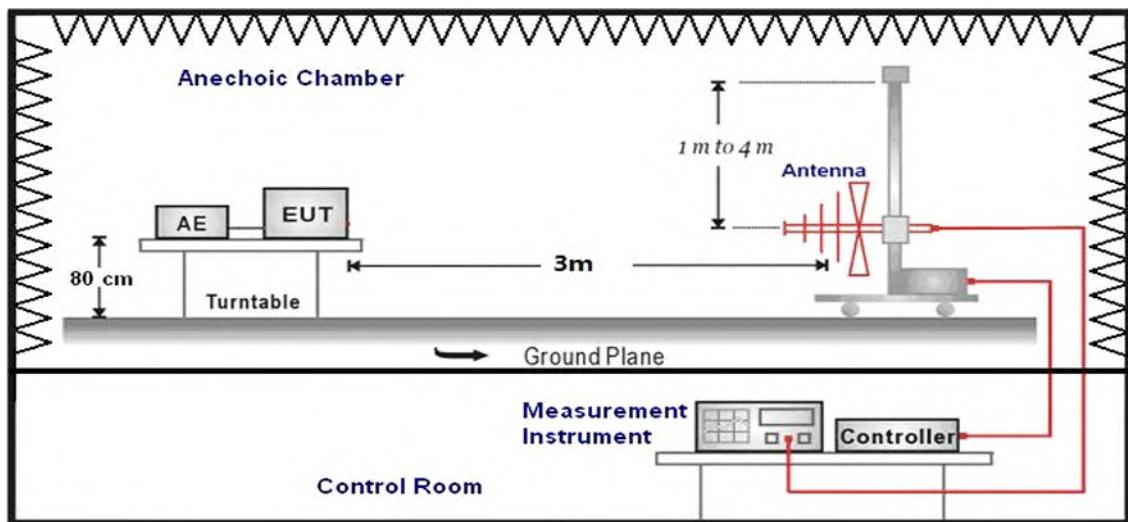
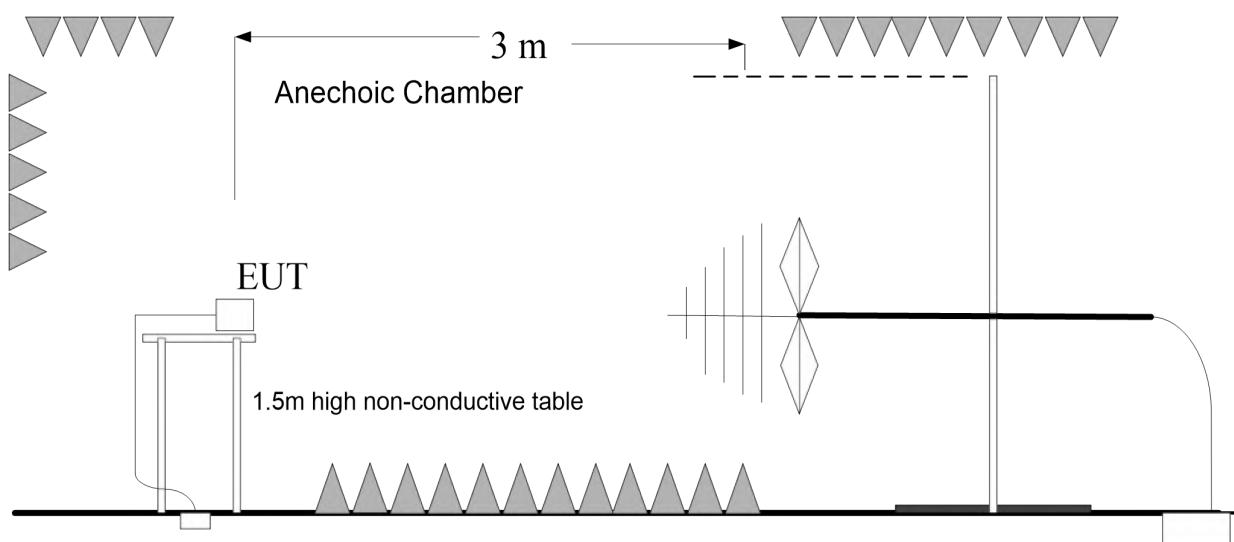
The EUT are measured in an anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving loop antenna is 1.0 meter above the ground. The test setup refers to figure below.

Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiver antenna polarization.

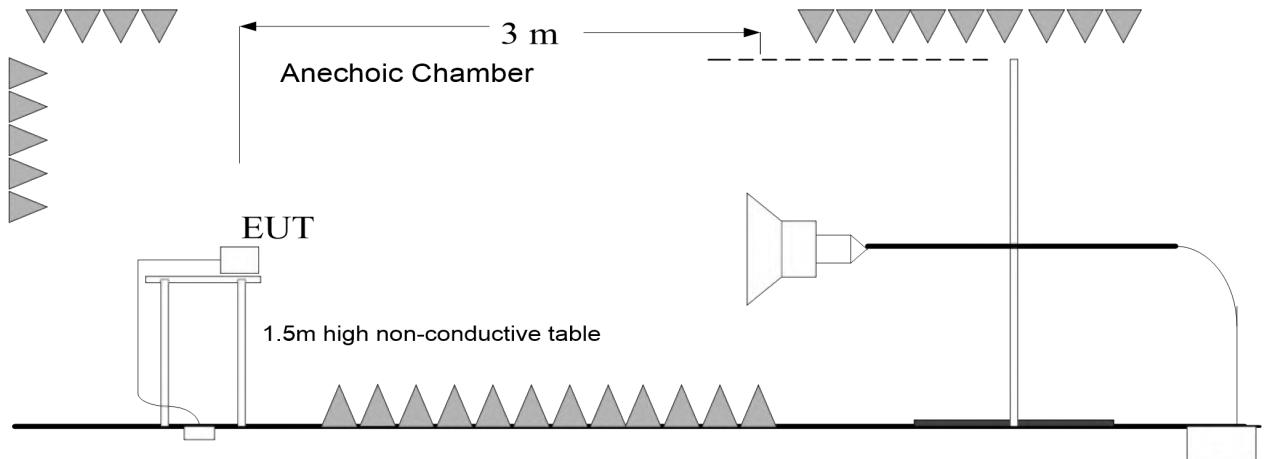


**30MHz-26.5GHz:**

The EUT are measured in a anechoic chamber. The EUT is placed on a non-conductive stand of 80cm high, and at a measurement distance of 3m from the receiving antenna. The center of the receiving antenna is 1.0 meter to 4.0 meter above the ground. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiver antenna polarization.

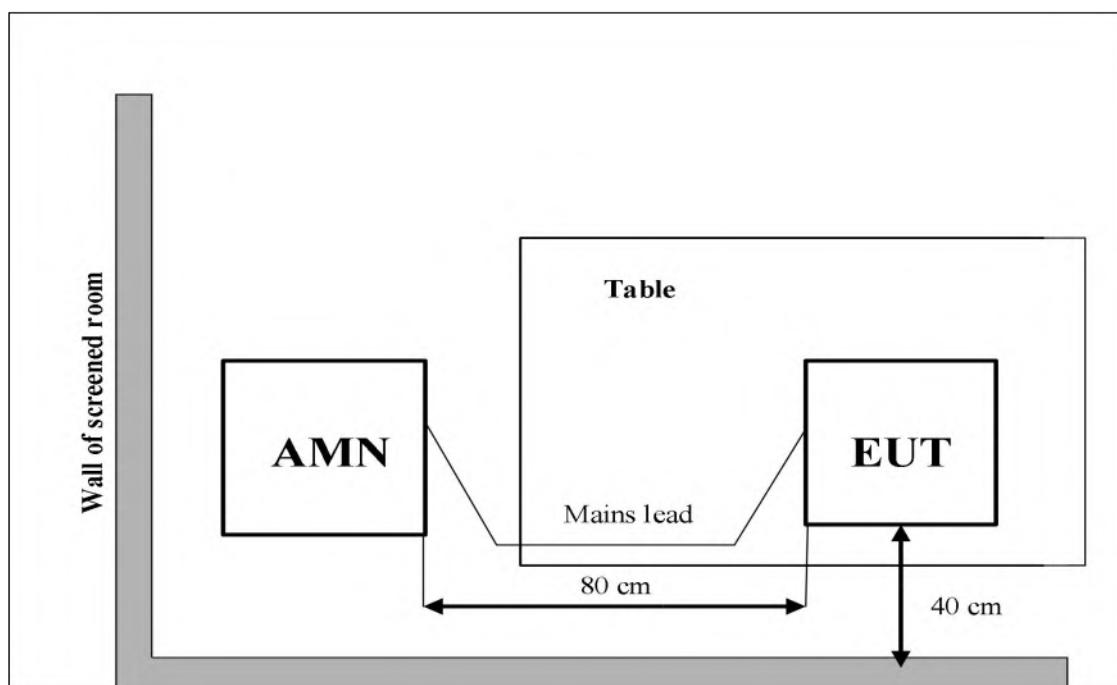
**30MHz-1GHz:**

**1GHz-3GHz:**


3GHz-26.5GHz:



### 3) AC Power line Conducted Emission Measurement

For WLAN, the EUT is working under test mode. The EUT is commanded to operate at maximum transmitting power.





## A.0 Antenna requirement

### Measurement Limit:

| Standard            | Requirement  |
|---------------------|--|
| FCC CRF Part 15.203 | An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded. |

**Conclusion: The Directional gains of antenna used for transmitting: Antenna 1:-0.05dBi; Antenna 2:-1.9dBi;Directional gain:2.1dBi.**

**The RF transmitter uses an integrate antenna without connector.**



## A.1 Maximum Output Power

**Measurement of method: See ANSI C63.10-2013-Clause 11.9.2.3.2.**

Method AVGPM-G is a measurement using a gated RF average power meter.

Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

### Measurement Limit:

| Standard               | Limit (dBm) |
|------------------------|-------------|
| FCC CRF Part 15.247(b) | < 30        |

### Measurement Results:

| Mode           | Frequency (MHz) | RF output power (dBm) |       |       | Conclusion |
|----------------|-----------------|-----------------------|-------|-------|------------|
|                |                 | Ant1                  | Ant2  | MIMO  |            |
| 802.11b        | 2412(CH1)       | 19.18                 | 19.09 | /     | P          |
|                | 2437(CH6)       | 19.34                 | 19.27 |       | P          |
|                | 2462(CH11)      | 19.54                 | 19.39 |       | P          |
| 802.11g        | 2412(CH1)       | 18.16                 | 18.03 | /     | P          |
|                | 2437(CH6)       | 18.33                 | 18.22 |       | P          |
|                | 2462(CH11)      | 18.21                 | 18.31 |       | P          |
| 802.11n -HT20  | 2412(CH1)       | 16.23                 | 16.13 | 19.19 | P          |
|                | 2437(CH6)       | 18.44                 | 18.34 | 21.40 | P          |
|                | 2462(CH11)      | 15.24                 | 15.19 | 18.23 | P          |
| 802.11n -HT40  | 2422(CH3)       | 14.18                 | 14.19 | 17.20 | P          |
|                | 2437(CH6)       | 18.31                 | 18.08 | 21.21 | P          |
|                | 2452(CH9)       | 14.15                 | 14.29 | 17.23 | P          |
| 802.11 -VHT20  | 2412(CH1)       | 17.20                 | 17.11 | 20.17 | P          |
|                | 2437(CH6)       | 18.37                 | 18.31 | 21.35 | P          |
|                | 2462(CH11)      | 15.25                 | 15.24 | 18.26 | P          |
| 802.11 -VHT40  | 2422(CH3)       | 15.17                 | 15.2  | 18.20 | P          |
|                | 2437(CH6)       | 18.29                 | 18.02 | 21.17 | P          |
|                | 2452(CH9)       | 14.15                 | 14.27 | 17.22 | P          |
| 802.11ax -HE20 | 2412(CH1)       | 15.81                 | 15.67 | 18.75 | P          |
|                | 2437(CH6)       | 17.91                 | 17.89 | 20.91 | P          |
|                | 2462(CH11)      | 14.85                 | 14.82 | 17.85 | P          |
| 802.11ax -HE40 | 2422(CH3)       | 14.85                 | 14.83 | 17.85 | P          |
|                | 2437(CH6)       | 17.90                 | 17.88 | 20.90 | P          |
|                | 2452(CH9)       | 14.84                 | 14.91 | 17.89 | P          |

**Note:** The data rate 1Mbps (11b mode), 6Mbps (11g mode), MCS0 (11n mode), MCS0 (VHT mode) and MCS0 (11ax mode) are selected as the Worst-Case. The Full RU of 802.11ax is the type with maximum outpower level. Between SISO and MIMO, the MIMO of 11n,VHT and 11ax is the worst

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type. Antenna 1 is selected as the worst condition (SISO). The following cases and test graphs are performed with this condition.

The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

**Conclusion: PASS**

## A.2 Peak Power Spectral Density

Method of Measurement: See ANSI C63.10-clause 11.10.2.

### Measurement Limit:

| Standard               | Limit (dBm/10 kHz) |
|------------------------|--------------------|
| FCC CRF Part 15.247(e) | < 8                |

### Measurement Results:

#### SISO:

| Mode    | Frequency (MHz) | Test Results (dBm/10 kHz) |       | Conclusion |
|---------|-----------------|---------------------------|-------|------------|
| 802.11b | 2412(CH1)       | Fig.1                     | 2.75  | P          |
|         | 2437(CH6)       | Fig.2                     | 2.22  | P          |
|         | 2462(CH11)      | Fig.3                     | 2.58  | P          |
| 802.11g | 2412(CH1)       | /                         | -0.91 | P          |
|         | 2437(CH6)       | /                         | -0.21 | P          |
|         | 2462(CH11)      | /                         | -0.80 | P          |

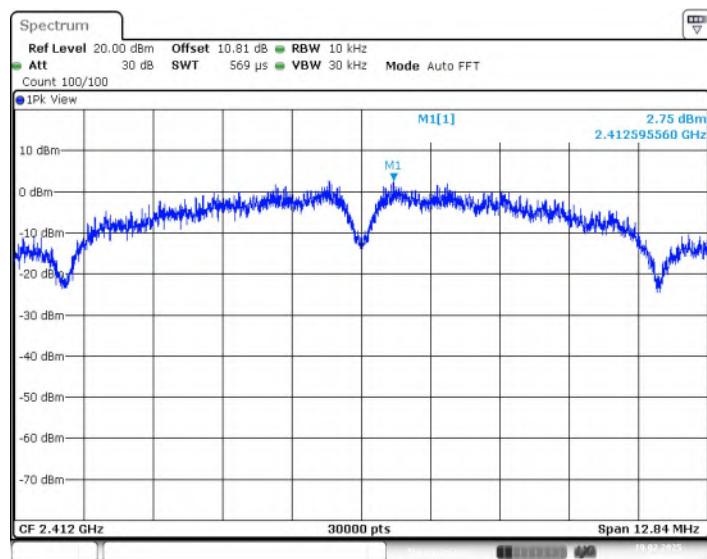
#### MIMO:

| Mode          | Frequency (MHz) | Test Results (dBm/10 kHz) | Conclusion |
|---------------|-----------------|---------------------------|------------|
| 802.11n-HT20  | 2412(CH1)       | -0.34                     | P          |
|               | 2437(CH6)       | 2.59                      | P          |
|               | 2462(CH11)      | -0.67                     | P          |
| 802.11-VHT20  | 2412(CH1)       | 0.77                      | P          |
|               | 2437(CH6)       | 1.89                      | P          |
|               | 2462(CH11)      | -1.25                     | P          |
| 802.11ax-HE20 | 2412(CH1)       | -1.38                     | P          |
|               | 2437(CH6)       | -0.16                     | P          |
|               | 2462(CH11)      | -1.85                     | P          |

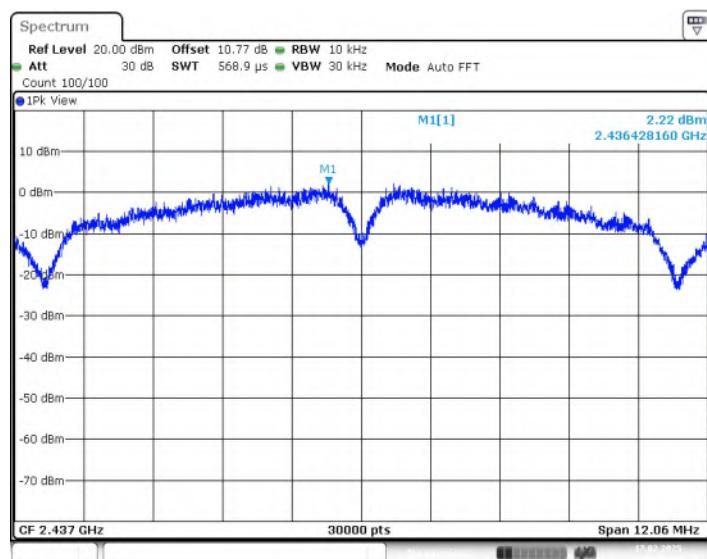
Note: The 20M bandwidth mode has the worst PSD.

See below for test graphs.

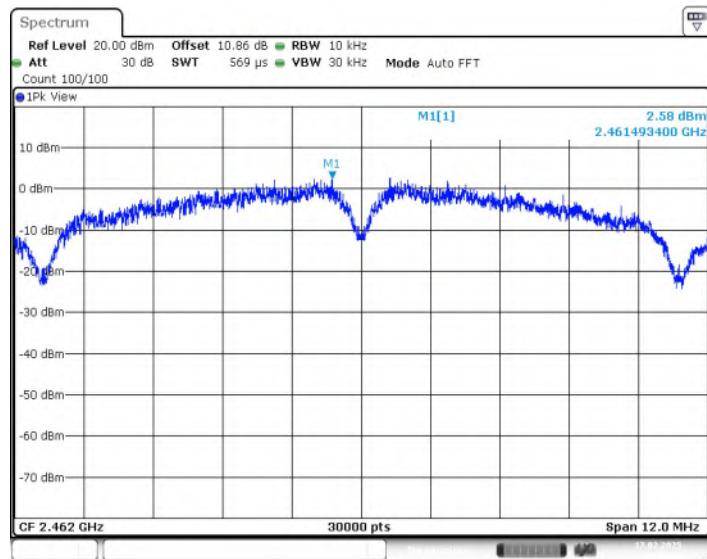
Conclusion: PASS



**Fig.1 Power Spectral Density (802.11b, CH1)**



**Fig.2 Power Spectral Density (802.11b, CH6)**



**Fig.3 Power Spectral Density (802.11b, CH11)**

### A.3 6dB Bandwidth

**Method of Measurement: See ANSI C63.10-clause 11.8.**

**Measurement Limit:**

| Standard                   | Limit (MHz) |
|----------------------------|-------------|
| FCC 47 CFR Part 15.247 (a) | ≥ 0.5       |

**Measurement Result:**

| Mode          | Frequency (MHz) | Test Results (MHz) |       | Conclusion |
|---------------|-----------------|--------------------|-------|------------|
| 802.11b       | 2412(CH1)       | Fig.4              | 8.56  | P          |
|               | 2437(CH6)       | Fig.5              | 8.04  | P          |
|               | 2462(CH11)      | Fig.6              | 8.00  | P          |
| 802.11g       | 2412(CH1)       | /                  | 15.80 | P          |
|               | 2437(CH6)       | /                  | 15.08 | P          |
|               | 2462(CH11)      | /                  | 15.36 | P          |
| 802.11n-HT20  | 2412(CH1)       | /                  | 16.28 | P          |
|               | 2437(CH6)       | /                  | 15.72 | P          |
|               | 2462(CH11)      | /                  | 15.96 | P          |
| 802.11n-HT40  | 2422(CH3)       | Fig.7              | 35.36 | P          |
|               | 2437(CH6)       | Fig.8              | 35.12 | P          |
|               | 2452(CH9)       | Fig.9              | 35.12 | P          |
| 802.11-VHT20  | 2412(CH1)       | /                  | 16.68 | P          |
|               | 2437(CH6)       | /                  | 16.80 | P          |
|               | 2462(CH11)      | /                  | 16.32 | P          |
| 802.11-VHT40  | 2422(CH3)       | /                  | 35.12 | P          |
|               | 2437(CH6)       | /                  | 35.68 | P          |
|               | 2452(CH9)       | /                  | 35.36 | P          |
| 802.11ax-HE20 | 2412(CH1)       | /                  | 16.92 | P          |
|               | 2437(CH6)       | /                  | 17.64 | P          |
|               | 2462(CH11)      | /                  | 17.44 | P          |
| 802.11ax-HE40 | 2422(CH3)       | /                  | 37.60 | P          |
|               | 2437(CH6)       | /                  | 37.68 | P          |
|               | 2452(CH9)       | /                  | 36.72 | P          |

See below for test graphs.

