



**FCC PART 15C  
TEST REPORT  
No. I16Z40476-EMC04**

**for**

**OnePlus Technology(Shenzhen) Co., Ltd.**

**Mobile Phone**

**Model name: ONEPLUS A3000**

**With**

**FCC ID: 2ABZ2-A3000**

**Hardware Version: 16**

**Software Version: Qxygen OS 3.1.0**

**Issued Date: 2016-05-05**



**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 CTTL.

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## **REPORT HISTORY**

| <b>Report Number</b> | <b>Revision</b> | <b>Description</b> | <b>Issue Date</b> |
|----------------------|-----------------|--------------------|-------------------|
| I16Z40476-EMC04      | Rev.0           | 1st edition        | 2016-05-05        |

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## 1. TEST LATORATORY

### 1.1. Testing Location

#### Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,  
P. R. China 100191

#### Location 4: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology  
Development Area, Beijing, P. R. China 100176

### 1.2. Testing Environment

Normal Temperature: 15-35°C


Relative Humidity: 20-75%

### 1.3. Project data

Testing Start Date: 2016-04-20

Testing End Date: 2016-05-04

### 1.4. Signature



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Wang Junqing  
(Prepared this test report)



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Qu Pengfei  
(Reviewed this test report)



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Liu Baodian  
Deputy Director of the laboratory  
(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1. Applicant Information**

Company Name: OnePlus Technology(Shenzhen) Co., Ltd.  
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### **2.2. Manufacturer Information**

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Country: China  
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Contact Email: keyoujiang@oneplus.cn  
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Fax: /

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

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

|                      |                           |
|----------------------|---------------------------|
| Description          | Mobile Phone              |
| Model name           | ONEPLUS A3000             |
| FCC ID               | 2ABZ2-A3000               |
| WLAN Frequency Range | ISM Band: 5725MHz~5850MHz |
| Type of modulation   | OFDM                      |

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, Academy of telecommunication Research, MIIT.

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

| <b>EUT ID*</b> | <b>IMEI</b>     | <b>HW Version</b> | <b>SW Version</b> |
|----------------|-----------------|-------------------|-------------------|
| EUT3           | 860152030018277 | 16                | Qxygen OS 3.1.0   |

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

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

| <b>AE ID*</b> | <b>Description</b> | <b>Type</b> | <b>Note</b>  |
|---------------|--------------------|-------------|--------------|
| AE1           | Battery            | /           | inbuilt      |
| AE2           | USB cable          | /           | 1640476DC001 |
| AE3           | Travel charger     | /           | 1640476CH002 |

##### **AE1**

|                 |     |
|-----------------|-----|
| Model           | /   |
| Manufacturer    | /   |
| Capacitance     | mAh |
| Nominal voltage | V   |

##### **AE2**

|                 |       |
|-----------------|-------|
| Model           | /     |
| Manufacturer    | /     |
| Length of cable | 105cm |

##### **AE3**

|                 |         |
|-----------------|---------|
| Model           | HK0504  |
| Manufacturer    | HUNTKEY |
| Length of cable | /       |

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





### 3.4. General Description

Equipment Under Test (EUT) is model of Mobile Phone with integrated antenna and inbuilt battery. It supports GSM 850/1900MHz bands, WCDMA Bands 2/4/5 and LTE FDD Band2/4/5/7/12/17/30 and LTE TDD Band41. It also supports GPRS service with multi-slots class 33 and EGPRS class33. The HSDPA, HSUPA, HSPA+ and DC-HSDPA services are also supported.

It has MP3, Camera, FM radio, USB, Bluetooth (EDR and LE), WLAN (802.11a/b/g/n/ac, 11n 20MHz and 40MHz, 11ac 20MHz, 40MHz and 80MHz) and GPS functions.

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

Samples undergoing test were selected by the Client.

### 3.5. EUT set-ups

| <b>EUT set-up No.</b> | <b>Combination of EUT and AE</b> | <b>Remarks</b> |
|-----------------------|----------------------------------|----------------|
| Set.2                 | EUT3+ AE1+ AE2 +AE3              | Charger        |



## **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.

|             |  |      |
|-------------|--|------|
|             | FCC CFR 47, Part 15:   |      |
| FCC Part15  | 15.205 Restricted bands of operation;<br>15.209 Radiated emission limits, general requirements;<br>15.407 General technical requirements.  | 2015 |
| ANSI C63.10 | Methods of Measurement of Radio-Noise Emissions from<br>Low-Voltage Electrical and Electronic Equipment in the<br>Range of 9 kHz to 40 GHz | 2013 |

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber SAC-2** (10 meters×6.7meters×6.1meters) did not exceed following limits along the EMC testing:

|   |   |
|---|---|
| Temperature                                     | Min. = 15 °C, Max. = 35 °C                        |
| Relative humidity                               | Min. = 15 %, Max. = 75 %                          |
| Shielding effectiveness                         | 0.014MHz - 1MHz, >60dB;<br>1MHz - 1000MHz, >90dB. |
| Electrical insulation                           | > 2 MΩ  |
| Ground system resistance                        | < 4Ω  |
| Normalised site attenuation (NSA)               | < ± 4 dB, 3m distance, from 30 to 1000 MHz        |
| Site voltage standing-wave ratio ( $S_{VSWR}$ ) | Between 0 and 6 dB, from 1GHz to 18GHz            |
| Uniformity of field strength                    | Between 0 and 6 dB, from 80 to 3000 MHz           |

## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

| SUMMARY OF MEASUREMENT RESULTS                   | Sub-clause of Part15   | Sub-clause of IC | Verdict  |
|--|------------------------|------------------|----------|
| Band Edges Compliance                            | 15.407, 15.209         | /                | <b>P</b> |
| Transmitter Spurious Emission - Radiated         | 15.407, 15.205, 15.209 | /                | <b>P</b> |
| Transmitter Spurious Emission - Radiated < 30MHz | 15.407, 15.209         | /                | <b>P</b> |