**Conclusion: PASS**

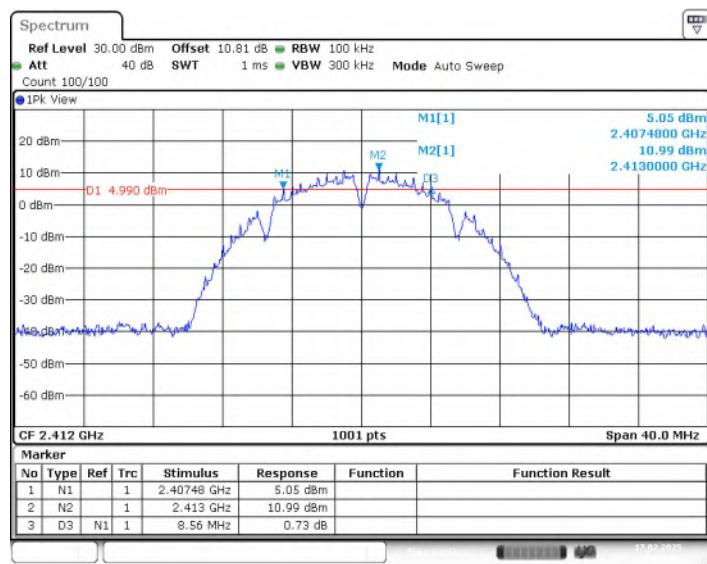


Fig.4 6dB Bandwidth (802.11b, CH1)

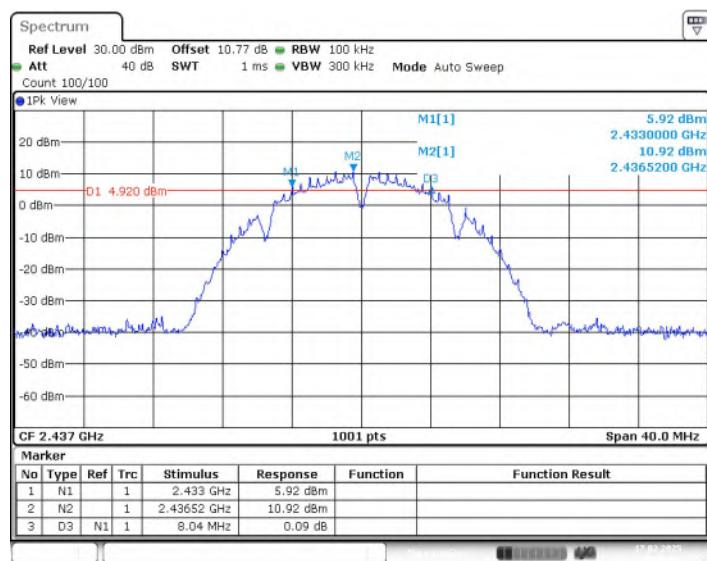


Fig.5 6dB Bandwidth (802.11b, CH6)

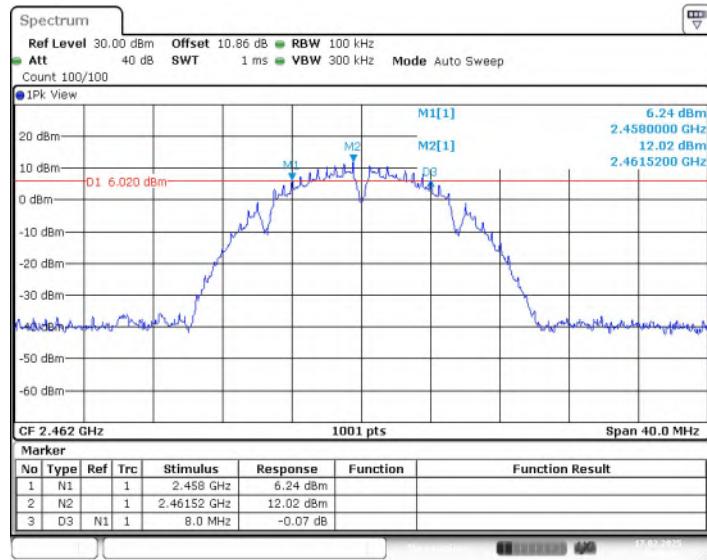


Fig.6 6dB Bandwidth (802.11b, CH11)

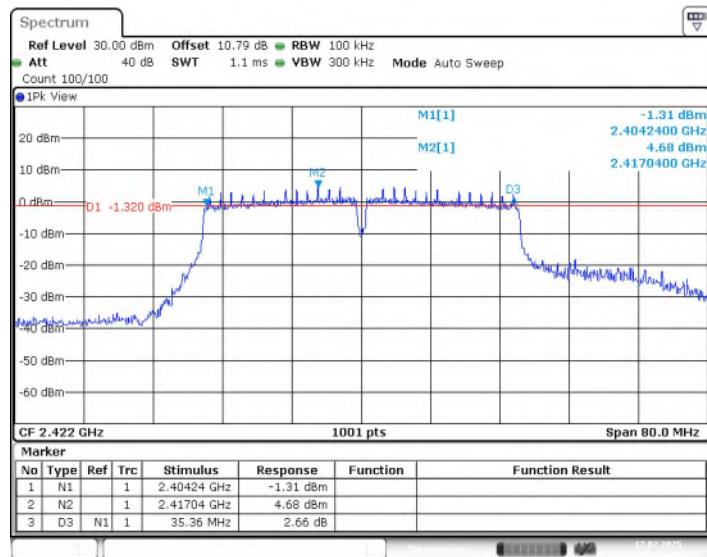


Fig.7 6dB Bandwidth (802.11n-HT40, CH3)

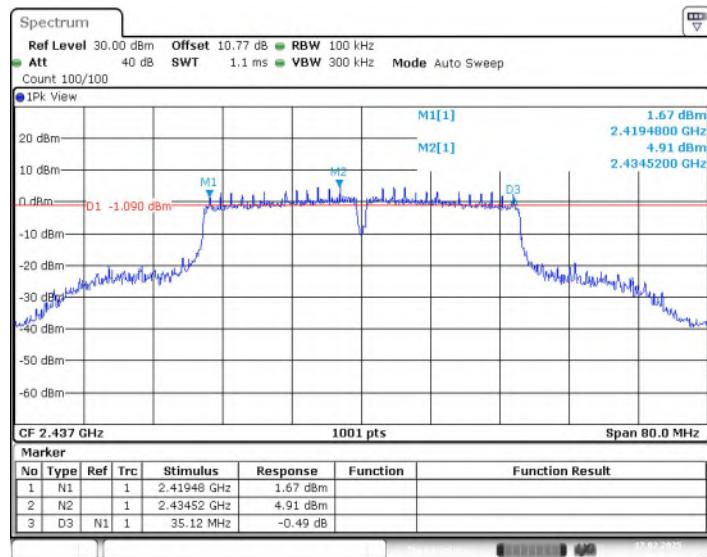


Fig.8 6dB Bandwidth (802.11n-HT40, CH6)

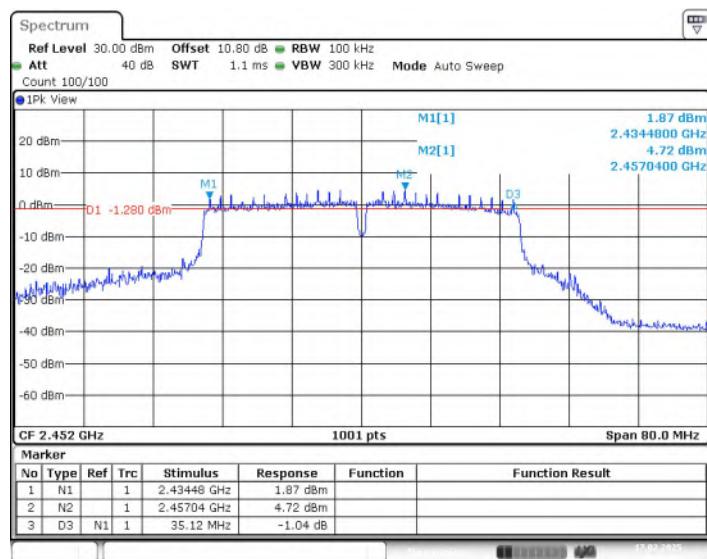


Fig.9 6dB Bandwidth (802.11n-HT40, CH9)



#### A.4 Band Edges Compliance

**Method of Measurement: See ANSI C63.10-clause 11.12.3.**

**Measurement Limit:**

| Standard                   | Limit (dBc) |
|----------------------------|-------------|
| FCC 47 CFR Part 15.247 (d) | > 30        |

**Measurement Result:**

| Mode          | Frequency (MHz) | Test Results (dBc) |       | Conclusion |
|---------------|-----------------|--------------------|-------|------------|
| 802.11b       | 2412(CH1)       | Fig.10             | 51.13 | P          |
|               | 2462(CH11)      | Fig.11             | 57.64 | P          |
| 802.11g       | 2412(CH1)       | /                  | 41.89 | P          |
|               | 2462(CH11)      | /                  | 52.35 | P          |
| 802.11n-HT20  | 2412(CH1)       | /                  | 37.95 | P          |
|               | 2462(CH11)      | /                  | 48.76 | P          |
| 802.11n-HT40  | 2422(CH3)       | Fig.12             | 35.48 | P          |
|               | 2452(CH9)       | Fig.13             | 42.94 | P          |
| 802.11-VHT20  | 2412(CH1)       | /                  | 41.18 | P          |
|               | 2462(CH11)      | /                  | 48.40 | P          |
| 802.11-VHT40  | 2422(CH3)       | /                  | 35.73 | P          |
|               | 2452(CH9)       | /                  | 44.93 | P          |
| 802.11ax-HE20 | 2412(CH1)       | /                  | 41.95 | P          |
|               | 2462(CH11)      | /                  | 48.54 | P          |
| 802.11ax-HE40 | 2422(CH3)       | /                  | 37.65 | P          |
|               | 2452(CH9)       | /                  | 40.84 | P          |

**See below for test graphs.**

**Conclusion: PASS**

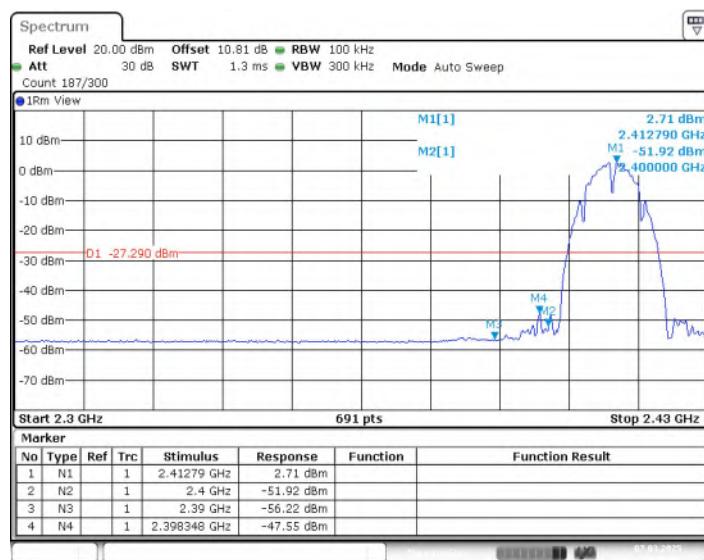


Fig.10 Band Edges (802.11b, CH1)

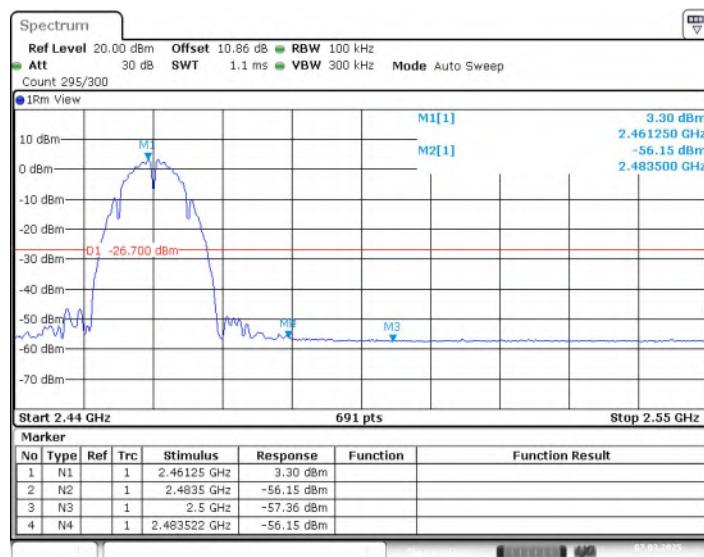


Fig.11 Band Edges (802.11b, CH11)

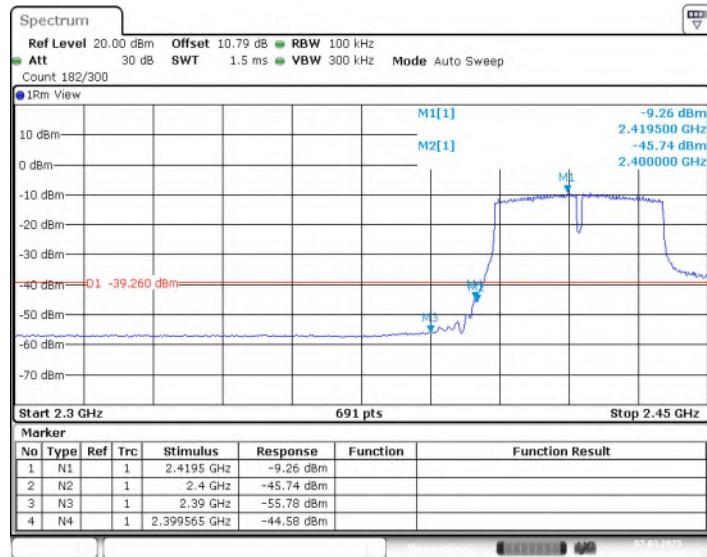


Fig.12 Band Edges (802.11n-HT40, CH3)

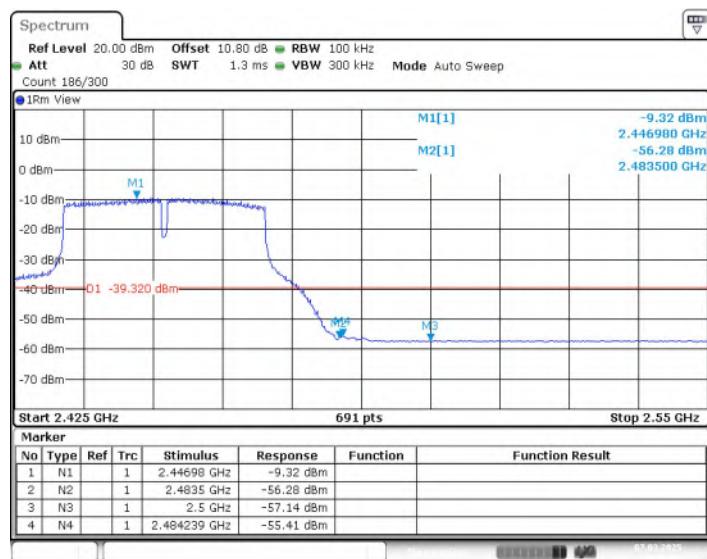


Fig.13 Band Edges (802.11n-HT40, CH9)

## A.5 Conducted Emission

**Method of Measurement: See ANSI C63.10-clause 11.11.**

**Measurement Limit:**

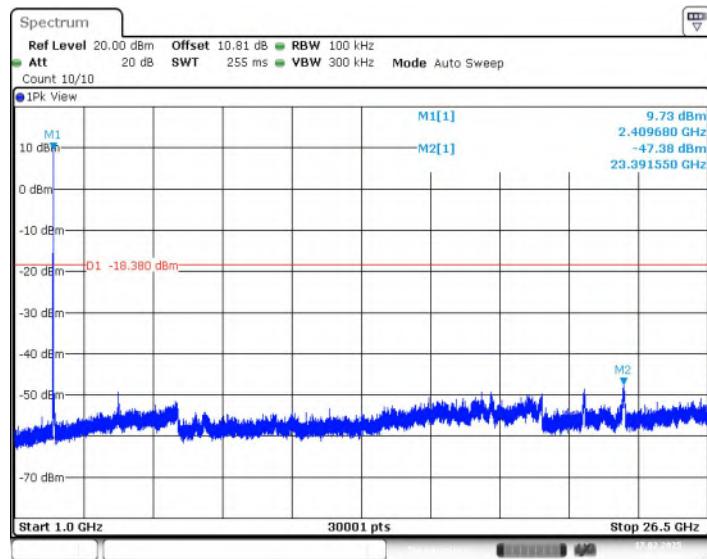
| Standard                   | Limit (dBm)                                       |
|----------------------------|---|
| FCC 47 CFR Part 15.247 (d) | 30dBm below peak output power in 100kHz bandwidth |

**Measurement Results:**

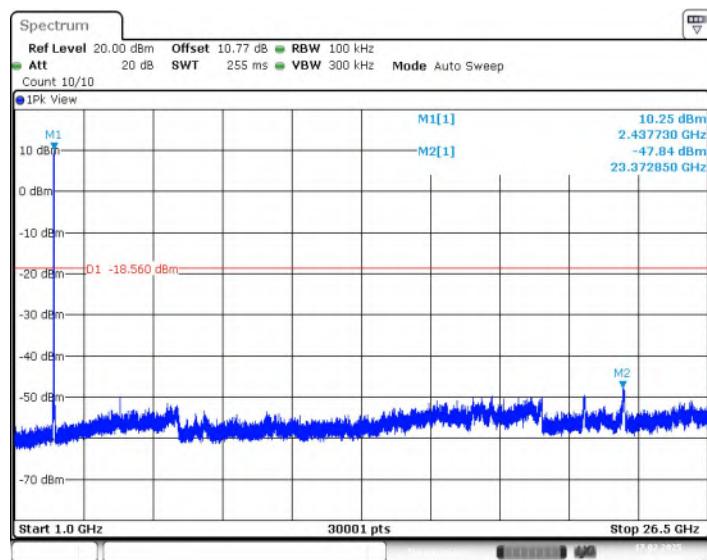
| Mode          | Frequency (MHz) | Frequency Range | Test Results | Conclusion |
|---------------|-----------------|-----------------|--------------|------------|
| 802.11b       | 2412(CH1)       | 1GHz-26.5GHz    | Fig.14       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.15       | P          |
|               | 2462(CH11)      | 1GHz-26.5GHz    | Fig.16       | P          |
| 802.11g       | 2412(CH1)       | 1GHz-26.5GHz    | Fig.17       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.18       | P          |
|               | 2462(CH11)      | 1GHz-26.5GHz    | Fig.19       | P          |
| 802.11n-HT20  | 2412(CH1)       | 1GHz-26.5GHz    | Fig.20       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.21       | P          |
|               | 2462(CH11)      | 1GHz-26.5GHz    | Fig.22       | P          |
| 802.11n-HT40  | 2422(CH3)       | 1GHz-26.5GHz    | Fig.23       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.24       | P          |
|               | 2452(CH9)       | 1GHz-26.5GHz    | Fig.25       | P          |
| 802.11-VHT20  | 2412(CH1)       | 1GHz-26.5GHz    | Fig.26       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.27       | P          |
|               | 2462(CH11)      | 1GHz-26.5GHz    | Fig.28       | P          |
| 802.11-VHT40  | 2422(CH3)       | 1GHz-26.5GHz    | Fig.29       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.30       | P          |
|               | 2452(CH9)       | 1GHz-26.5GHz    | Fig.31       | P          |
| 802.11ax-HE20 | 2412(CH1)       | 1GHz-26.5GHz    | Fig.32       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.33       | P          |
|               | 2462(CH11)      | 1GHz-26.5GHz    | Fig.34       | P          |
| 802.11ax-HE40 | 2422(CH3)       | 1GHz-26.5GHz    | Fig.35       | P          |
|               | 2437(CH6)       | 1GHz-26.5GHz    | Fig.36       | P          |
|               | 2452(CH9)       | 1GHz-26.5GHz    | Fig.37       | P          |
| /             | All channels    | 30MHz -1GHz     | Fig.38       | P          |

See below for test graphs.