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

|    |   |
|----|---|
| P  | Pass, The EUT complies with the essential requirements in the standard.       |
| NM | Not measured, The test was not measured by CTTL                               |
| NA | Not Applicable, The test was not applicable                                   |
| F  | Fail, The EUT does not comply with the essential requirements in the standard |

### 6.2. Statements

CTTL has evaluated the test cases requested by the client/matrix manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

### 6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

|             |           |
|-------------|-----------|
| Temperature | 15°C~35°C |
| Voltage     | 3.82V     |
| Humidity    | 15%~75%   |



## **7. TEST EQUIPMENTS UTILIZED**

| <b>No.</b> | <b>Equipment</b> | <b>Model</b> | <b>Serial Number</b> | <b>Manufacturer</b> | <b>Calibration Period</b> | <b>Calibration Due date</b> |
|------------|------------------|--------------|----------------------|---------------------|---------------------------|-----------------------------|
| 1          | Test Receiver    | ESU26        | 100376               | R&S                 | 2016-10-29                | 1 Year                      |
| 2          | Test Receiver    | FSV40        | 101047               | R&S                 | 2016-07-02                | 1 Year                      |
| 3          | Loop Antenna     | HFH2-Z2      | 829324/007           | R&S                 | 2017-12-16                | 3 Years                     |
| 4          | EMI Antenna      | VULB9163     | 9163-514             | Schwarzbeck         | 2017-11-24                | 3 Years                     |
| 5          | EMI Antenna      | 3117         | 00139065             | ETS-Lindgren        | 2017-07-01                | 3 Years                     |
| 6          | EMI Antenna      | 3116         | 2661                 | ETS-Lindgren        | 2017-06-17                | 3 Years                     |

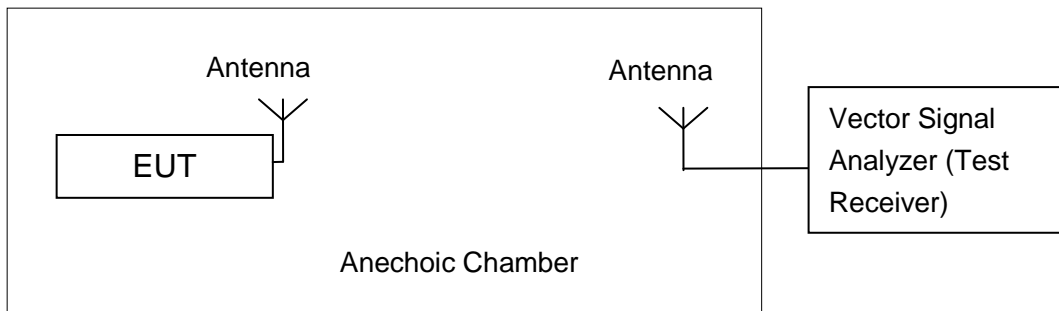
## ANNEX A: MEASUREMENT RESULTS

### A.1. Measurement Method

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 40GHz, RBW = 1MHz, VBW = 3MHz;



The measurement is made according to ANSI C63.10.

For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m.

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m or 10m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

## A.2. Transmitter Spurious Emission

### Measurement Limit:

| Standard               | Frequency (MHz) | Limit (dBm/MHz) |
|------------------------|-----------------|-----------------|
| FCC 47 CFR Part 15.407 | 5725MHz~5850MHz | < -27           |

The measurement is made according to ANSI C63.10 .

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 (uV/m) | Field strength (dBµV/m) | Measurement distance(m) |
|-----------------------------|-----------------------|-------------------------|-------------------------|
| 30-88                       | 100                   | 40.0                    | 3                       |
| 88-216                      | 150                   | 43.5                    | 3                       |
| 216-960                     | 200                   | 46.0                    | 3                       |
| Above 960                   | 500                   | 54.0                    | 3                       |

### Measurement Uncertainty:

| Frequency Range | Uncertainty(dB) | Note |
|-----------------|-----------------|------|
| f ≤ 1GHz        | 3.9             | k=2  |
| f > 1GHz        | 4.3             |      |

### Measurement Results:

#### 802.11a mode

| Mode    | Channel | Frequency Range   | Test Results | Conclusion |
|---------|---------|-------------------|--------------|------------|
| 802.11a | 149     | 1 GHz ~ 3 GHz     | Fig.1        | P          |
|         |         | 3GHz ~ 6 GHz      | Fig.2        | P          |
|         |         | 6 GHz ~ 18 GHz    | Fig.3        | P          |
|         | 157     | 30 MHz ~1 GHz     | Fig.4        | P          |
|         |         | 1 GHz ~ 3 GHz     | Fig.5        | P          |
|         |         | 3 GHz ~ 6 GHz     | Fig.6        | P          |
|         |         | 6 GHz ~ 18 GHz    | Fig.7        | P          |
|         |         | 18 GHz ~ 26.5 GHz | Fig.8        | P          |
|         | 165     | 26.5 GHz~ 40 GHz  | Fig.9        | P          |
|         |         | 1 GHz ~ 3 GHz     | Fig.10       | P          |
|         |         | 3 GHz ~ 6 GHz     | Fig.11       | P          |
|         |         | 6 GHz ~ 18 GHz    | Fig.12       | P          |

**802.11n-HT20 mode**

| Mode              | Channel | Frequency Range | Test Results      | Conclusion |   |
|-------------------|---------|-----------------|-------------------|------------|---|
| 802.11n<br>(HT20) | 149     | 1 GHz ~ 3 GHz   | Fig.13            | P          |   |
|                   |         | 3GHz ~ 6 GHz    | Fig.14            | P          |   |
|                   |         | 6 GHz ~ 18 GHz  | Fig.15            | P          |   |
|                   | 157     | 157             | 30 MHz ~1 GHz     | Fig.16     | P |
|                   |         |                 | 1 GHz ~ 3 GHz     | Fig.17     | P |
|                   |         |                 | 3 GHz ~ 6 GHz     | Fig.18     | P |
|                   |         |                 | 6 GHz ~ 18 GHz    | Fig.19     | P |
|                   |         |                 | 18 GHz ~ 26.5 GHz | Fig.20     | P |
|                   | 165     | 165             | 26.5 GHz~ 40 GHz  | Fig.21     | P |
|                   |         |                 | 1 GHz ~ 3 GHz     | Fig.22     | P |
|                   |         |                 | 3 GHz ~ 6 GHz     | Fig.23     | P |
|                   |         |                 | 6 GHz ~ 18 GHz    | Fig.24     | P |