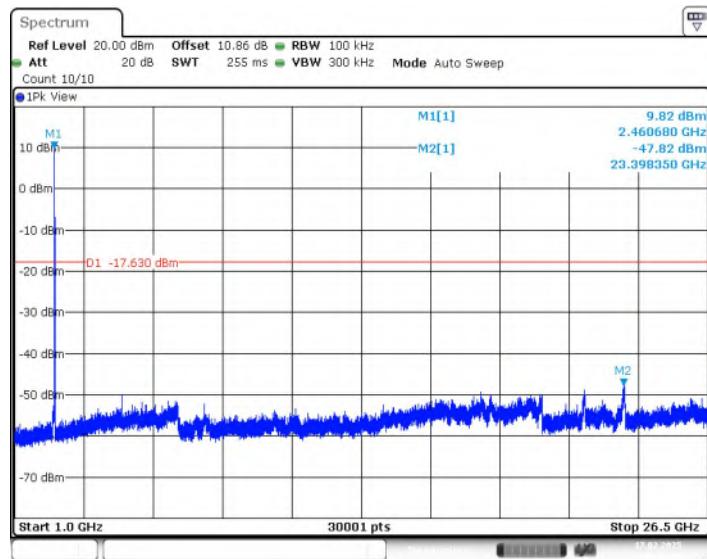
**Conclusion: PASS**



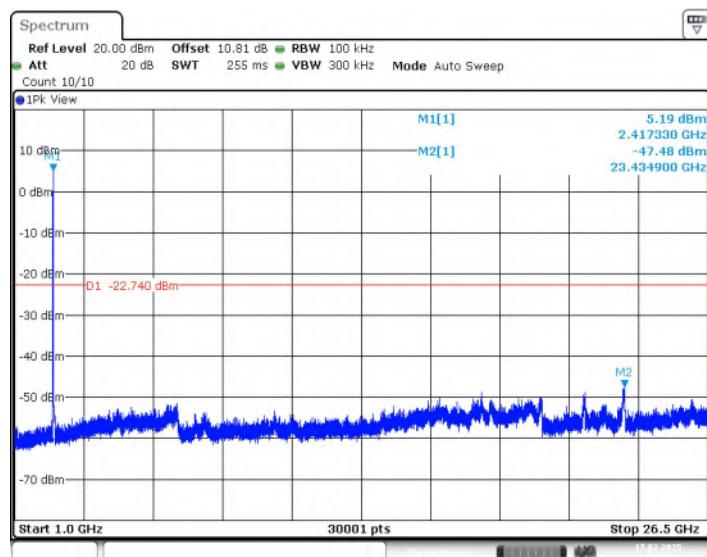
**Fig.14 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH1)**



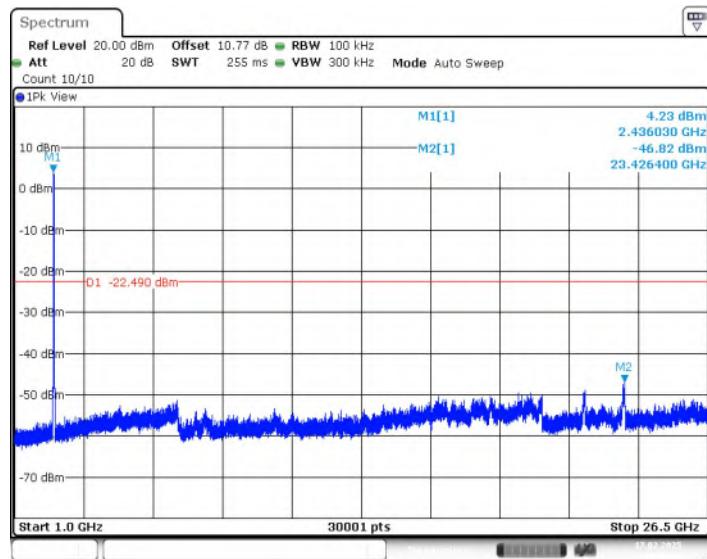
**Fig.15 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH6)**



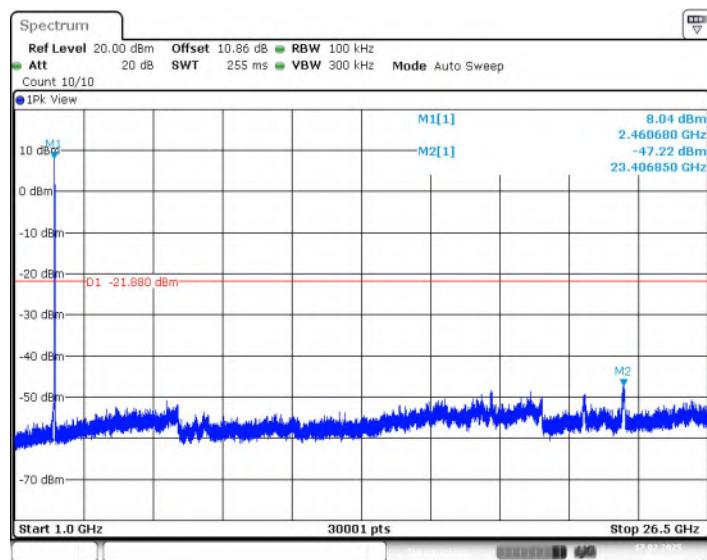
**Fig.16 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH11)**



**Fig.17 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH1)**



**Fig.18 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH6)**



**Fig.19 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH11)**

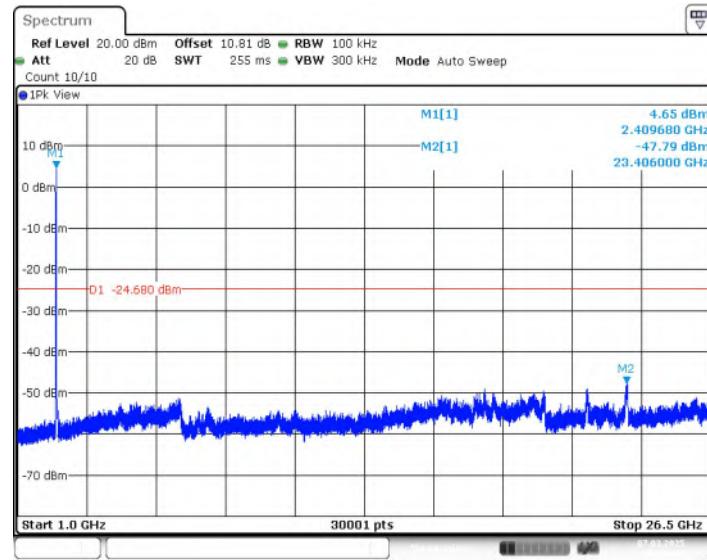


Fig.20 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT20, CH1)

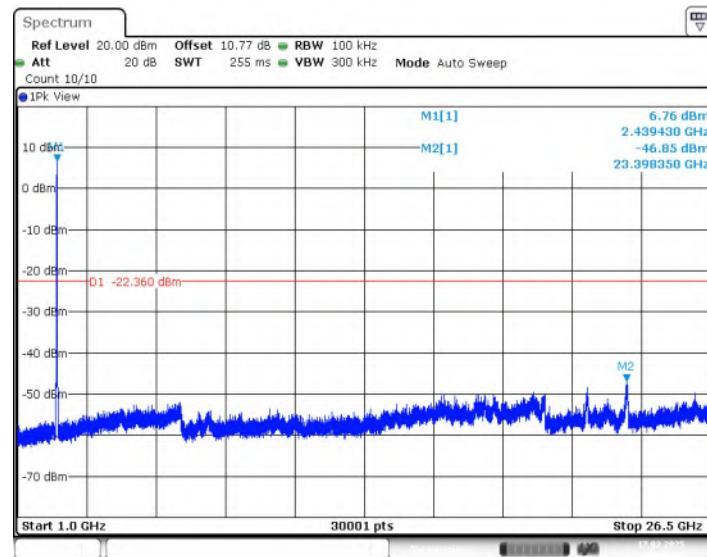
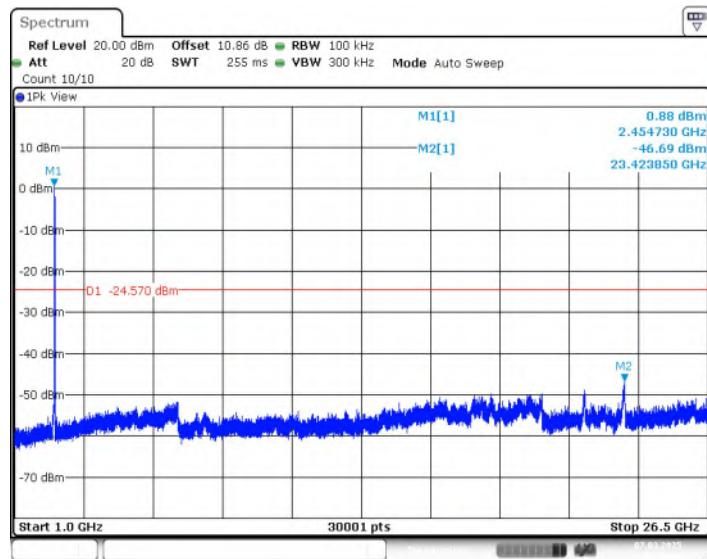
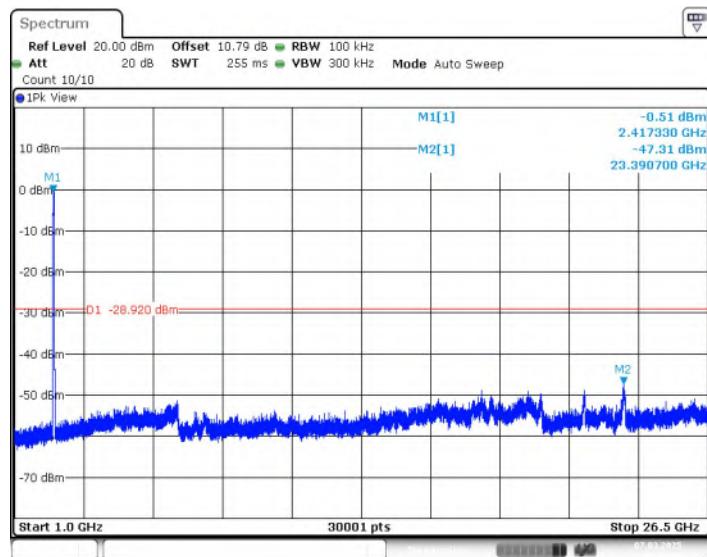


Fig.21 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT20, CH6)



**Fig.22 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT20, CH11)**



**Fig.23 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT40, CH3)**

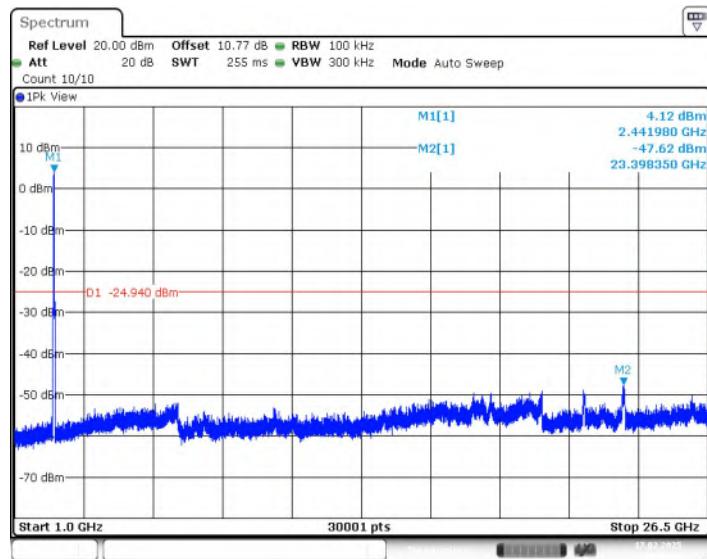


Fig.24 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT40, CH6)

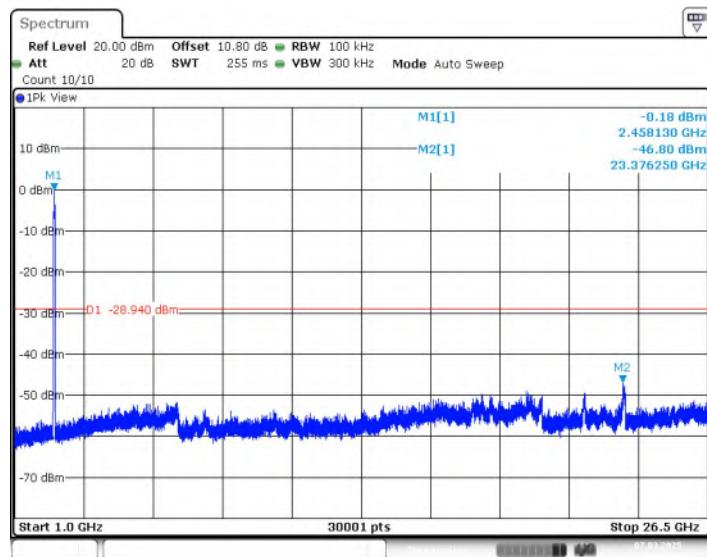
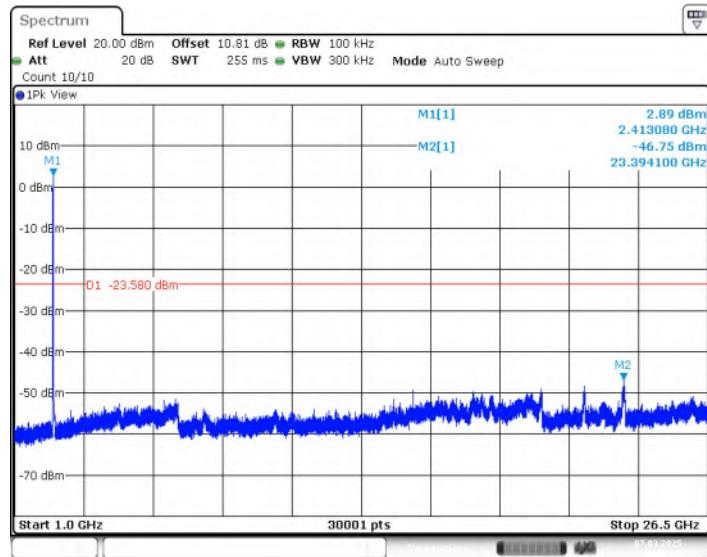
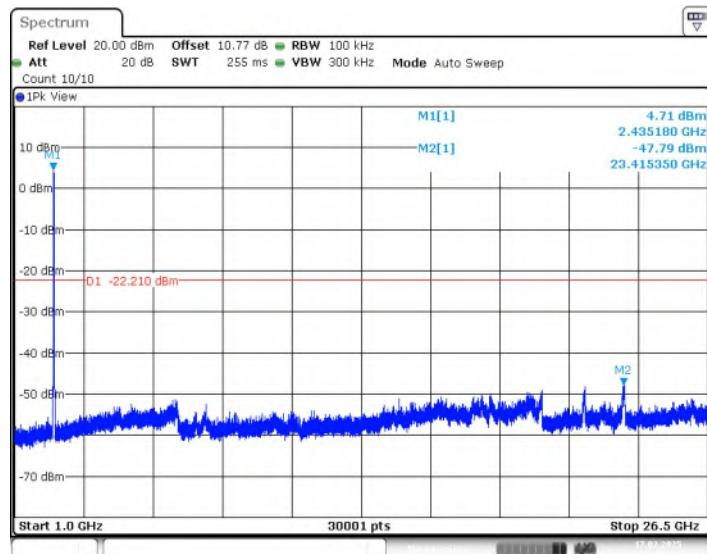


Fig.25 Conducted Spurious Emission (1GHz-26.5GHz, 802.11n-HT40, CH9)



**Fig.26 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT20, CH1)**



**Fig.27 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT20, CH6)**

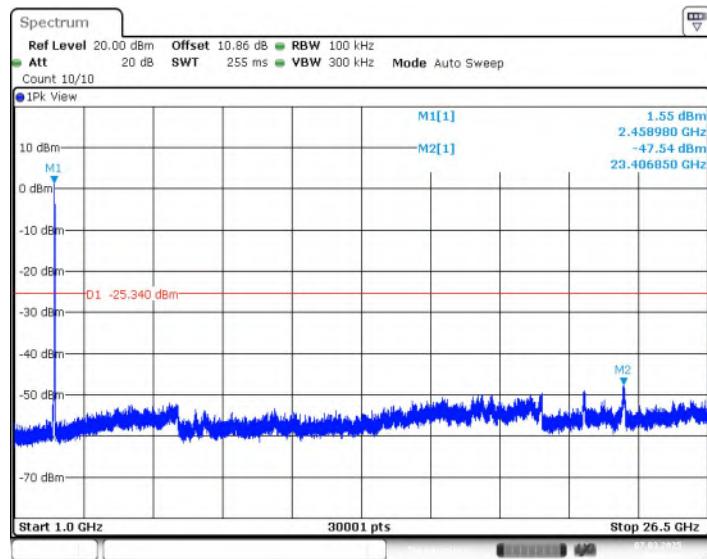


Fig.28 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT20, CH11)

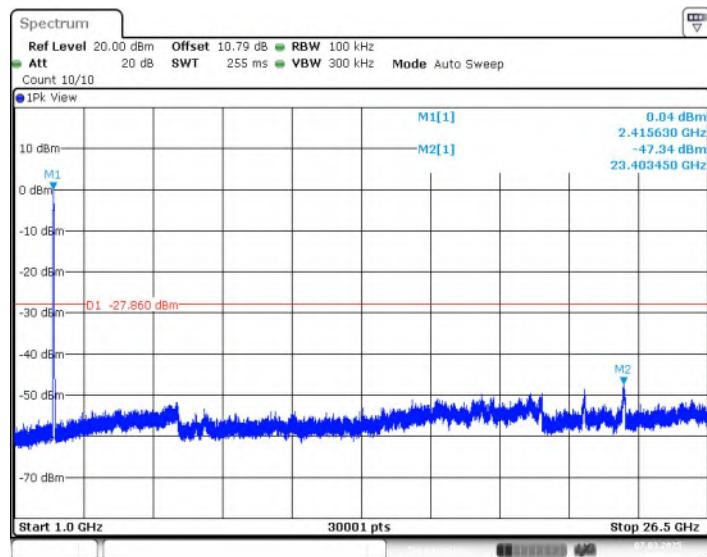


Fig.29 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT40, CH3)

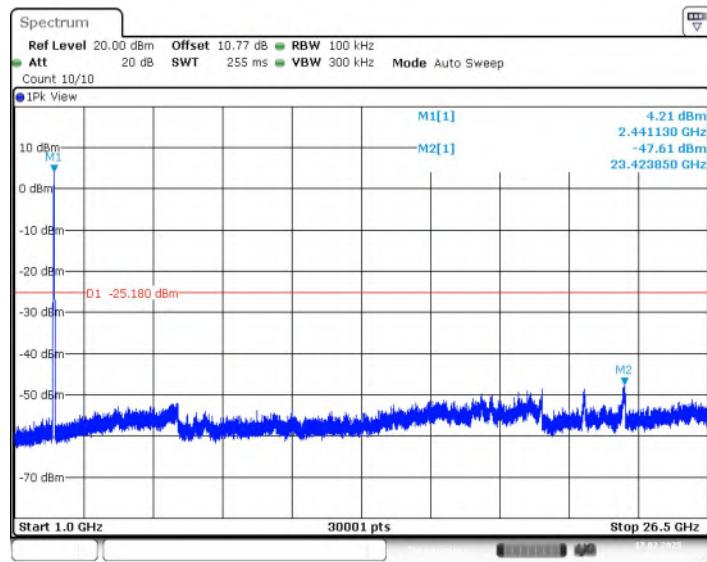


Fig.30 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT40, CH6)

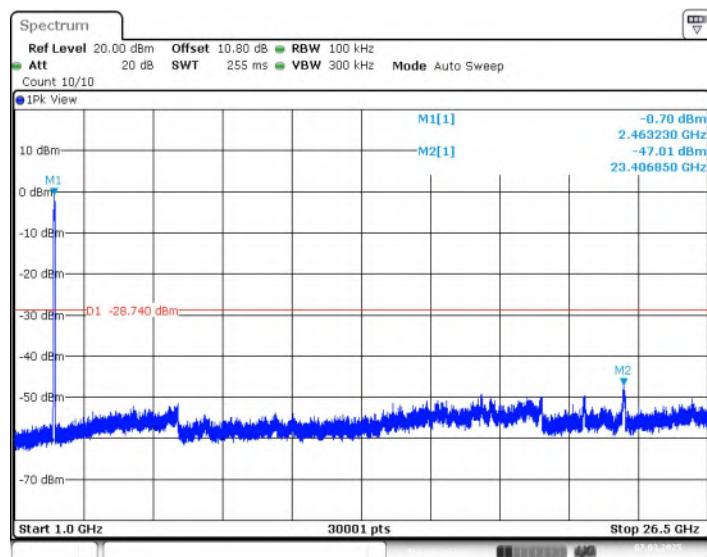


Fig.31 Conducted Spurious Emission (1GHz-26.5GHz, 802.11-VHT40, CH9)

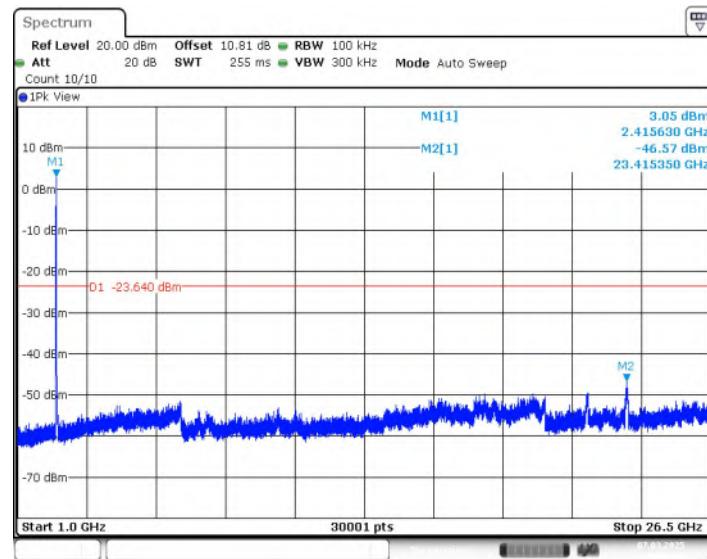


Fig.32 Conducted Spurious Emission (1GHz-26.5GHz, 802.11ax-HE20, CH1)

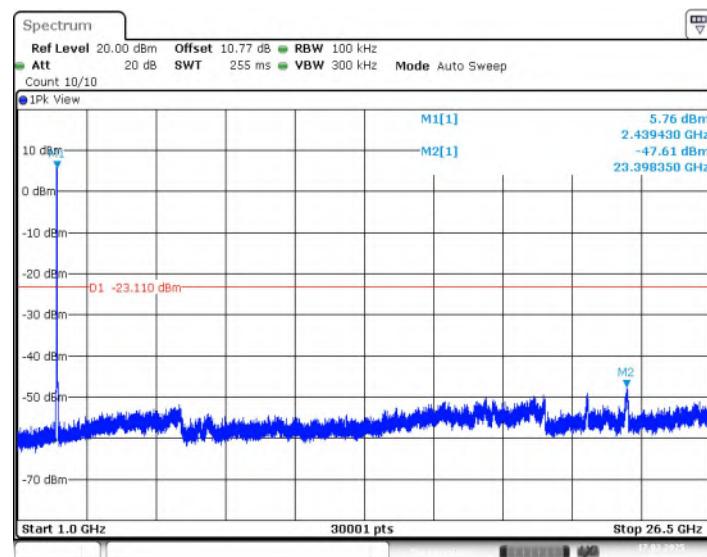


Fig.33 Conducted Spurious Emission (1GHz-26.5GHz, 802.11ax-HE20, CH6)

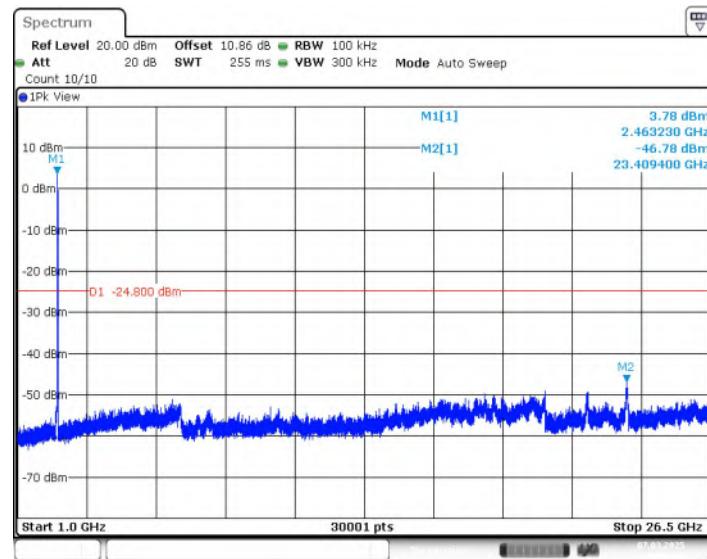


Fig.34 Conducted Spurious Emission (1GHz-26.5GHz, 802.11ax-HE20, CH11)

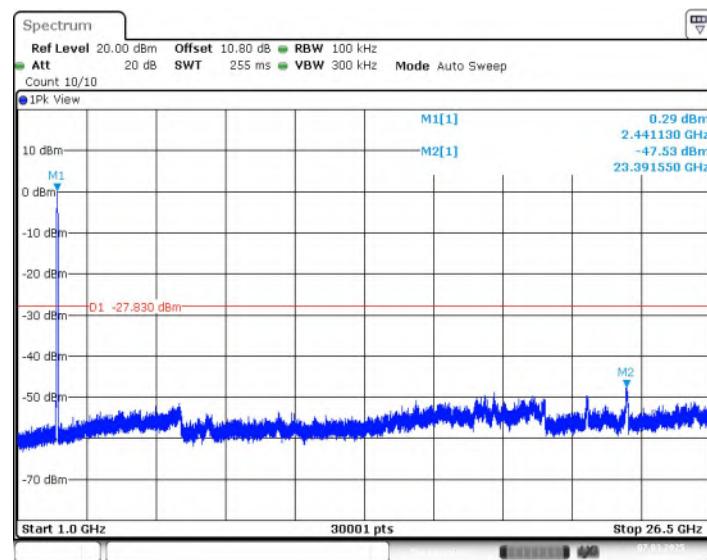


Fig.35 Conducted Spurious Emission (1GHz-26.5GHz, 802.11ax-HE40, CH3)

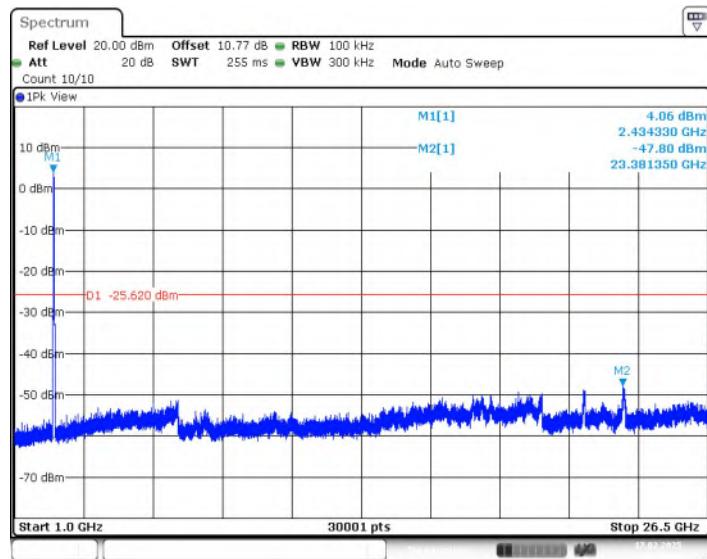


Fig.36 Conducted Spurious Emission (1GHz-26.5GHz, 802.11ax-HE40, CH6)

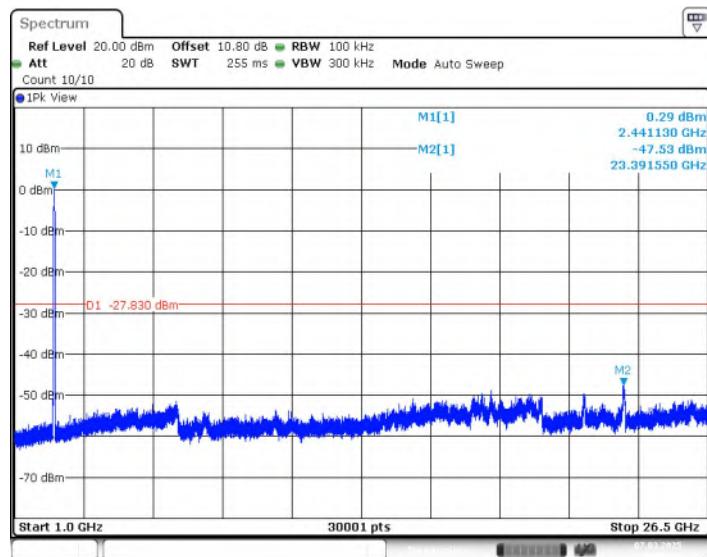


Fig.37 Conducted Spurious Emission (1GHz-26.5GHz, 802.11ax-HE40, CH9)

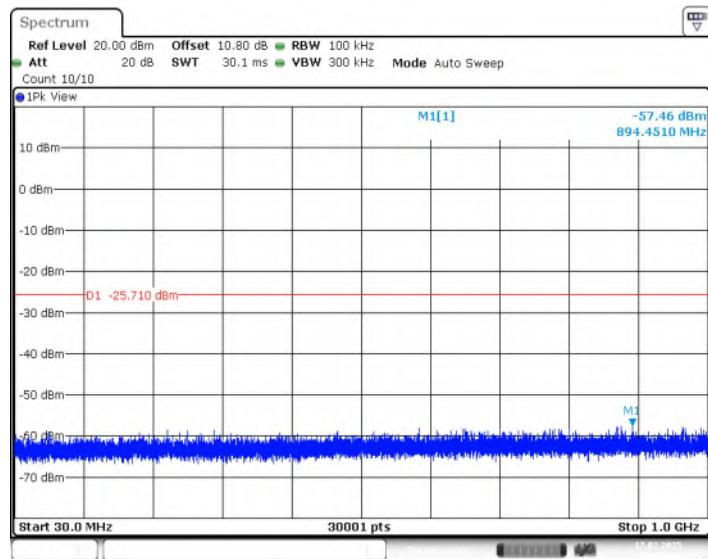


Fig.38 Conducted Spurious Emission (All Channels, 30MHz -1GHz)

## A.6 Radiated Emission

**Method of Measurement: See ANSI C63.10-clause 11.11&11.12.**

**Measurement Limit:**

| Standard                               | Limit (dBm)                   |
|--|-------------------------------|
| FCC 47 CFR Part 15.247, 15.205, 15.209 | 20dBm below peak output power |

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

**Limit in restricted band:**

| Frequency of emission (MHz) | Field strength( $\mu$ V/m) | Measurement distance(meters) |
|-----------------------------|----------------------------|------------------------------|
| 0.009-0.490                 | 2400/F(kHz)                | 300                          |
| 0.490-1.705                 | 24000/F(kHz)               | 30                           |
| 1.705-30.0                  | 30                         | 30                           |
| 30-88                       | 100                        | 3                            |
| 88-216                      | 150                        | 3                            |
| 216-960                     | 200                        | 3                            |
| Above 960                   | 500                        | 3                            |

**Test Condition:**

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

| Frequency of emission (MHz) | RBW/VBW       | Sweep Time(s) |
|-----------------------------|---------------|---------------|
| 30-1000                     | 120kHz/300kHz | 5             |
| 1000-4000                   | 1MHz/3MHz     | 15            |
| 4000-18000                  | 1MHz/3MHz     | 40            |
| 18000-26500                 | 1MHz/3MHz     | 20            |

**Note:** According to the performance evaluation, the radiated emission margin of EUT is over 20dB in the band from 9kHz to 30MHz. Therefore, the measurement starts from 30MHz to tenth harmonic. The measurement results include the horizontal polarization and vertical polarization measurements. For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases were recorded in this report.

**Measurement Results:**

| Mode              | Frequency (MHz)        | Frequency Range     | Test Results | Conclusion |
|-------------------|------------------------|---------------------|--------------|------------|
| 802.11n-<br>HT20  | 2412(CH1)              | 1 GHz ~18 GHz       | Fig.39       | P          |
|                   | 2437(CH6)              | 1 GHz ~18 GHz       | Fig.40       | P          |
|                   | 2462(CH11)             | 1 GHz ~18 GHz       | Fig.41       | P          |
|                   | Restricted Band (CH1)  | 2.38 GHz ~ 2.45 GHz | Fig.42       | P          |
|                   | Restricted Band (CH11) | 2.45 GHz ~ 2.5 GHz  | Fig.43       | P          |
| 802.11-<br>VHT20  | 2412(CH1)              | 1 GHz ~18 GHz       | Fig.44       | P          |
|                   | 2437(CH6)              | 1 GHz ~18 GHz       | Fig.45       | P          |
|                   | 2462(CH11)             | 1 GHz ~18 GHz       | Fig.46       | P          |
|                   | Restricted Band (CH1)  | 2.38 GHz ~ 2.45 GHz | Fig.47       | P          |
|                   | Restricted Band (CH11) | 2.45 GHz ~ 2.5 GHz  | Fig.48       | P          |
| 802.11ax<br>-HE20 | 2412(CH1)              | 1 GHz ~18 GHz       | Fig.49       | P          |
|                   | 2437(CH6)              | 1 GHz ~18 GHz       | Fig.50       | P          |
|                   | 2462(CH11)             | 1 GHz ~18 GHz       | Fig.51       | P          |
|                   | Restricted Band (CH1)  | 2.38 GHz ~ 2.45 GHz | Fig.52       | P          |
|                   | Restricted Band (CH11) | 2.45 GHz ~ 2.5 GHz  | Fig.53       | P          |
| 802.11n-<br>HT40  | 2422(CH3)              | 1 GHz ~18 GHz       | Fig.54       | P          |
|                   | 2437(CH6)              | 1 GHz ~18 GHz       | Fig.55       | P          |
|                   | 2452(CH9)              | 1 GHz ~18 GHz       | Fig.56       | P          |
|                   | Restricted Band (CH3)  | 2.38 GHz ~ 2.45 GHz | Fig.57       | P          |
|                   | Restricted Band (CH9)  | 2.45 GHz ~ 2.5 GHz  | Fig.58       | P          |
| 802.11-<br>VHT40  | 2422(CH3)              | 1 GHz ~18 GHz       | Fig.59       | P          |
|                   | 2437(CH6)              | 1 GHz ~18 GHz       | Fig.60       | P          |
|                   | 2452(CH9)              | 1 GHz ~18 GHz       | Fig.61       | P          |
|                   | Restricted Band (CH3)  | 2.38 GHz ~ 2.45 GHz | Fig.62       | P          |
|                   | Restricted Band (CH9)  | 2.45 GHz ~ 2.5 GHz  | Fig.63       | P          |
| 802.11ax<br>-HE40 | 2422(CH3)              | 1 GHz ~18 GHz       | Fig.64       | P          |
|                   | 2437(CH6)              | 1 GHz ~18 GHz       | Fig.65       | P          |
|                   | 2452(CH9)              | 1 GHz ~18 GHz       | Fig.66       | P          |
|                   | Restricted Band (CH3)  | 2.38 GHz ~ 2.45 GHz | Fig.67       | P          |
|                   | Restricted Band (CH9)  | 2.45 GHz ~ 2.5 GHz  | Fig.68       | P          |
| /                 | All Channels           | 9 kHz ~30 MHz       | Fig.69       | P          |
|                   |                        | 30 MHz ~1 GHz       | Fig.70       | P          |
|                   |                        | 18 GHz ~26.5 GHz    | Fig.71       | P          |

Between SISO and MIMO, the MIMO of 11n,VHT,11ax and 11be is the worst type.

**Worst-Case Result:****802.11n-HT20 CH6 (1GHz-18GHz)**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3102.500000     | 46.89                  | 74.00                | 27.11       | H   | 0.3          |
| 4950.500000     | 49.80                  | 74.00                | 24.20       | V   | 4.8          |
| 7306.000000     | 48.55                  | 74.00                | 25.45       | V   | 6.5          |
| 10388.000000    | 49.30                  | 74.00                | 24.70       | V   | 11.1         |
| 13869.500000    | 51.05                  | 74.00                | 22.95       | V   | 12.7         |
| 17937.500000    | 59.46                  | 74.00                | 14.54       | H   | 21.8         |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3102.500000     | 34.74                  | 54.00                | 19.26       | H   | 0.3          |
| 4950.500000     | 37.00                  | 54.00                | 17.00       | V   | 4.8          |
| 7306.000000     | 35.33                  | 54.00                | 18.67       | V   | 6.5          |
| 10388.000000    | 37.16                  | 54.00                | 16.84       | V   | 11.1         |
| 13869.500000    | 39.17                  | 54.00                | 14.83       | V   | 12.7         |
| 17937.500000    | 46.67                  | 54.00                | 7.33        | H   | 21.8         |

**802.11-VHT20 CH6 (1GHz-18GHz)**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3135.000000     | 48.09                  | 74.00                | 25.91       | H   | 0.4          |
| 5514.500000     | 50.33                  | 74.00                | 23.67       | H   | 5.0          |
| 8269.000000     | 47.02                  | 74.00                | 26.98       | H   | 7.0          |
| 11152.000000    | 50.43                  | 74.00                | 23.57       | V   | 11.6         |
| 14196.500000    | 51.70                  | 74.00                | 22.30       | H   | 14.0         |
| 17650.000000    | 58.72                  | 74.00                | 15.28       | V   | 21.2         |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3135.000000     | 35.42                  | 54.00                | 18.58       | H   | 0.4          |
| 5514.500000     | 38.38                  | 54.00                | 15.62       | H   | 5.0          |
| 8269.000000     | 34.56                  | 54.00                | 19.44       | H   | 7.0          |
| 11152.000000    | 38.16                  | 54.00                | 15.84       | V   | 11.6         |
| 14196.500000    | 38.97                  | 54.00                | 15.03       | H   | 14.0         |
| 17650.000000    | 46.44                  | 54.00                | 7.56        | V   | 21.2         |

**802.11ax-HE20 CH6 (1GHz-18GHz)**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3334.500000     | 46.19                  | 74.00                | 27.81       | V   | -0.2         |
| 5444.500000     | 51.50                  | 74.00                | 22.50       | H   | 5.4          |
| 8256.500000     | 46.73                  | 74.00                | 27.27       | H   | 7.0          |
| 11199.000000    | 49.95                  | 74.00                | 24.05       | H   | 11.6         |
| 14229.000000    | 51.59                  | 74.00                | 22.41       | H   | 14.0         |
| 17872.500000    | 58.51                  | 74.00                | 15.49       | H   | 21.4         |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3334.500000     | 34.09                  | 54.00                | 19.91       | V   | -0.2         |
| 5444.500000     | 38.69                  | 54.00                | 15.31       | H   | 5.4          |
| 8256.500000     | 34.55                  | 54.00                | 19.45       | H   | 7.0          |
| 11199.000000    | 37.91                  | 54.00                | 16.09       | H   | 11.6         |
| 14229.000000    | 39.30                  | 54.00                | 14.70       | H   | 14.0         |
| 17872.500000    | 45.89                  | 54.00                | 8.11        | H   | 21.4         |

**802.11n-HT40 CH6 (1GHz-18GHz)**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3257.000000     | 46.45                  | 74.00                | 27.55       | H   | -0.2         |
| 5485.500000     | 51.84                  | 74.00                | 22.16       | H   | 5.0          |
| 7812.000000     | 48.46                  | 74.00                | 25.54       | H   | 7.8          |
| 11088.000000    | 50.11                  | 74.00                | 23.89       | V   | 11.6         |
| 13820.500000    | 51.34                  | 74.00                | 22.66       | H   | 13.0         |
| 16838.000000    | 58.27                  | 74.00                | 15.73       | H   | 19.2         |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3257.000000     | 33.85                  | 54.00                | 20.15       | H   | -0.2         |
| 5485.500000     | 38.35                  | 54.00                | 15.65       | H   | 5.0          |
| 7812.000000     | 35.36                  | 54.00                | 18.64       | H   | 7.8          |
| 11088.000000    | 37.55                  | 54.00                | 16.45       | V   | 11.6         |
| 13820.500000    | 39.30                  | 54.00                | 14.70       | H   | 13.0         |
| 16838.000000    | 45.60                  | 54.00                | 8.40        | H   | 19.2         |

**802.11-VHT40 CH6 (1GHz-18GHz)**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3188.000000     | 46.65                  | 74.00                | 27.35       | H   | -0.1         |
| 5447.500000     | 50.80                  | 74.00                | 23.21       | V   | 5.4          |
| 8412.500000     | 46.99                  | 74.00                | 27.01       | H   | 7.7          |
| 11890.000000    | 51.15                  | 74.00                | 22.85       | H   | 12.7         |
| 15155.000000    | 54.05                  | 74.00                | 19.95       | H   | 15.0         |
| 17947.000000    | 59.10                  | 74.00                | 14.90       | H   | 21.8         |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 3188.000000     | 33.96                  | 54.00                | 20.04       | H   | -0.1         |
| 5447.500000     | 38.65                  | 54.00                | 15.35       | V   | 5.4          |
| 8412.500000     | 34.48                  | 54.00                | 19.52       | H   | 7.7          |
| 11890.000000    | 39.13                  | 54.00                | 14.87       | H   | 12.7         |
| 15155.000000    | 41.47                  | 54.00                | 12.53       | H   | 15.0         |
| 17947.000000    | 46.62                  | 54.00                | 7.38        | H   | 21.8         |

**802.11ax-HE40 CH6 (1GHz-18GHz)**

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 13811.500000    | 50.99                  | 74.00                | 23.01       | V   | 13.1         |
| 14289.500000    | 51.66                  | 74.00                | 22.34       | H   | 14.1         |
| 14921.500000    | 52.67                  | 74.00                | 21.33       | H   | 14.9         |
| 15643.000000    | 54.98                  | 74.00                | 19.02       | V   | 15.1         |
| 16551.500000    | 56.64                  | 74.00                | 17.36       | H   | 18.9         |
| 17435.000000    | 58.56                  | 74.00                | 15.44       | H   | 20.9         |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|----------------------|-------------|-----|--------------|
| 13811.500000    | 39.21                  | 54.00                | 14.79       | V   | 13.1         |
| 14289.500000    | 39.39                  | 54.00                | 14.61       | H   | 14.1         |
| 14921.500000    | 40.23                  | 54.00                | 13.77       | H   | 14.9         |
| 15643.000000    | 41.76                  | 54.00                | 12.24       | V   | 15.1         |
| 16551.500000    | 44.46                  | 54.00                | 9.54        | H   | 18.9         |
| 17435.000000    | 45.81                  | 54.00                | 8.19        | H   | 20.9         |

**Note:**

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and Antenna Factor, the gain of the preamplifier, the cable loss.  $P_{Mea}$  is the field strength recorded from the instrument. The measurement results are obtained as described below:

Result=  $P_{Mea}$  + Cable Loss + Antenna Factor-Gain of the preamplifier.