**802.11n-HT40 mode**

| Mode              | Channel | Frequency Range   | Test Results   | Conclusion |   |
|-------------------|---------|-------------------|----------------|------------|---|
| 802.11n<br>(HT40) | 151     | 30 MHz ~1 GHz     | Fig.25         | P          |   |
|                   |         | 1 GHz ~ 3 GHz     | Fig.26         | P          |   |
|                   |         | 3 GHz ~ 6 GHz     | Fig.27         | P          |   |
|                   |         | 6 GHz ~ 18 GHz    | Fig.28         | P          |   |
|                   |         | 18 GHz ~ 26.5 GHz | Fig.29         | P          |   |
|                   |         | 26.5 GHz~ 40 GHz  | Fig.30         | P          |   |
|                   | 159     | 159               | 1 GHz ~ 3 GHz  | Fig.31     | P |
|                   |         |                   | 3 GHz ~ 6 GHz  | Fig.32     | P |
|                   |         |                   | 6 GHz ~ 18 GHz | Fig.33     | P |

**802.11ac-HT20 mode**

| Mode               | Channel | Frequency Range | Test Results      | Conclusion |   |
|--------------------|---------|-----------------|-------------------|------------|---|
| 802.11ac<br>(HT20) | 149     | 1 GHz ~ 3 GHz   | Fig.34            | P          |   |
|                    |         | 3GHz ~ 6 GHz    | Fig.35            | P          |   |
|                    |         | 6 GHz ~ 18 GHz  | Fig.36            | P          |   |
|                    | 157     | 157             | 30 MHz ~1 GHz     | Fig.37     | P |
|                    |         |                 | 1 GHz ~ 3 GHz     | Fig.38     | P |
|                    |         |                 | 3 GHz ~ 6 GHz     | Fig.39     | P |
|                    |         |                 | 6 GHz ~ 18 GHz    | Fig.40     | P |
|                    |         |                 | 18 GHz ~ 26.5 GHz | Fig.41     | P |
|                    |         |                 | 26.5 GHz~ 40 GHz  | Fig.42     | P |
|                    | 165     | 165             | 1 GHz ~ 3 GHz     | Fig.43     | P |
|                    |         |                 | 3 GHz ~ 6 GHz     | Fig.44     | P |
|                    |         |                 | 6 GHz ~ 18 GHz    | Fig.45     | P |



**802.11ac-HT40 mode**

| Mode               | Channel | Frequency Range   | Test Results | Conclusion |
|--------------------|---------|-------------------|--------------|------------|
| 802.11ac<br>(HT40) | 151     | 30 MHz ~1 GHz     | Fig.46       | P          |
|                    |         | 1 GHz ~ 3 GHz     | Fig.47       | P          |
|                    |         | 3 GHz ~ 6 GHz     | Fig.48       | P          |
|                    |         | 6 GHz ~ 18 GHz    | Fig.49       | P          |
|                    |         | 18 GHz ~ 26.5 GHz | Fig.50       | P          |
|                    |         | 26.5 GHz~ 40 GHz  | Fig.51       | P          |
|                    | 159     | 1 GHz ~ 3 GHz     | Fig.52       | P          |
|                    |         | 3 GHz ~ 6 GHz     | Fig.53       | P          |
|                    |         | 6 GHz ~ 18 GHz    | Fig.54       | P          |

**802.11ac-HT80 mode**

| Mode               | Channel | Frequency Range   | Test Results | Conclusion |
|--------------------|---------|-------------------|--------------|------------|
| 802.11ac<br>(HT80) | 155     | 30 MHz ~1 GHz     | Fig.55       | P          |
|                    |         | 1 GHz ~ 3 GHz     | Fig.56       | P          |
|                    |         | 3 GHz ~ 6 GHz     | Fig.57       | P          |
|                    |         | 6 GHz ~ 18 GHz    | Fig.58       | P          |
|                    |         | 18 GHz ~ 26.5 GHz | Fig.59       | P          |
|                    |         | 26.5 GHz~ 40 GHz  | Fig.60       | P          |

**Conclusion: PASS**

**Note:**

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, 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:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$



**802.11a**

Ch149

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.744       | 48.9            | -18.2          | 34.8           | 32.264                    | H            |
| 17652.600      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17742.000      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17671.800      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17676.600      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17721.600      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.976       | 62.0            | -18.2          | 34.8           | 45.364                    | H            |
| 17569.200      | 58.3            | -14.9          | 41.2           | 32.018                    | H            |
| 17170.800      | 58.2            | -15.1          | 41.4           | 31.893                    | V            |
| 17301.600      | 58.2            | -13.9          | 41.2           | 30.923                    | H            |
| 17475.600      | 57.9            | -14.9          | 41.2           | 31.618                    | V            |
| 17737.200      | 57.8            | -13.0          | 41.2           | 29.605                    | H            |

Ch157

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17704.800      | 46.4            | -13.0          | 41.2           | 18.205                    | V            |
| 17664.600      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17737.800      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17286.600      | 46.3            | -13.9          | 41.2           | 19.023                    | H            |
| 17634.000      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17701.200      | 46.2            | -13.0          | 41.2           | 18.005                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17950.800      | 58.7            | -13.5          | 41.0           | 31.162                    | H            |
| 17641.800      | 58.3            | -13.0          | 41.2           | 30.105                    | V            |
| 17813.400      | 58.1            | -13.5          | 41.0           | 30.562                    | V            |
| 17715.000      | 58.1            | -13.0          | 41.2           | 29.905                    | H            |
| 17928.600      | 58.0            | -13.5          | 41.0           | 30.462                    | H            |
| 17742.600      | 57.9            | -13.0          | 41.2           | 29.705                    | V            |



Ch165

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5850.044       | 39.9            | -20.0          | 34.9           | 25.003                    | H            |
| 17657.400      | 46.2            | -13.0          | 41.2           | 18.005                    | V            |
| 17616.000      | 46.2            | -14.9          | 41.2           | 19.918                    | H            |
| 17655.000      | 46.2            | -13.0          | 41.2           | 18.005                    | V            |
| 17625.600      | 46.2            | -14.9          | 41.2           | 19.918                    | V            |
| 17727.600      | 46.2            | -13.0          | 41.2           | 18.005                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5852.812       | 52.9            | -20.0          | 34.9           | 38.003                    | H            |
| 17563.800      | 58.6            | -14.9          | 41.2           | 32.318                    | V            |
| 17653.800      | 58.5            | -13.0          | 41.2           | 30.305                    | H            |
| 17650.800      | 58.4            | -13.0          | 41.2           | 30.205                    | H            |
| 17280.000      | 58.3            | -15.1          | 41.2           | 32.193                    | V            |
| 17560.200      | 58.3            | -14.9          | 41.2           | 32.018                    | H            |

**802.11n-HT20**

Ch149

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.728       | 43.1            | -18.2          | 34.8           | 26.464                    | H            |
| 17710.800      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17707.200      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17625.600      | 46.3            | -14.9          | 41.2           | 20.018                    | H            |
| 17700.000      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17661.600      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5723.800       | 56.5            | -18.2          | 34.8           | 39.864                    | V            |
| 17558.400      | 58.9            | -14.9          | 41.2           | 32.618                    | V            |
| 17663.400      | 58.3            | -13.0          | 41.2           | 30.105                    | V            |
| 17259.600      | 58.2            | -15.1          | 41.2           | 32.093                    | H            |
| 17634.000      | 58.1            | -13.0          | 41.2           | 29.905                    | H            |
| 17271.600      | 58.1            | -15.1          | 41.2           | 31.993                    | H            |

Ch157

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17635.800      | 46.5            | -13.0          | 41.2           | 18.305                    | V            |
| 17721.600      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17702.400      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17663.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17658.000      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17715.000      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17673.600      | 58.7            | -13.0          | 41.2           | 30.505                    | H            |
| 17952.600      | 58.5            | -13.5          | 41.0           | 30.962                    | H            |
| 17961.600      | 58.2            | -13.5          | 41.0           | 30.662                    | V            |
| 17741.400      | 58.1            | -13.0          | 41.2           | 29.905                    | V            |
| 17663.400      | 58.0            | -13.0          | 41.2           | 29.805                    | H            |
| 17271.600      | 58.0            | -15.1          | 41.2           | 31.893                    | V            |

Ch165

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5850.104       | 37.2            | -20.0          | 34.9           | 22.303                    | H            |
| 17692.800      | 46.5            | -13.0          | 41.2           | 18.305                    | H            |
| 17638.200      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17632.200      | 46.3            | -14.9          | 41.2           | 20.018                    | H            |
| 17726.400      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17660.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5860.528       | 50.4            | -20.0          | 34.9           | 35.503                    | H            |
| 17655.000      | 58.5            | -13.0          | 41.2           | 30.305                    | H            |
| 17686.200      | 58.1            | -13.0          | 41.2           | 29.905                    | H            |
| 17671.800      | 58.0            | -13.0          | 41.2           | 29.805                    | V            |
| 17565.600      | 57.9            | -14.9          | 41.2           | 31.618                    | V            |
| 17636.400      | 57.8            | -13.0          | 41.2           | 29.605                    | H            |



**802.11n-HT40**

Ch151

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.996       | 49.9            | -18.2          | 34.8           | 33.264                    | H            |
| 17689.200      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17659.200      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17637.600      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17659.800      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17744.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.956       | 68.7            | -18.2          | 34.8           | 52.064                    | V            |
| 17890.800      | 59.0            | -13.5          | 41.0           | 31.462                    | H            |
| 17528.400      | 58.6            | -14.9          | 41.2           | 32.318                    | H            |
| 17667.000      | 58.3            | -13.0          | 41.2           | 30.105                    | V            |
| 17662.800      | 58.1            | -13.0          | 41.2           | 29.905                    | V            |
| 17698.200      | 58.1            | -13.0          | 41.2           | 29.905                    | V            |

Ch159

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5850.000       | 38.5            | -20.0          | 34.9           | 23.603                    | H            |
| 18000.000      | 45.2            | -13.5          | 40.8           | 17.888                    | H            |
| 17999.400      | 45.2            | -13.6          | 41.0           | 17.842                    | H            |
| 17998.800      | 45.1            | -13.6          | 41.0           | 17.742                    | H            |
| 17998.200      | 45.7            | -13.6          | 41.0           | 18.342                    | H            |
| 17997.600      | 45.4            | -13.6          | 41.0           | 18.042                    | V            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5851.712       | 61.9            | -20.0          | 34.9           | 47.003                    | V            |
| 17614.200      | 58.7            | -14.9          | 41.2           | 32.418                    | V            |
| 17932.200      | 58.5            | -13.5          | 41.0           | 30.962                    | H            |
| 17745.600      | 58.4            | -13.0          | 41.2           | 30.205                    | V            |
| 17475.000      | 58.4            | -14.9          | 41.2           | 32.118                    | H            |
| 17694.000      | 58.3            | -13.0          | 41.2           | 30.105                    | V            |

**802.11ac-HT20**

Ch149

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5723.920       | 42.5            | -18.2          | 34.8           | 25.864                    | V            |
| 17709.600      | 46.4            | -13.0          | 41.2           | 18.205                    | V            |
| 17614.800      | 46.4            | -14.9          | 41.2           | 20.118                    | V            |
| 17655.000      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17710.800      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17656.800      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.084       | 58.3            | -18.2          | 34.8           | 41.664                    | H            |
| 17709.600      | 58.9            | -13.0          | 41.2           | 30.705                    | H            |
| 17710.200      | 58.2            | -13.0          | 41.2           | 30.005                    | V            |
| 17605.200      | 58.1            | -14.9          | 41.2           | 31.818                    | V            |
| 17707.800      | 58.0            | -13.0          | 41.2           | 29.805                    | H            |
| 17670.000      | 57.9            | -13.0          | 41.2           | 29.705                    | V            |