**See below for test graphs.**

**Conclusion: PASS**

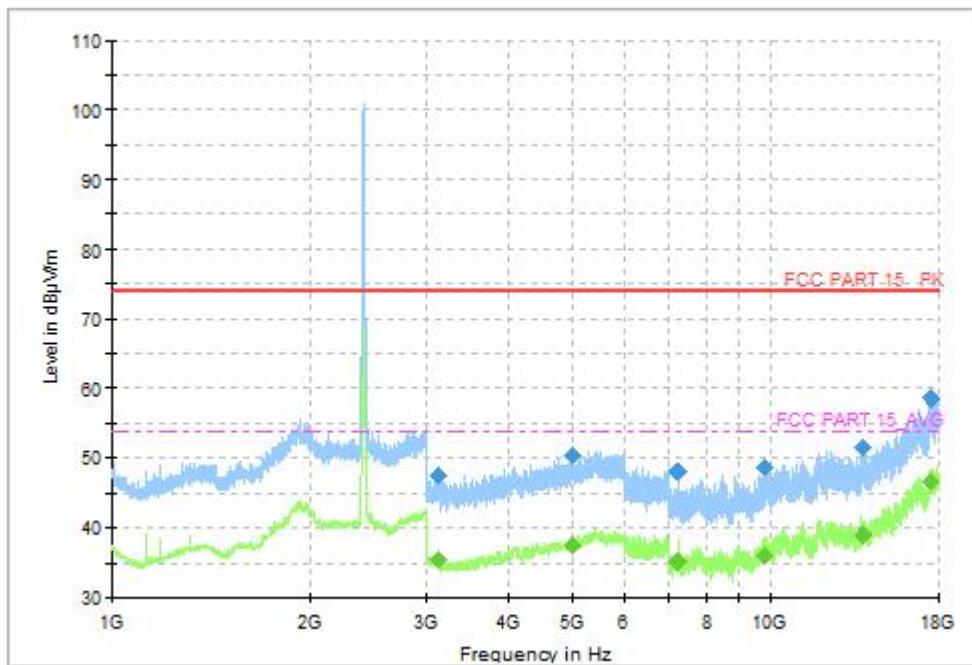


Fig.39 Radiated Spurious Emission (802.11n-HT20, CH1, 1GHz-18GHz, MIMO)

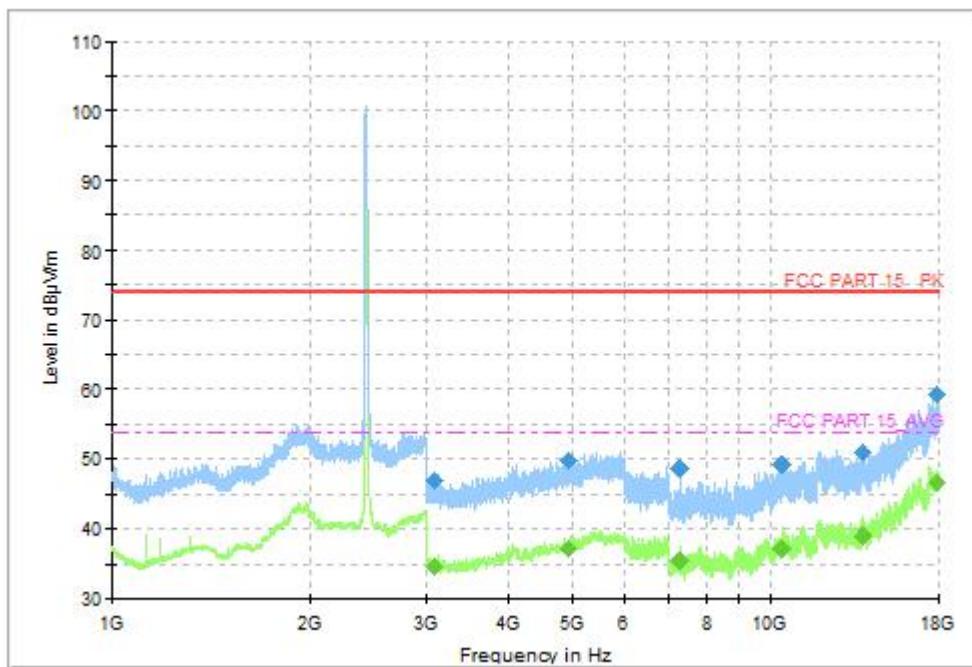
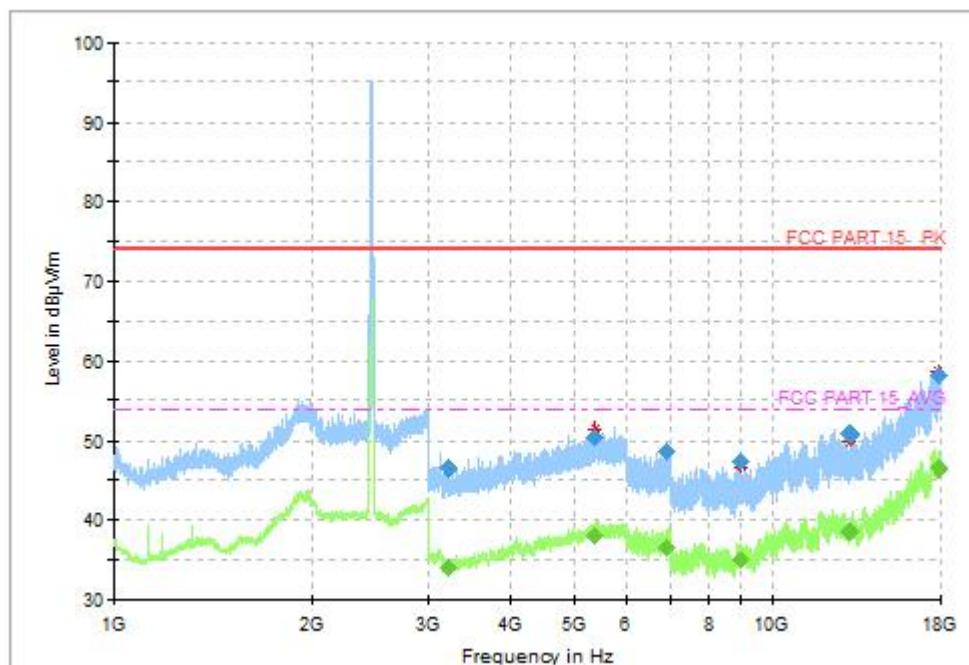
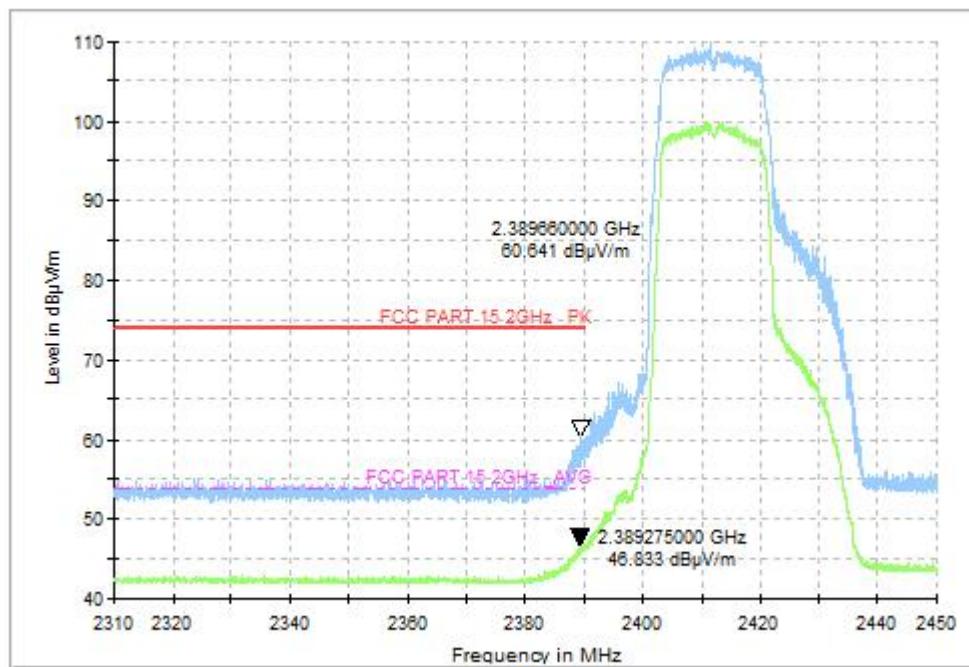


Fig.40 Radiated Spurious Emission (802.11n-HT20, CH6, 1GHz-18GHz, MIMO)



**Fig.41 Radiated Spurious Emission (802.11n-HT20, CH11, 1GHz-18GHz, MIMO)**



**Fig.42 Radiated Restricted Band (802.11n-HT20, CH1, 2.38GHz~2.45GHz, MIMO)**

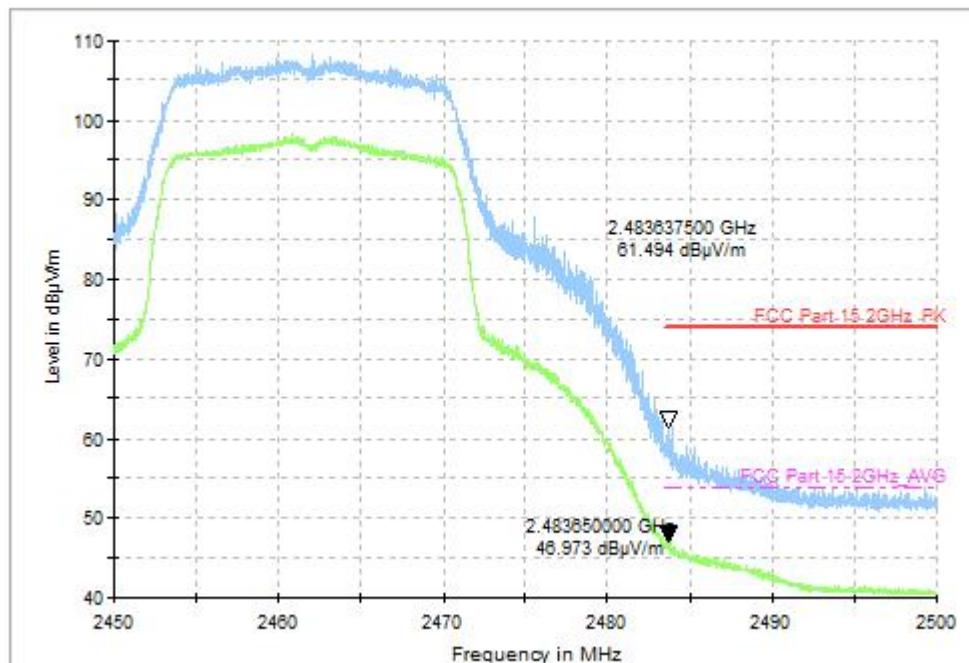


Fig.43 Radiated Restricted Band (802.11n-HT20, CH11, 2.45GHz~2.50GHz, MIMO)

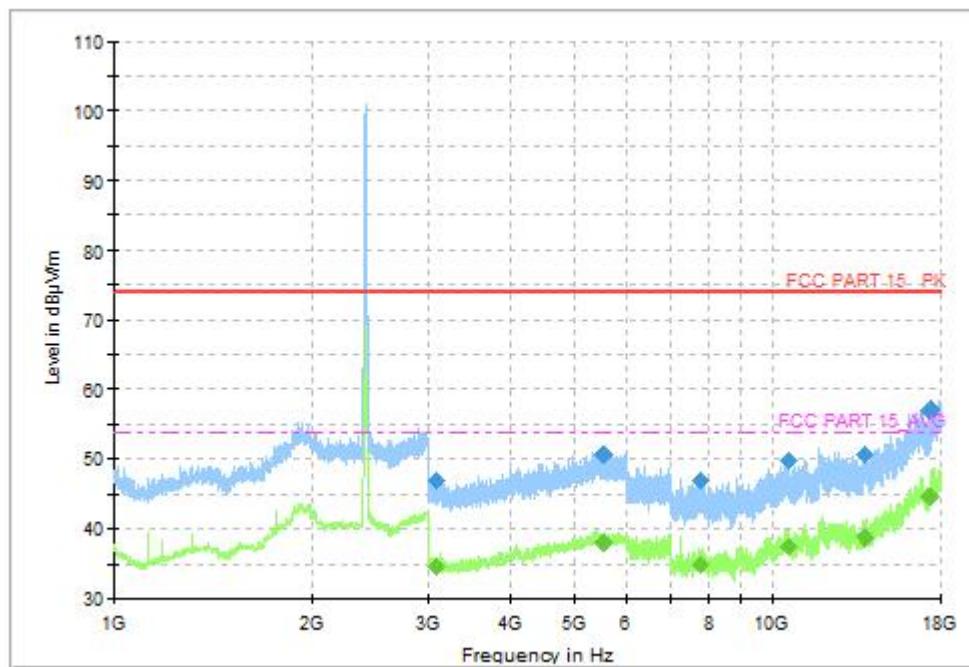


Fig.44 Radiated Spurious Emission (802.11-VHT20, CH1, 1GHz-18GHz, MIMO)

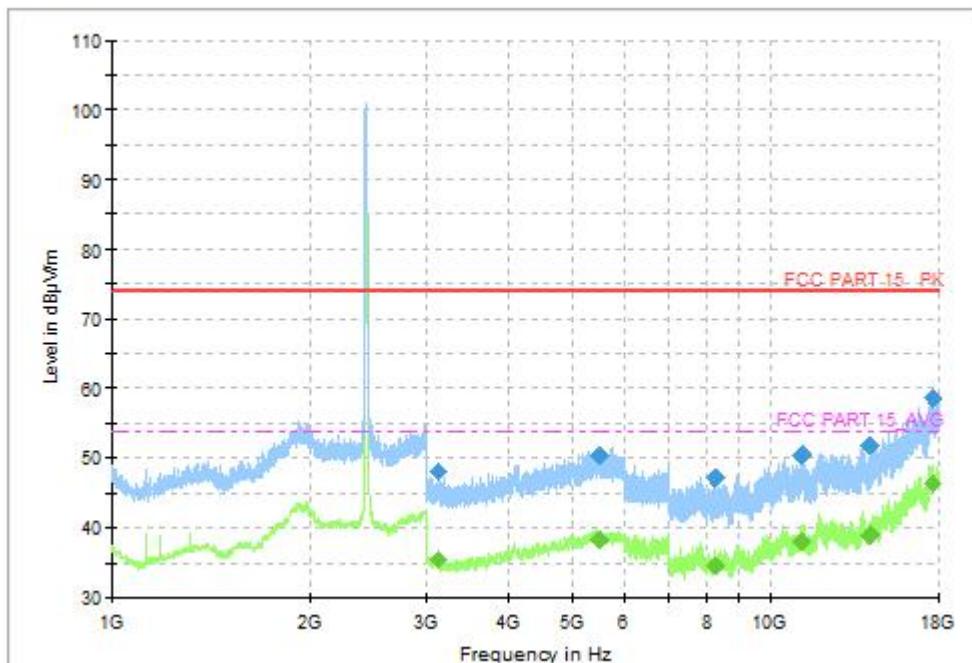


Fig.45 Radiated Spurious Emission (802.11-VHT20, CH6, 1GHz-18GHz, MIMO)

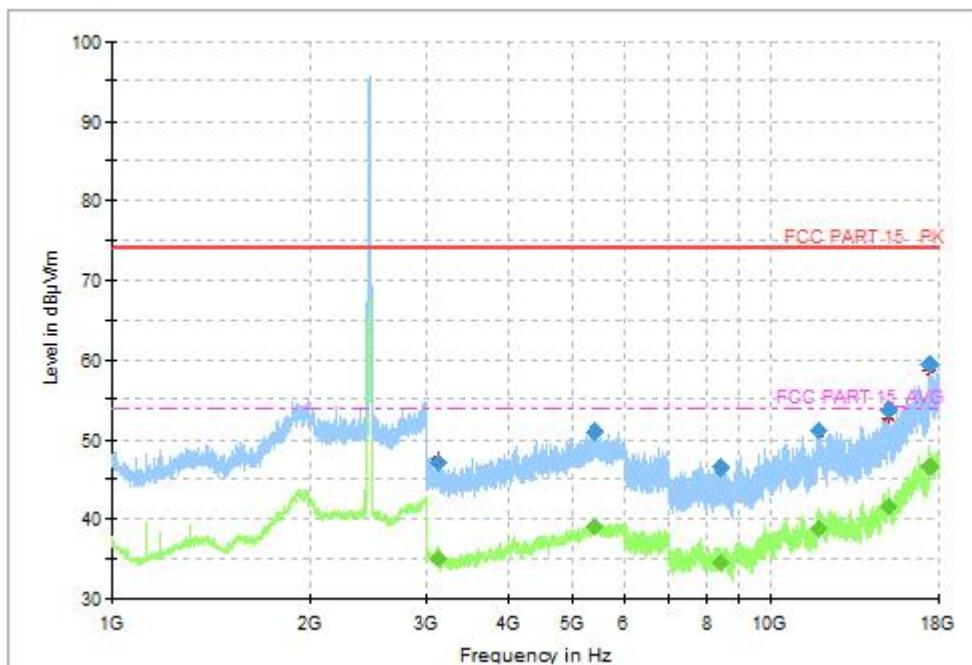


Fig.46 Radiated Spurious Emission (802.11-VHT20, CH11, 1GHz-18GHz, MIMO)