Ch157

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17661.600      | 46.5            | -13.0          | 41.2           | 18.305                    | V            |
| 17622.000      | 46.4            | -14.9          | 41.2           | 20.118                    | H            |
| 17652.600      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17631.000      | 46.3            | -14.9          | 41.2           | 20.018                    | V            |
| 17632.800      | 46.3            | -14.9          | 41.2           | 20.018                    | H            |
| 17678.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17986.800      | 59.1            | -13.5          | 41.0           | 31.562                    | V            |
| 17673.000      | 58.7            | -13.0          | 41.2           | 30.505                    | V            |
| 17684.400      | 58.4            | -13.0          | 41.2           | 30.205                    | H            |
| 17689.800      | 58.4            | -13.0          | 41.2           | 30.205                    | V            |
| 17695.200      | 58.3            | -13.0          | 41.2           | 30.105                    | V            |
| 17630.400      | 58.3            | -14.9          | 41.2           | 32.018                    | H            |

Ch165

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5850.224       | 37.8            | -20.0          | 34.9           | 22.903                    | H            |
| 17698.800      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17699.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17676.000      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17623.800      | 46.3            | -14.9          | 41.2           | 20.018                    | H            |
| 17607.600      | 46.3            | -14.9          | 41.2           | 20.018                    | V            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5853.404       | 52.5            | -20.0          | 34.9           | 37.603                    | V            |
| 17545.200      | 58.3            | -14.9          | 41.2           | 32.018                    | H            |
| 17658.000      | 58.3            | -13.0          | 41.2           | 30.105                    | V            |
| 17652.000      | 58.2            | -13.0          | 41.2           | 30.005                    | H            |
| 17546.400      | 58.2            | -14.9          | 41.2           | 31.918                    | V            |
| 17693.400      | 58.1            | -13.0          | 41.2           | 29.905                    | V            |

**802.11ac-HT40**

Ch151

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5850.224       | 37.8            | -20.0          | 34.9           | 22.903                    | V            |
| 17629.800      | 46.4            | -14.9          | 41.2           | 20.118                    | H            |
| 17711.400      | 46.4            | -13.0          | 41.2           | 18.205                    | V            |
| 17636.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17696.400      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17637.000      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5724.072       | 62.4            | -18.2          | 34.8           | 45.764                    | H            |
| 17655.000      | 59.2            | -13.0          | 41.2           | 31.005                    | H            |
| 17685.600      | 58.3            | -13.0          | 41.2           | 30.105                    | H            |
| 17638.200      | 58.3            | -13.0          | 41.2           | 30.105                    | H            |
| 17670.600      | 58.2            | -13.0          | 41.2           | 30.005                    | V            |
| 17996.400      | 58.1            | -13.6          | 41.0           | 30.742                    | V            |



Ch159

**Average**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5850.000       | 36.9            | -20.0          | 34.9           | 22.003                    | V            |
| 17633.400      | 46.4            | -13.0          | 41.2           | 18.205                    | V            |
| 17660.400      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17632.200      | 46.3            | -14.9          | 41.2           | 20.018                    | H            |
| 17728.200      | 46.3            | -13.0          | 41.2           | 18.105                    | H            |
| 17657.400      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |

**Peak**

| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 5853.876       | 50.8            | -20.0          | 34.9           | 35.903                    | V            |
| 17292.000      | 59.1            | -13.9          | 41.2           | 31.823                    | H            |
| 17688.000      | 58.5            | -13.0          | 41.2           | 30.305                    | H            |
| 17728.800      | 58.2            | -13.0          | 41.2           | 30.005                    | H            |
| 17748.600      | 58.1            | -13.0          | 41.2           | 29.905                    | V            |
| 17622.600      | 57.9            | -14.9          | 41.2           | 31.618                    | V            |

**802.11ac-HT80**

Ch155

**Average**

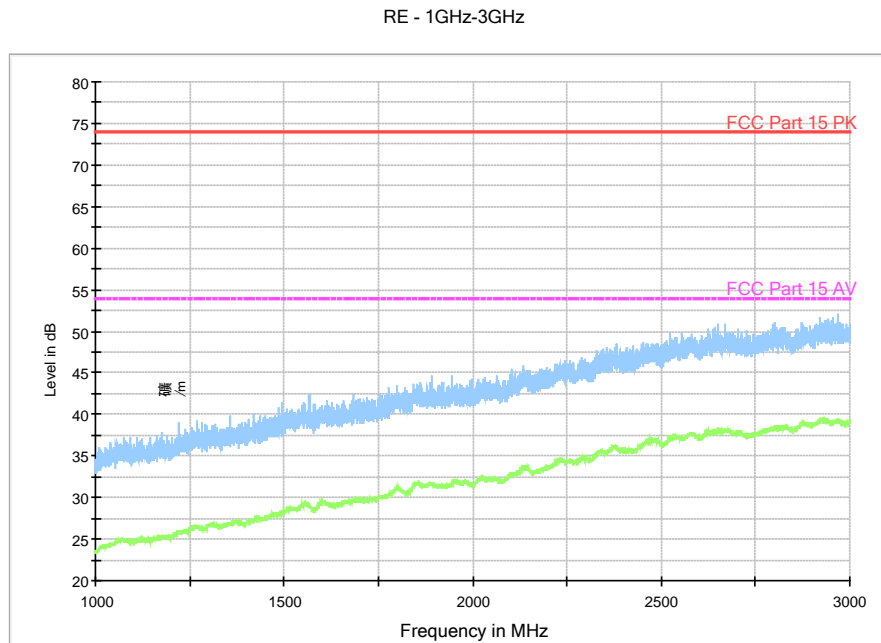
| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17688.600      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17729.400      | 46.4            | -13.0          | 41.2           | 18.205                    | H            |
| 17704.200      | 46.4            | -13.0          | 41.2           | 18.205                    | V            |
| 17664.600      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17634.600      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |
| 17680.200      | 46.3            | -13.0          | 41.2           | 18.105                    | V            |