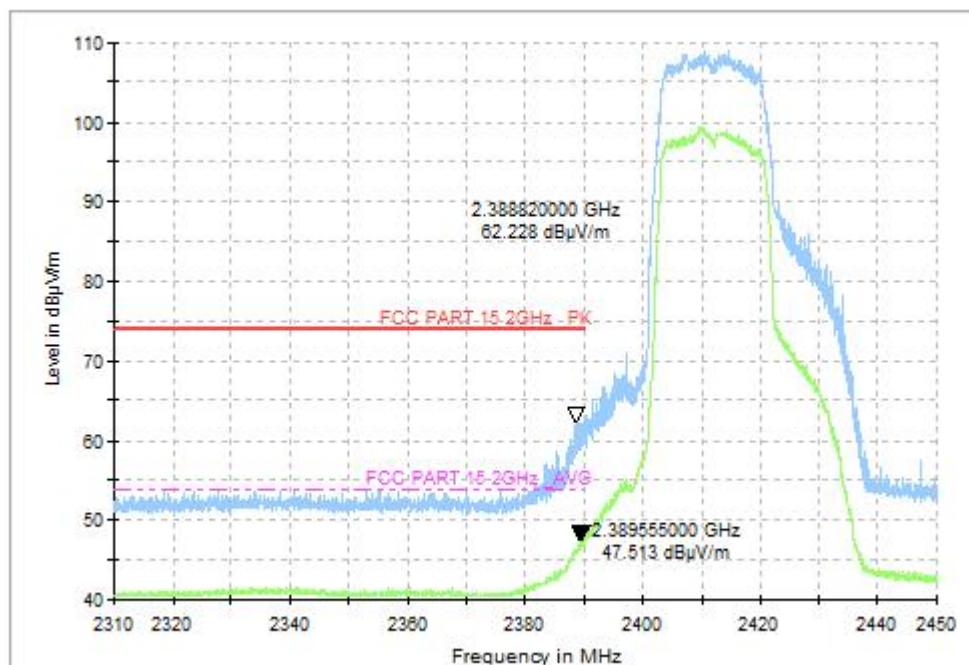


Fig.47 Radiated Restricted Band (802.11-VHT20, CH1, 2.38GHz~2.45GHz, MIMO)

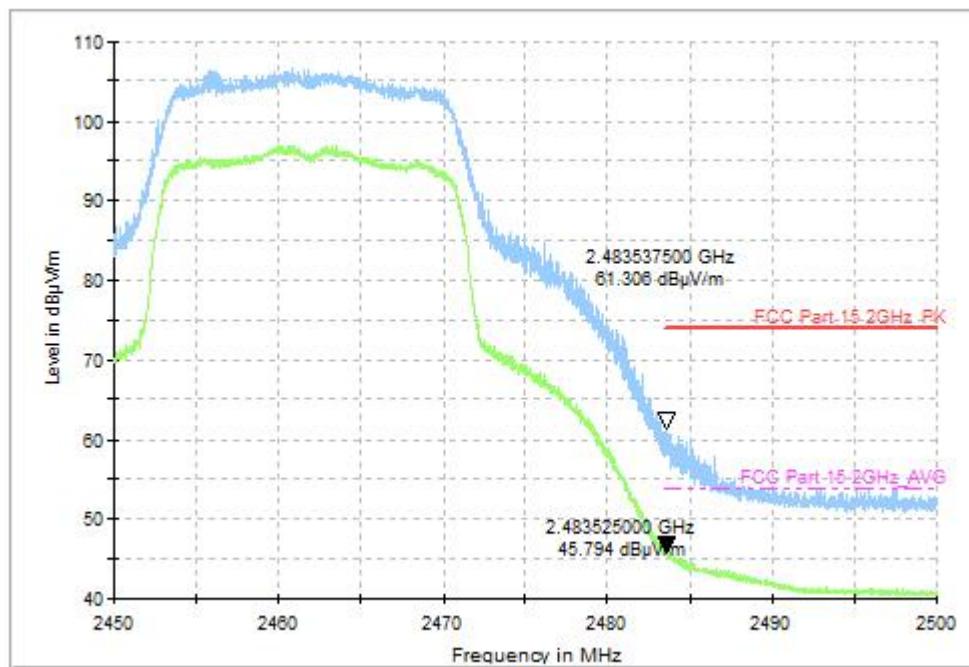
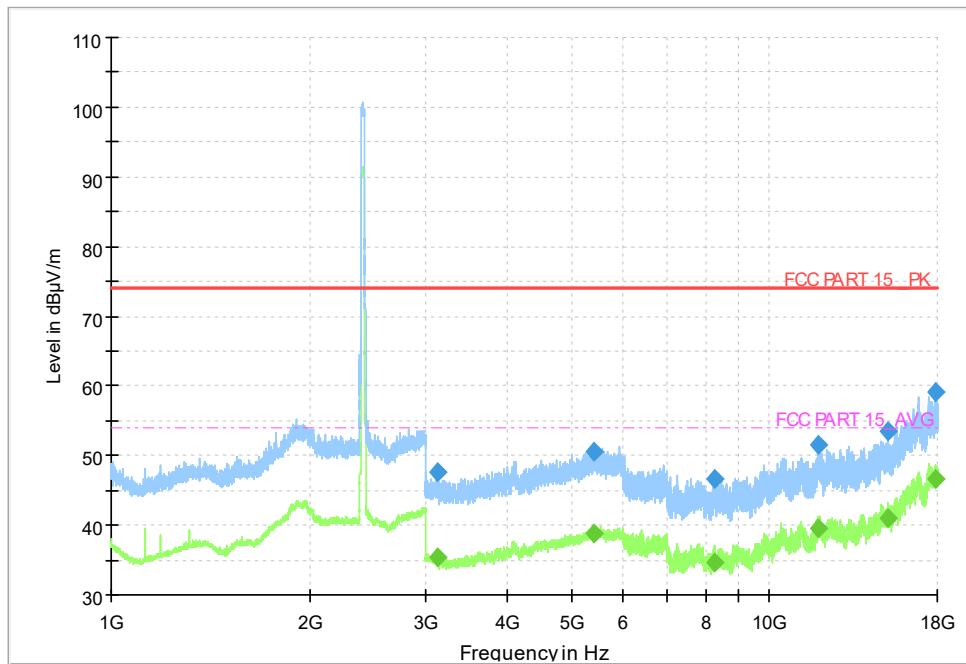
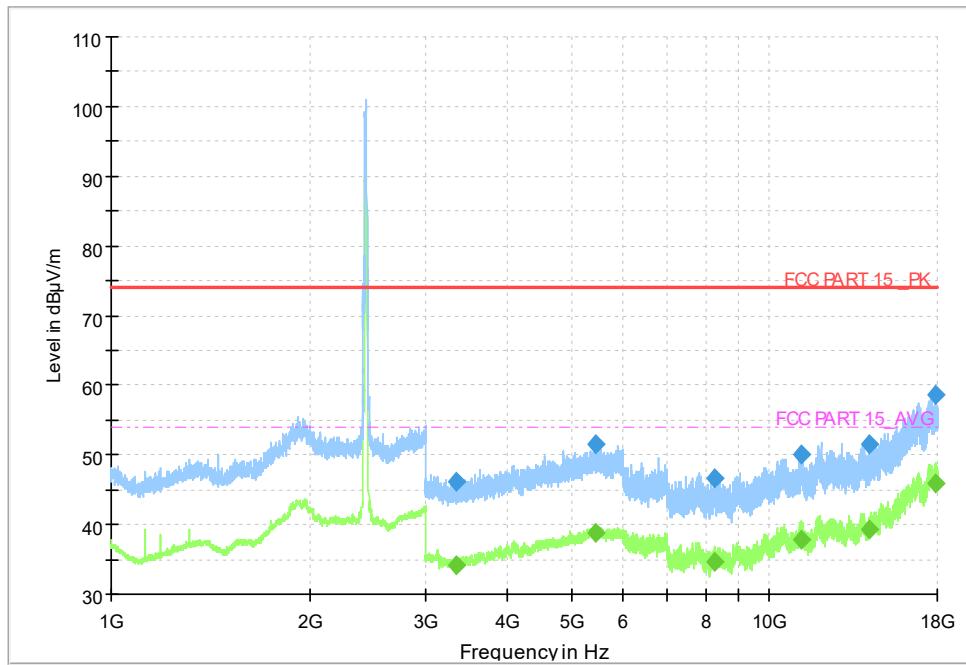


Fig.48 Radiated Restricted Band (802.11-VHT20, CH11, 2.45GHz~2.50GHz, MIMO)



**Fig.49 Radiated Spurious Emission (802.11ax-HE20, CH1, 1GHz-18GHz, MIMO)**



**Fig.50 Radiated Spurious Emission (802.11ax-HE20, CH6, 1GHz-18GHz, MIMO)**

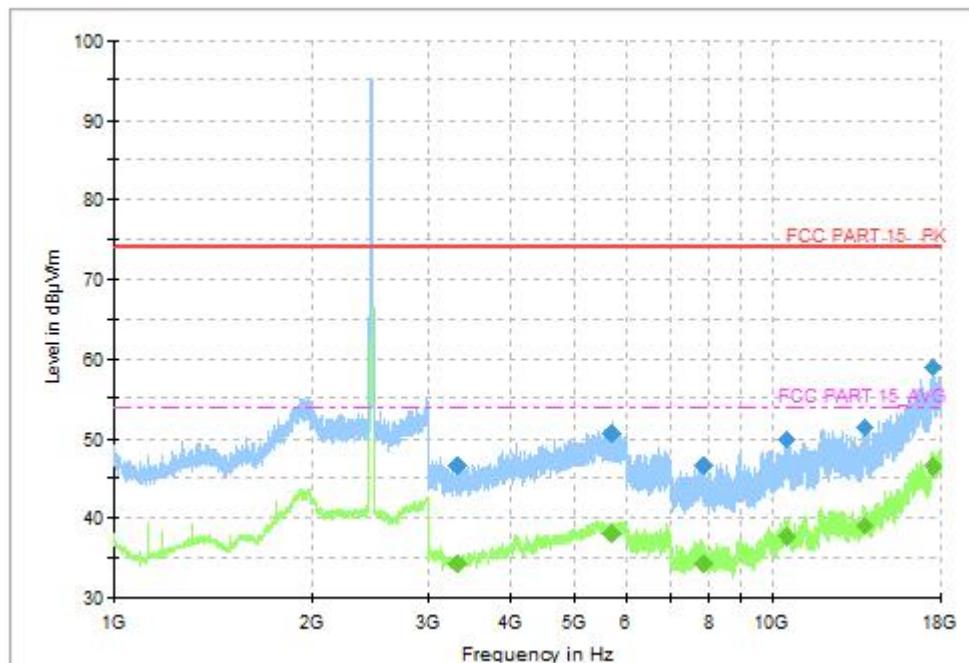


Fig.51 Radiated Spurious Emission (802.11ax-HE20, CH11, 1GHz-18GHz, MIMO)

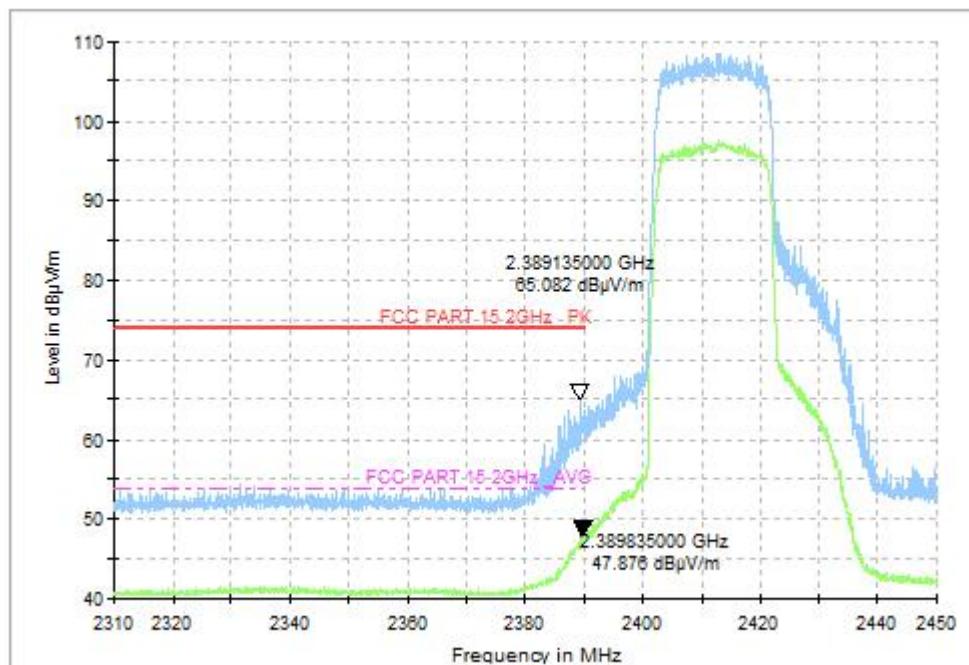


Fig.52 Radiated Restricted Band (802.11ax-HE20, CH1, 2.38GHz~2.45GHz, MIMO)

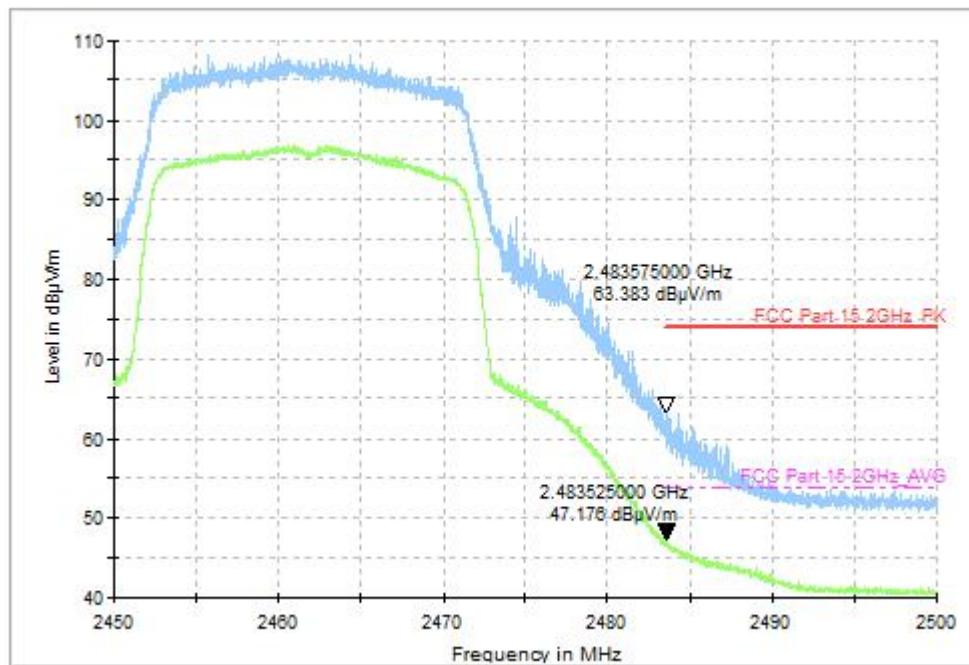


Fig.53 Radiated Restricted Band (802.11ax-HE20, CH11, 2.45GHz~2.50GHz, MIMO)

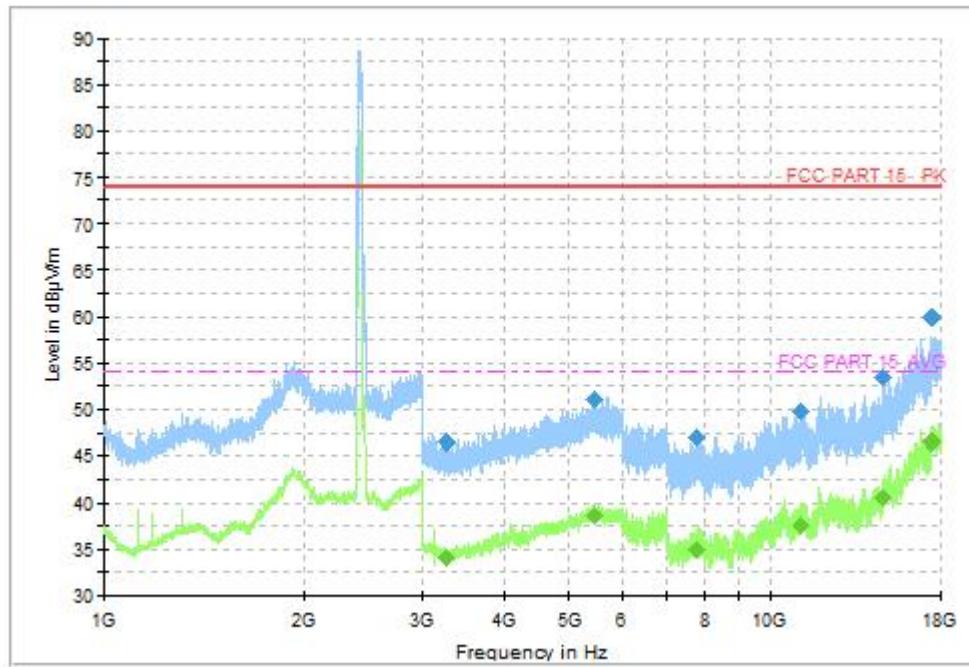


Fig.54 Radiated Spurious Emission (802.11n-HT40, CH3, 1GHz-18GHz, MIMO)

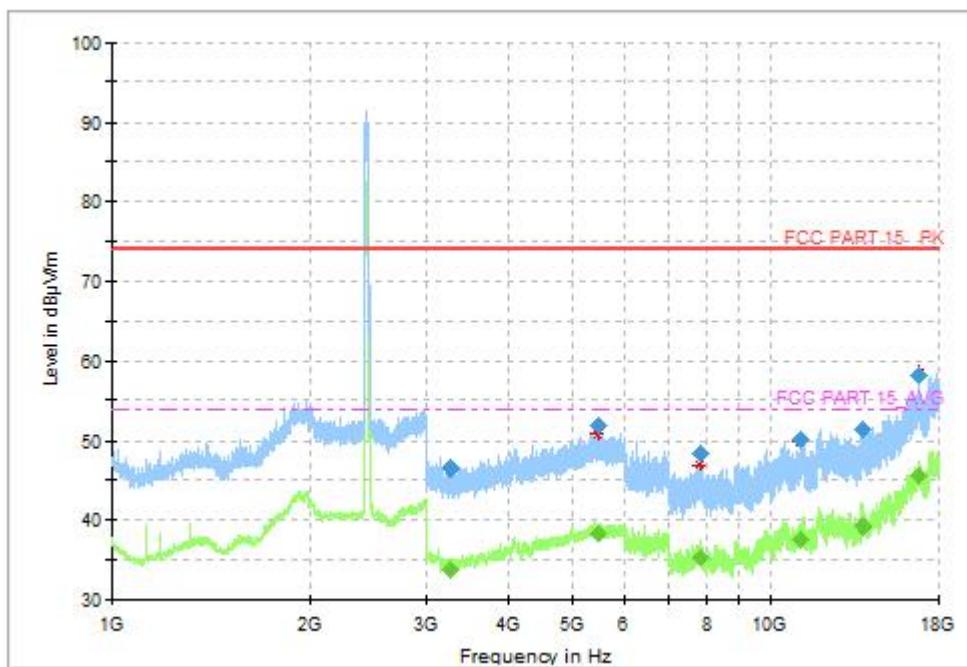


Fig.55 Radiated Spurious Emission (802.11n-HT40, CH6, 1GHz-18GHz, MIMO)

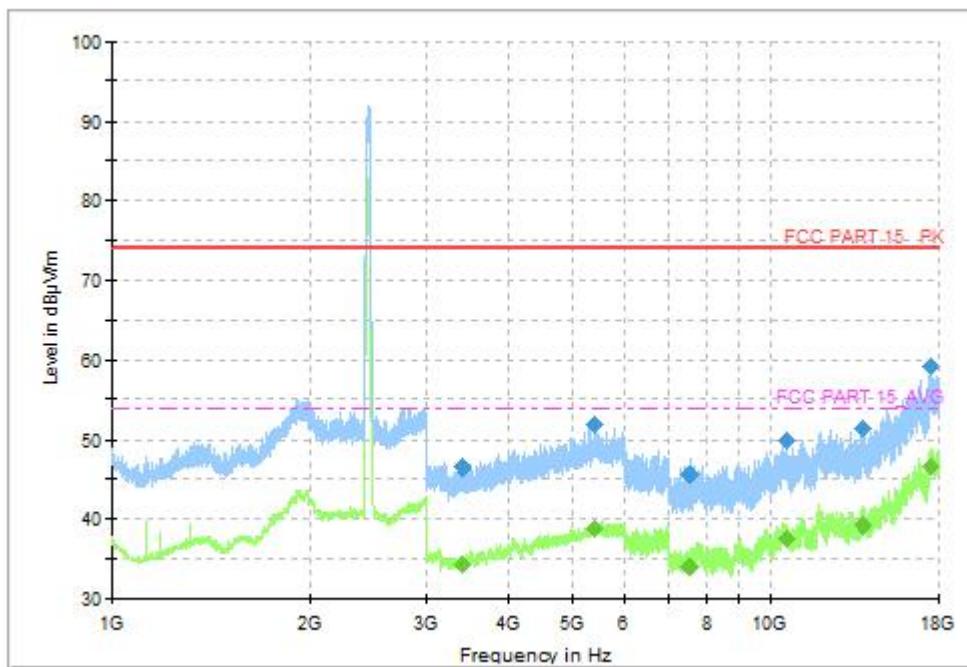


Fig.56 Radiated Spurious Emission (802.11n-HT40, CH9, 1GHz-18GHz, MIMO)