**Peak**

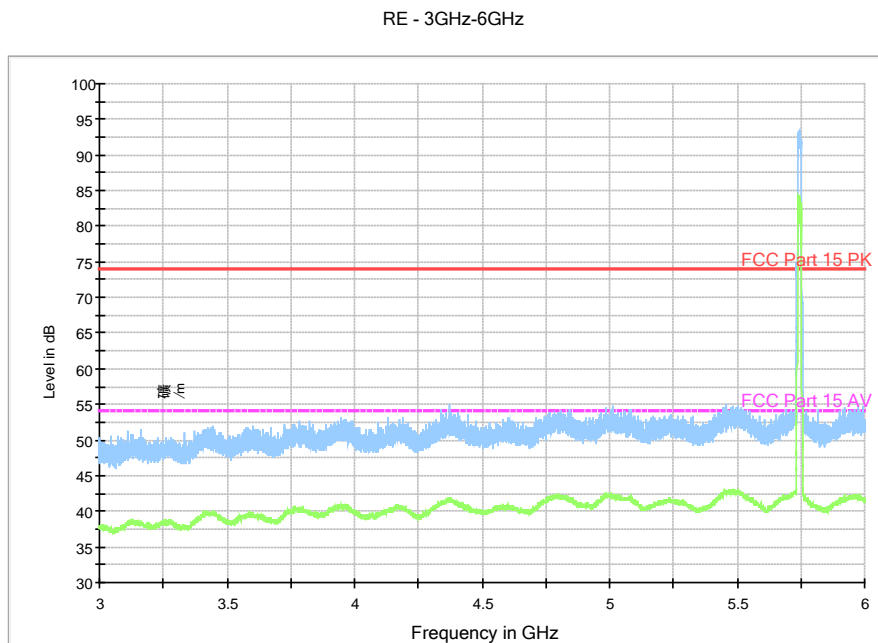
| Frequency(MHz) | Result (dBuV/m) | Cable Loss(dB) | Antenna Factor | P <sub>Mea</sub> (dBuV/m) | Polarization |
|----------------|-----------------|----------------|----------------|---------------------------|--------------|
| 17715.000      | 59.4            | -13.0          | 41.2           | 31.205                    | H            |
| 17220.000      | 58.4            | -15.1          | 41.4           | 32.093                    | V            |
| 17962.800      | 58.2            | -13.5          | 41.0           | 30.662                    | H            |
| 17074.200      | 58.2            | -16.3          | 41.4           | 33.141                    | V            |
| 17730.600      | 58.2            | -13.0          | 41.2           | 30.005                    | H            |
| 17673.000      | 58.1            | -13.0          | 41.2           | 29.905                    | H            |



Test graphs as below:



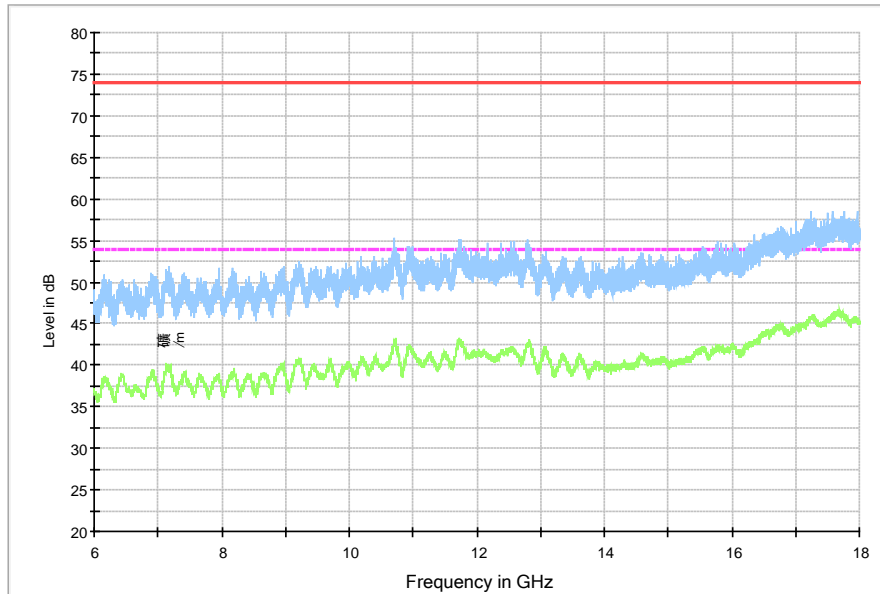
**Fig. 1 Radiated Spurious Emission (802.11a, Ch149, 1 GHz-3 GHz)**



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

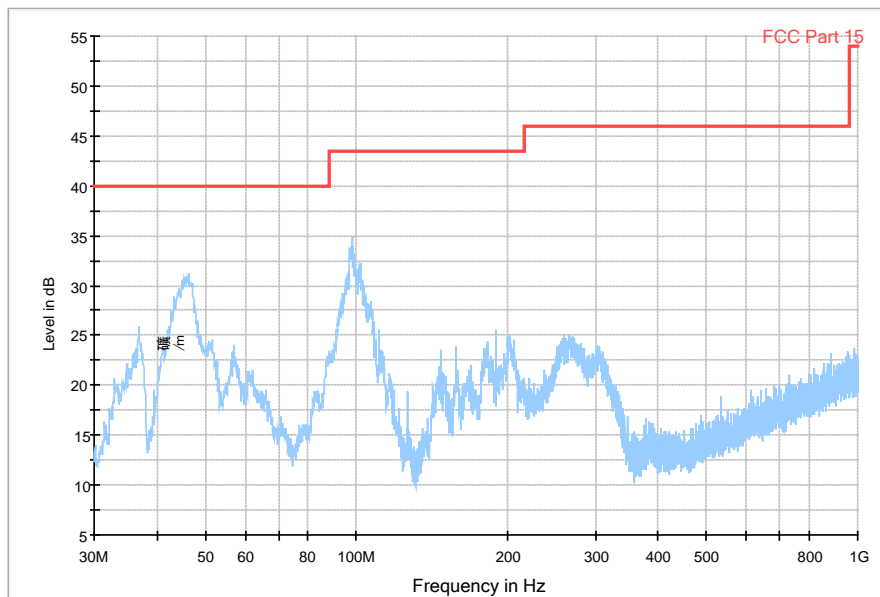
**Fig. 2 Radiated Spurious Emission (802.11a, Ch149, 3 GHz-6 GHz)**

RE - 6GHz-18GHz



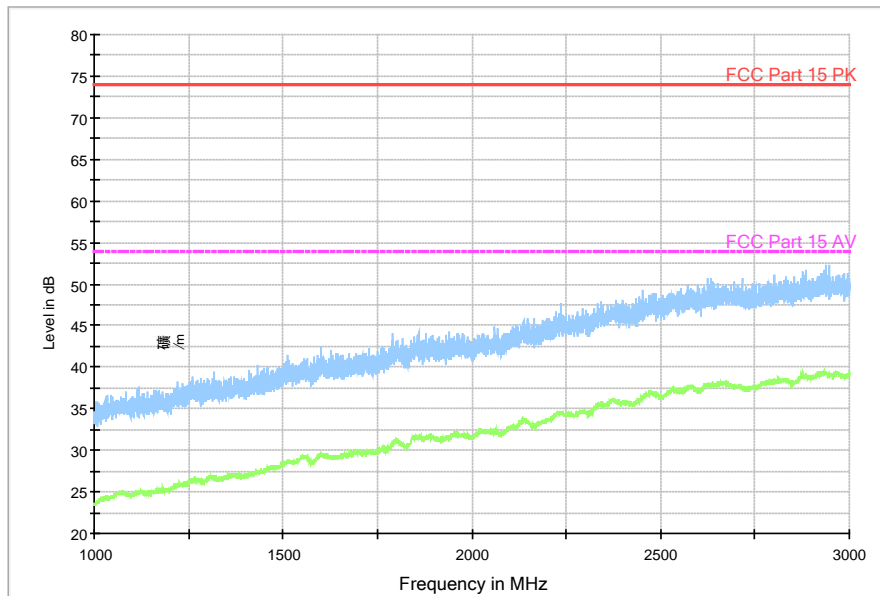
**Fig. 3 Radiated Spurious Emission (802.11a, Ch149, 6 GHz-18 GHz)**

RE 30MHz-1GHz



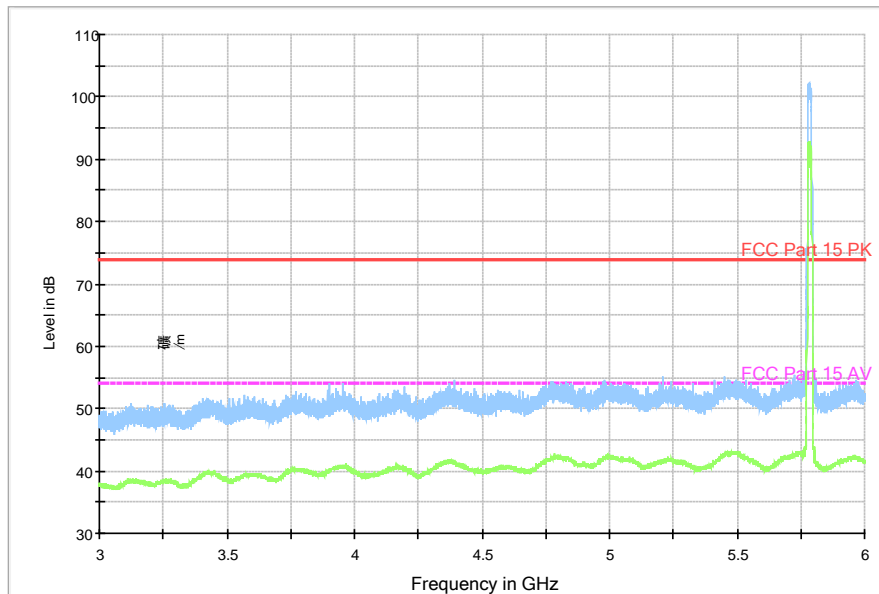
**Fig. 4 Radiated Spurious Emission (802.11a, Ch157, 30 MHz-1 GHz)**