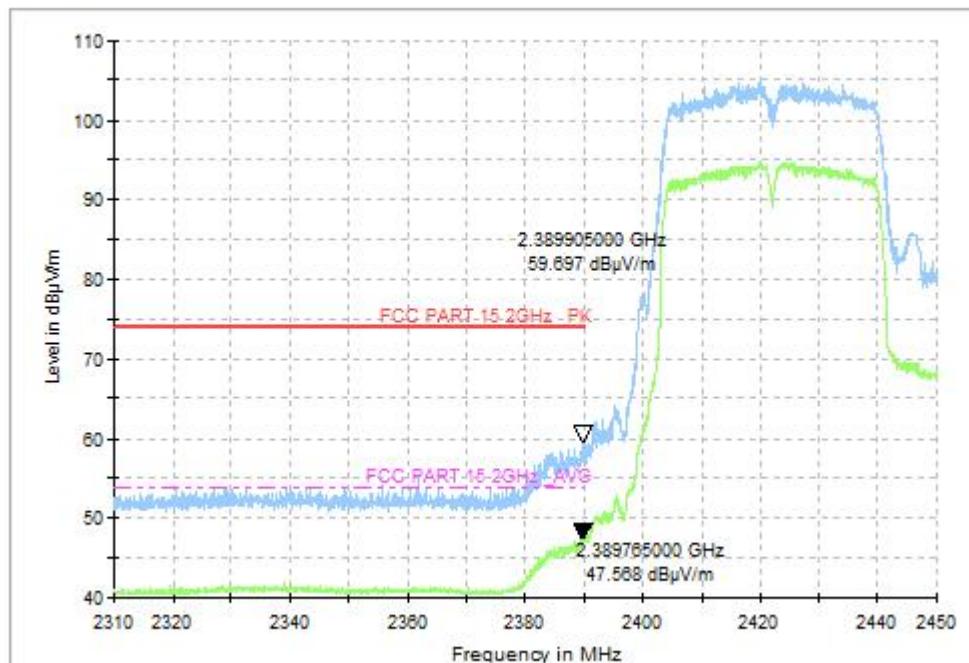


Fig.57 Radiated Restricted Band (802.11n-HT40, CH3, 2.38GHz~2.45GHz, MIMO)

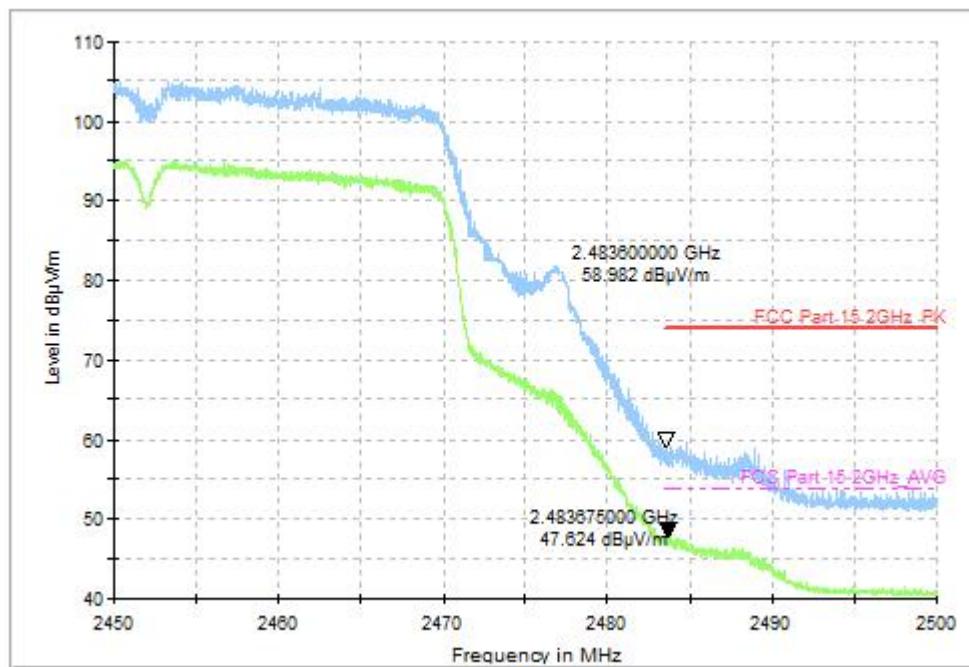


Fig.58 Radiated Restricted Band (802.11n-HT40, CH9, 2.45GHz~2.50GHz, MIMO)

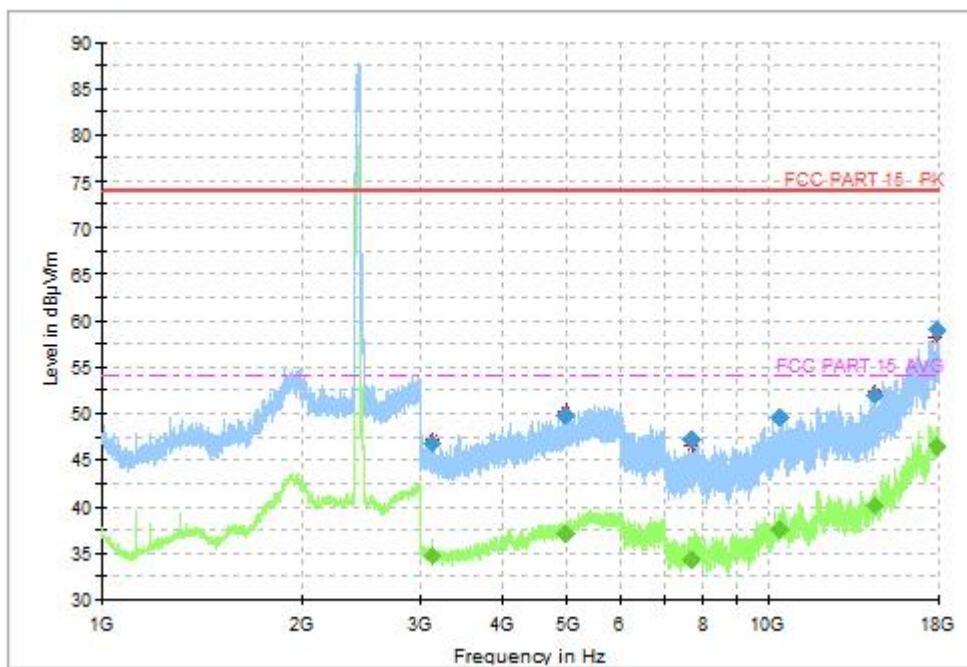


Fig.59 Radiated Spurious Emission (802.11-VHT40, CH3, 1GHz-18GHz, MIMO)

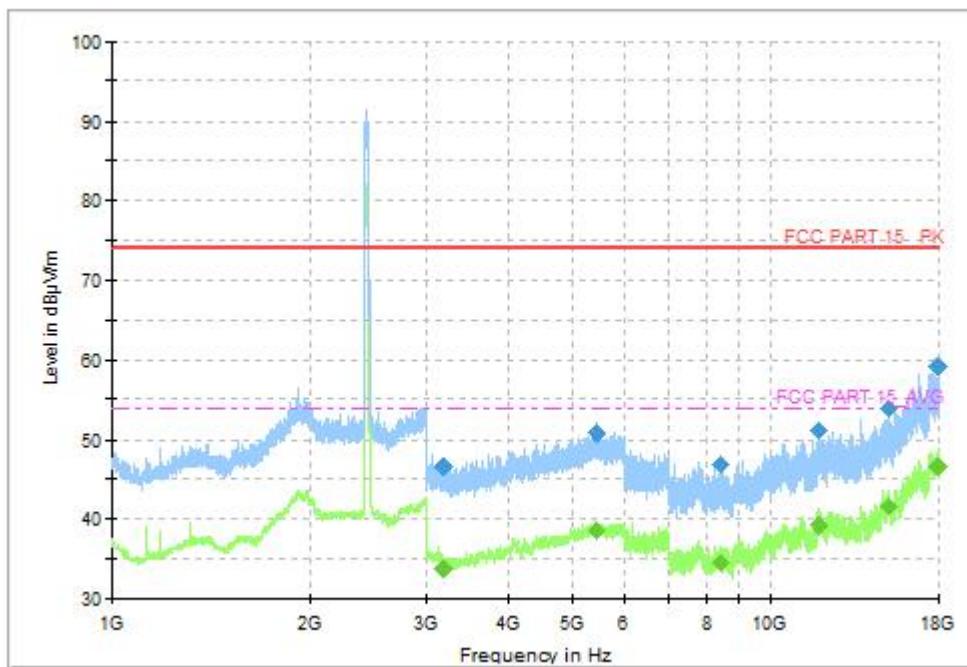


Fig.60 Radiated Spurious Emission (802.11-VHT40, CH6, 1GHz-18GHz, MIMO)

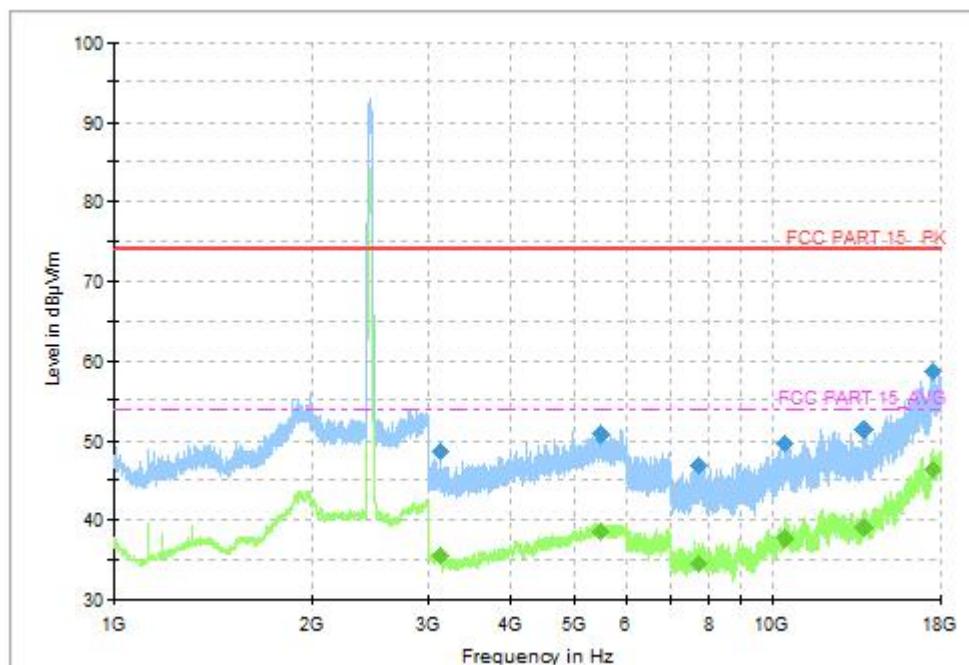


Fig.61 Radiated Spurious Emission (802.11-VHT40, CH9, 1GHz-18GHz, MIMO)

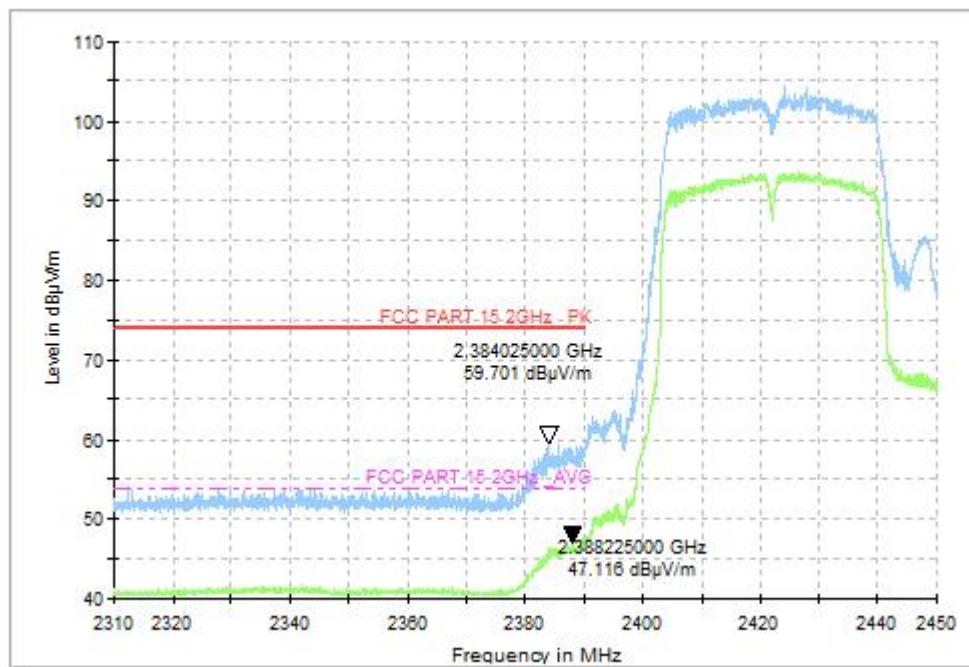


Fig.62 Radiated Restricted Band (802.11-VHT40, CH3, 2.38GHz~2.45GHz, MIMO)

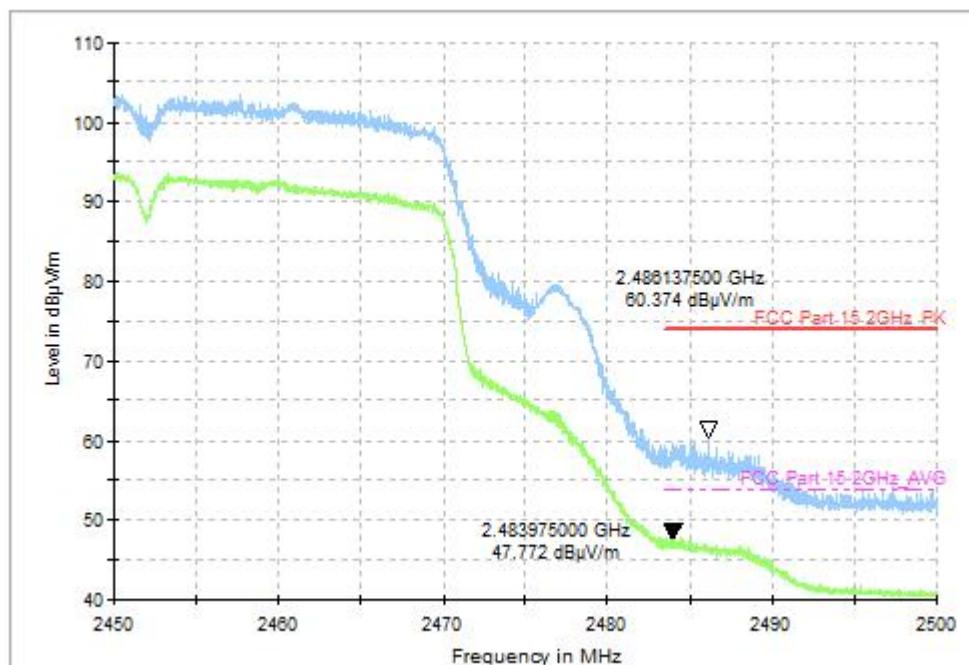


Fig.63 Radiated Restricted Band (802.11-VHT40, CH9, 2.45GHz~2.50GHz, MIMO)

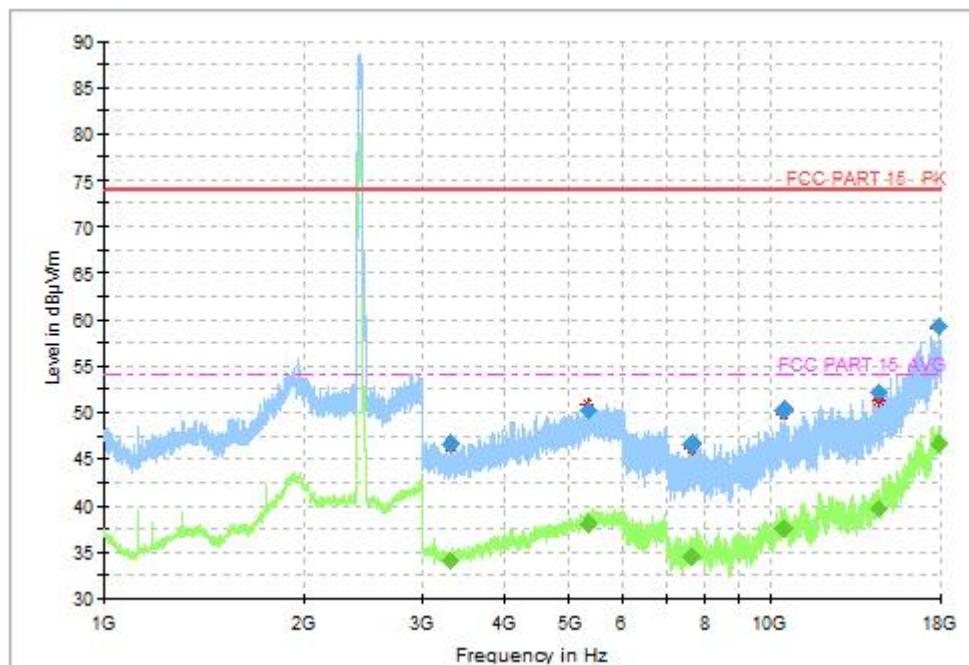


Fig.64 Radiated Spurious Emission (802.11ax-HE40, CH3, 1GHz-18GHz, MIMO)

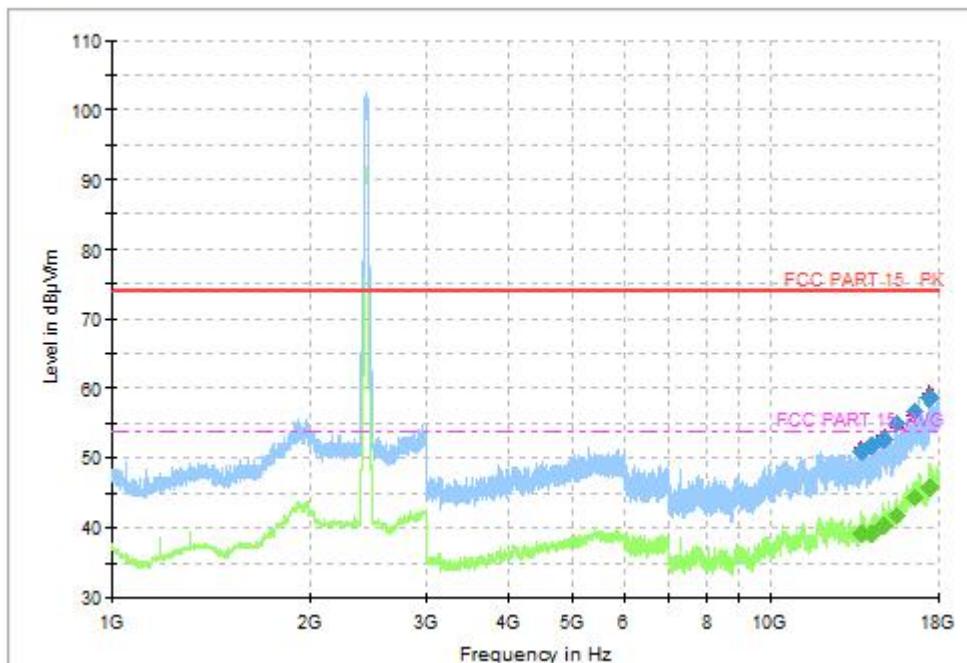


Fig.65 Radiated Spurious Emission (802.11ax-HE40, CH6, 1GHz-18GHz, MIMO)

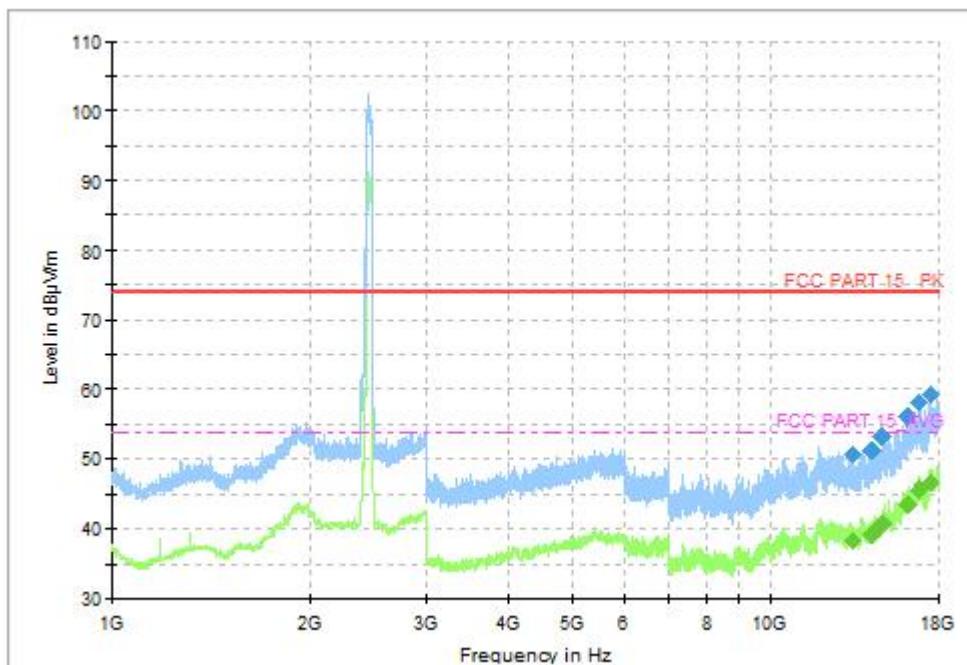


Fig.66 Radiated Spurious Emission (802.11ax-HE40, CH9, 1GHz-18GHz, MIMO)

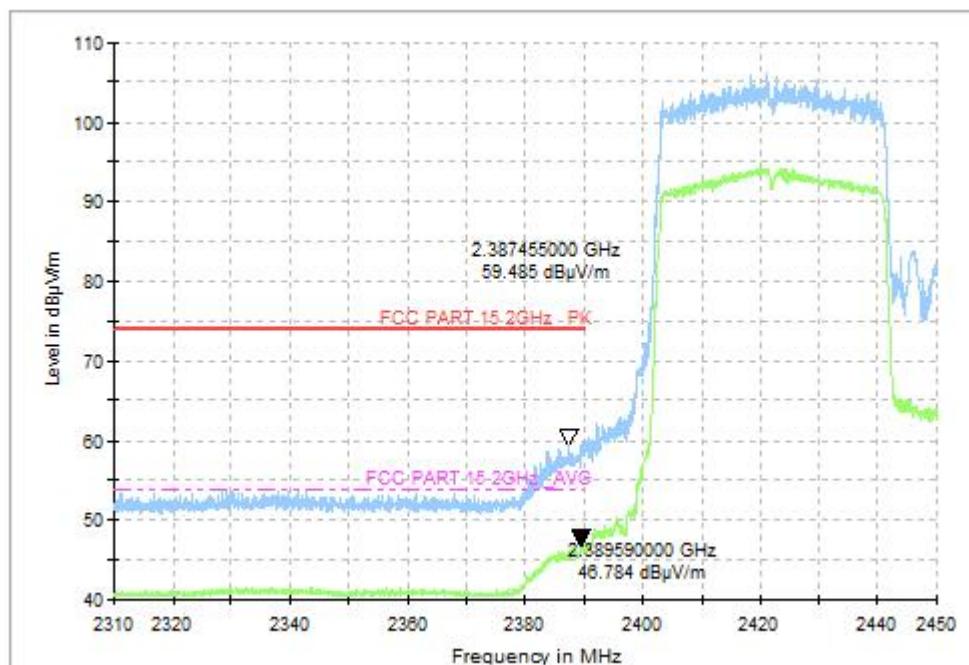


Fig.67 Radiated Restricted Band (802.11ax-HE40, CH3, 2.38GHz~2.45GHz, MIMO)

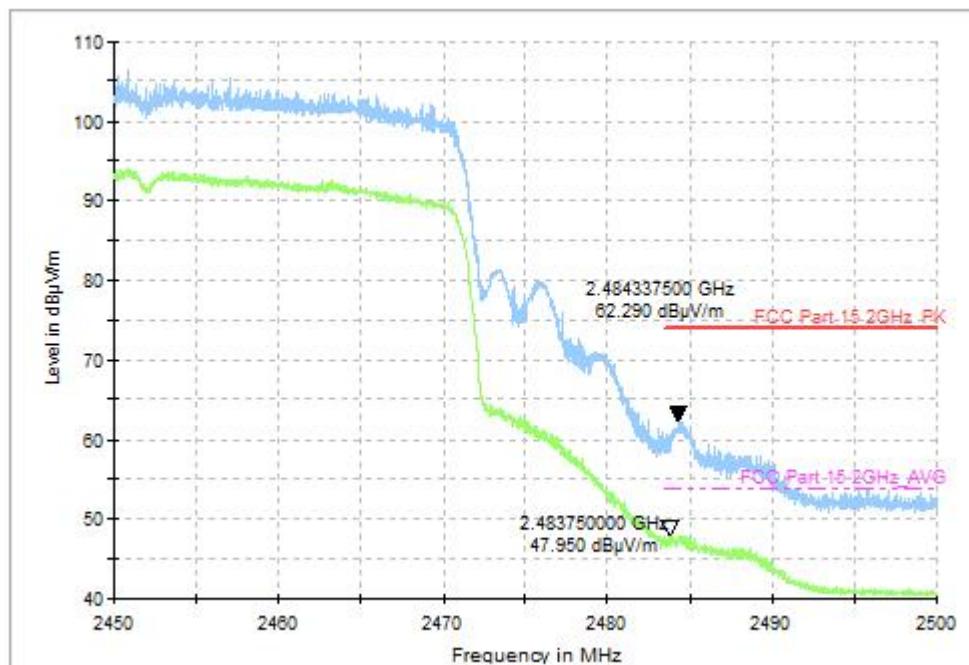
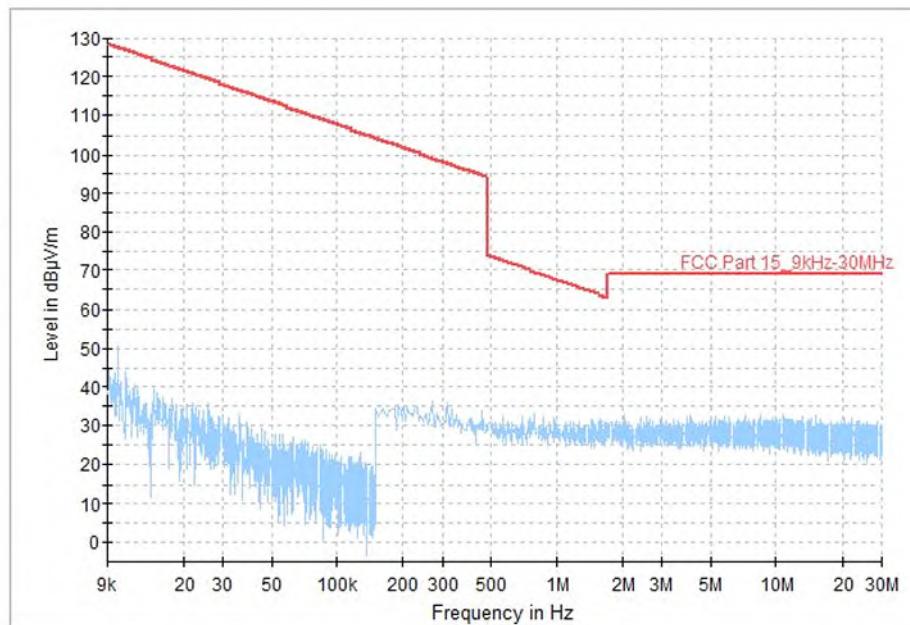
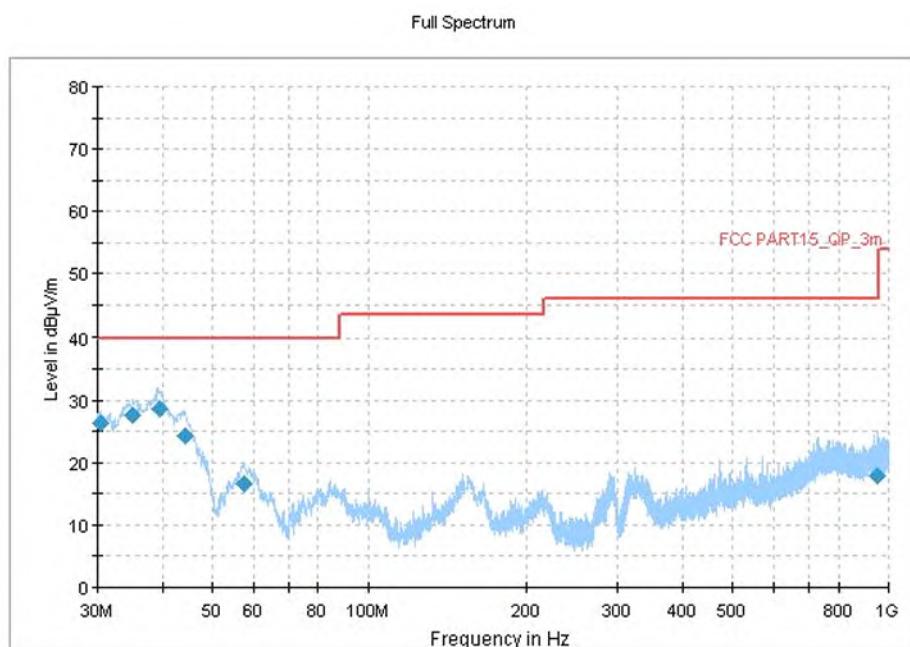


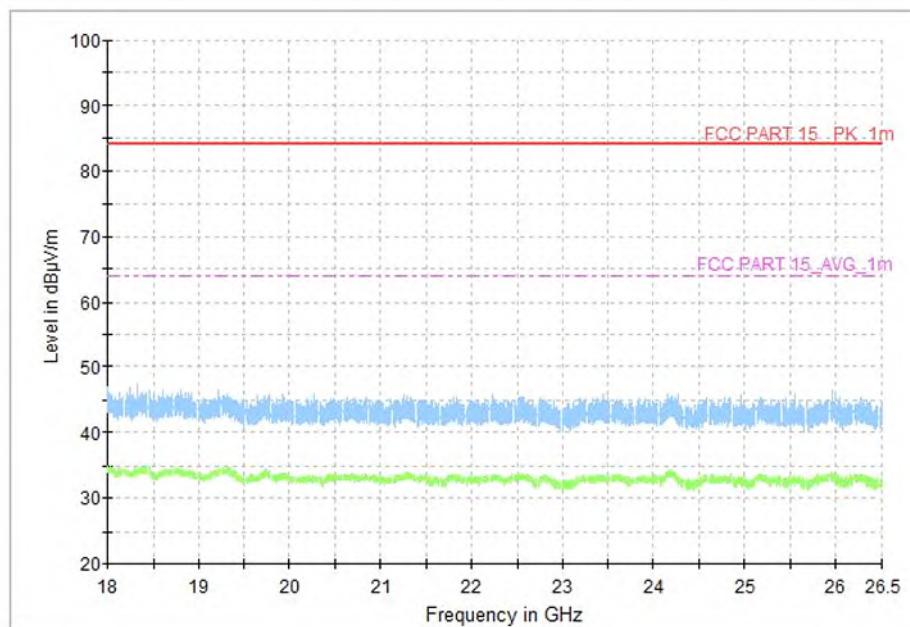
Fig.68 Radiated Restricted Band (802.11ax-HE40, CH9, 2.45GHz~2.50GHz, MIMO)



**Fig.69 Radiated Spurious Emission (All Channels, 9kHz-30MHz, MIMO)**



**Fig.70 Radiated Spurious Emission (All Channels, 30MHz-1GHz, MIMO)**



**Fig.71 Radiated Spurious Emission (All Channels, 18GHz-26.5GHz, MIMO)**



### A.7 AC Power line Conducted Emission

**Method of Measurement: See ANSI C63.10-clause 6.2**

**Test Condition:**

| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 120         | 60             |

**Measurement Result and limit:**

| Frequency range (MHz) | Quasi-peak Limit (dB $\mu$ V) | Average-peak Limit (dB $\mu$ V) | Result (dB $\mu$ V) |        | Conclusion |
|-----------------------|-------------------------------|---------------------------------|---------------------|--------|------------|
|                       |                               |                                 | Traffic             | Idle   |            |
| 0.15 to 0.5           | 66 to 56                      | 56 to 46                        | Fig.72              | Fig.73 | P          |
| 0.5 to 5              | 56                            | 46                              |                     |        |            |
| 5 to 30               | 60                            | 50                              |                     |        |            |

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

**Note:** The measurement results include the L1 and N measurements.

**See below for test graphs.**

**Conclusion: PASS**

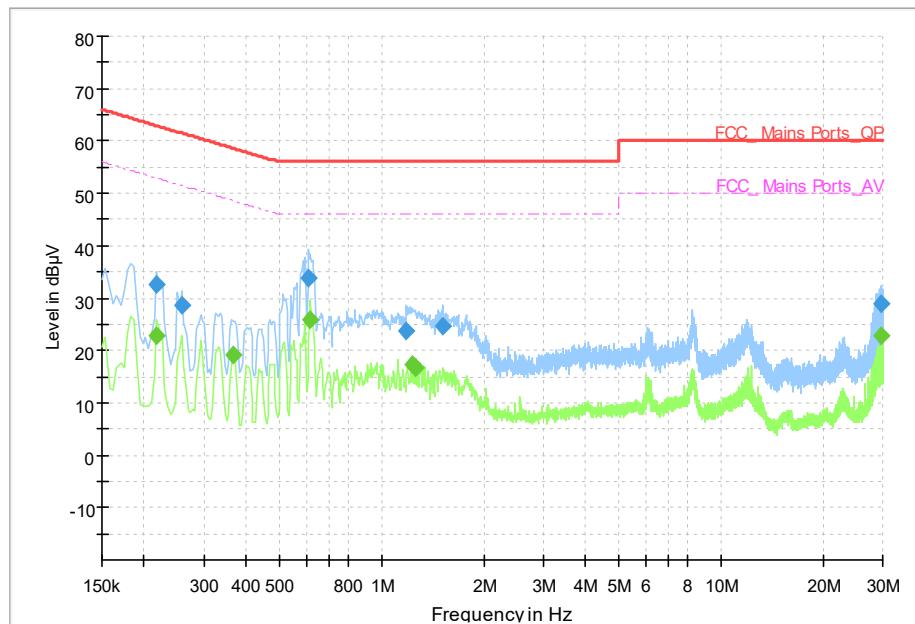


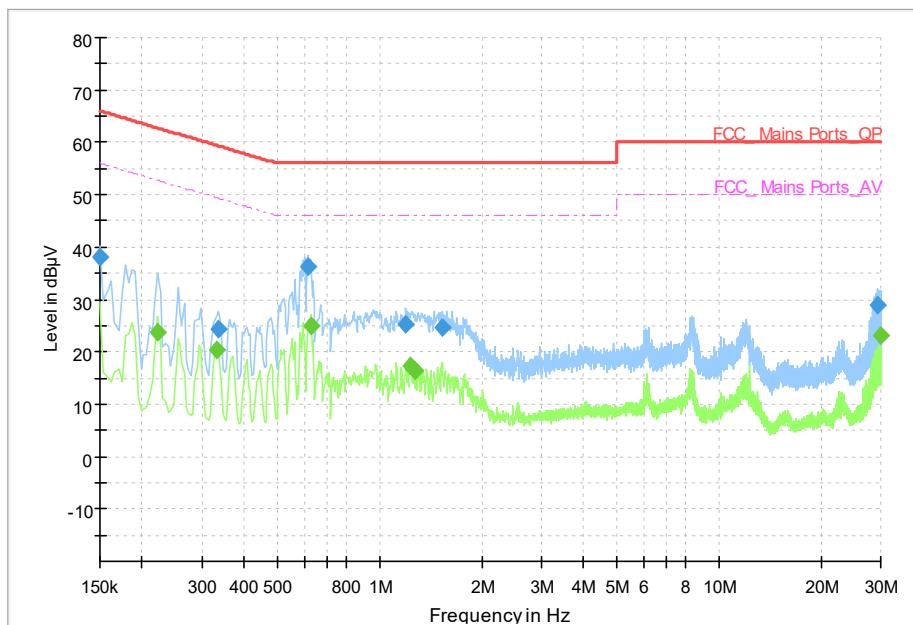
Fig.72 AC Power line Conducted Emission (Traffic)

## Measurement Results: Quasi Peak

| Frequency (MHz) | Quasi Peak (dB $\mu$ V) | Limit (dB $\mu$ V) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------------|--------------------|-------------|------|--------|------------|
| 0.218000        | 32.49                   | 62.90              | 30.41       | L1   | ON     | 10         |
| 0.258000        | 28.64                   | 61.50              | 32.86       | N    | ON     | 10         |
| 0.610000        | 33.68                   | 56.00              | 22.32       | N    | ON     | 10         |
| 1.186000        | 23.80                   | 56.00              | 32.20       | L1   | ON     | 10         |
| 1.518000        | 24.57                   | 56.00              | 31.43       | N    | ON     | 10         |
| 29.774000       | 29.00                   | 60.00              | 31.00       | L1   | ON     | 10         |

## Measurement Results: Average

| Frequency (MHz) | Quasi Peak (dB $\mu$ V) | Limit (dB $\mu$ V) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------------|--------------------|-------------|------|--------|------------|
| 0.218000        | 22.74                   | 52.90              | 30.16       | L1   | ON     | 10         |
| 0.366000        | 19.09                   | 48.59              | 29.50       | N    | ON     | 10         |
| 0.618000        | 26.00                   | 46.00              | 20.00       | N    | ON     | 10         |
| 1.234000        | 17.17                   | 46.00              | 28.83       | L1   | ON     | 10         |
| 1.266000        | 16.65                   | 46.00              | 29.35       | L1   | ON     | 10         |
| 29.578000       | 22.70                   | 50.00              | 27.30       | L1   | ON     | 10         |



**Fig.73 AC Power line Conducted Emission (Idle)**

**Measurement Results: Quasi Peak**

| Frequency (MHz) | Quasi Peak (dB $\mu$ V) | Limit (dB $\mu$ V) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------------|--------------------|-------------|------|--------|------------|
| 0.150000        | 38.13                   | 66.00              | 27.87       | L1   | ON     | 10         |
| 0.334000        | 24.21                   | 59.35              | 35.14       | N    | ON     | 10         |
| 0.614000        | 36.37                   | 56.00              | 19.63       | N    | ON     | 10         |
| 1.198000        | 25.25                   | 56.00              | 30.75       | N    | ON     | 10         |
| 1.526000        | 24.67                   | 56.00              | 31.33       | N    | ON     | 10         |
| 29.282000       | 28.95                   | 60.00              | 31.05       | N    | ON     | 10         |

**Measurement Results: Average**

| Frequency (MHz) | Quasi Peak (dB $\mu$ V) | Limit (dB $\mu$ V) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------------|--------------------|-------------|------|--------|------------|
| 0.222000        | 23.70                   | 52.74              | 29.05       | L1   | ON     | 10         |
| 0.330000        | 20.34                   | 49.45              | 29.11       | N    | ON     | 10         |
| 0.626000        | 25.00                   | 46.00              | 21.00       | N    | ON     | 10         |
| 1.234000        | 17.31                   | 46.00              | 28.69       | L1   | ON     | 10         |
| 1.270000        | 16.46                   | 46.00              | 29.54       | L1   | ON     | 10         |
| 29.874000       | 23.02                   | 50.00              | 26.98       | N    | ON     | 10         |

\*\*\*END OF REPORT\*\*\*