RE - 1GHz-3GHz



**Fig. 5 Radiated Spurious Emission (802.11a, Ch157, 1 GHz-3 GHz)**

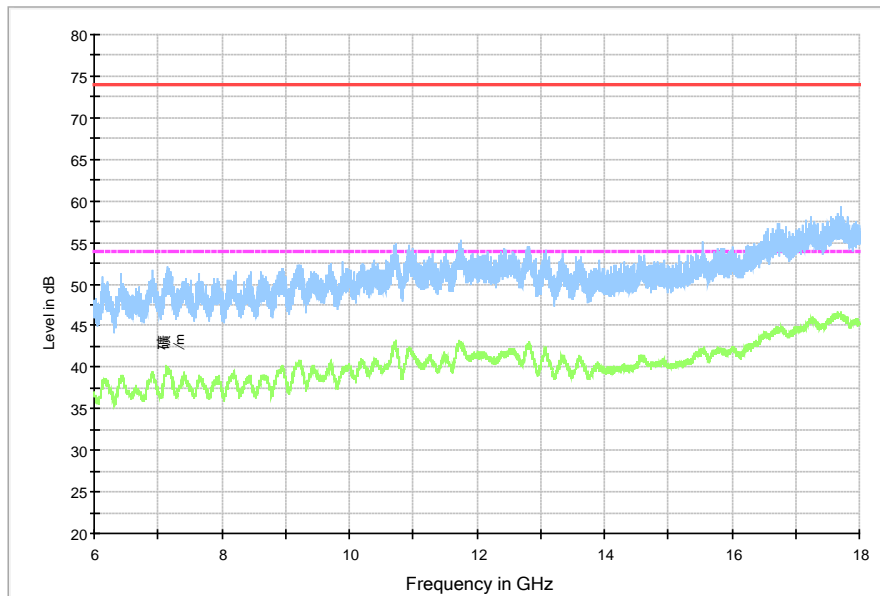
RE - 3GHz-6GHz



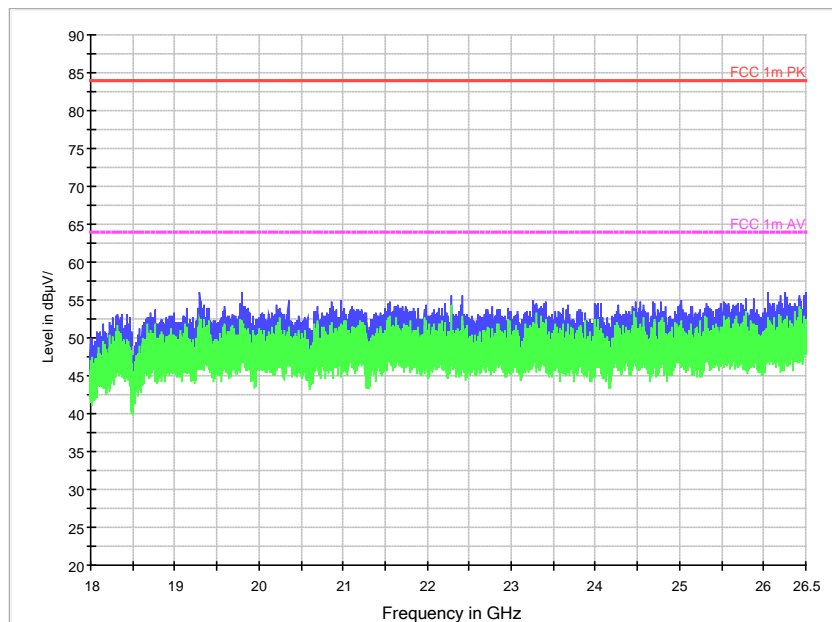
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 6 Radiated Spurious Emission (802.11a, Ch157, 3 GHz-6 GHz)**

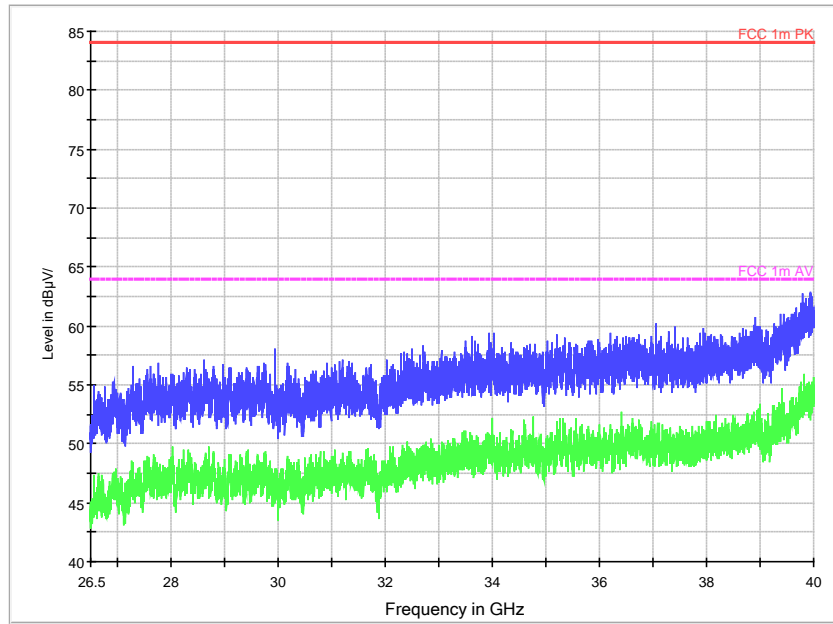
RE - 6GHz-18GHz



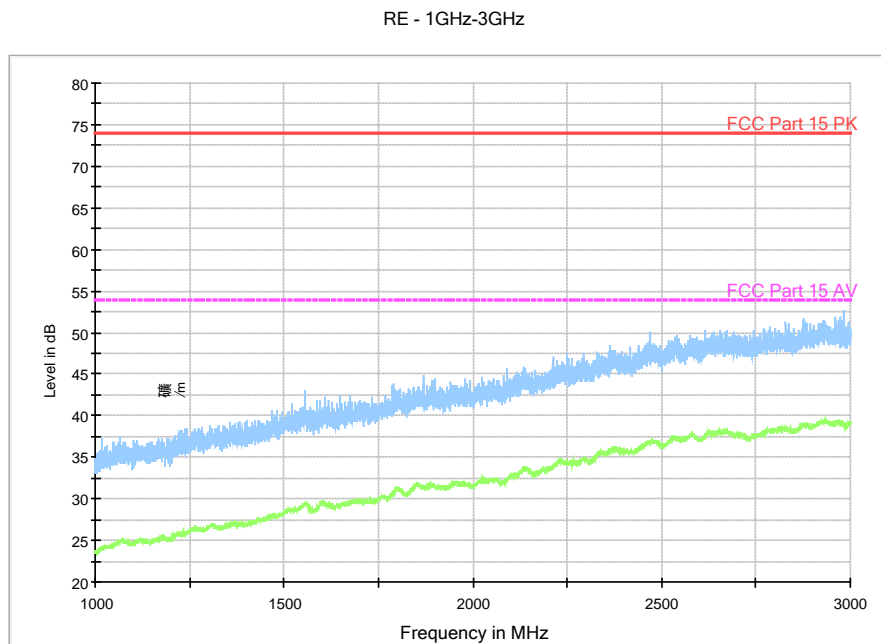
**Fig. 7 Radiated Spurious Emission (802.11a, Ch157, 6 GHz-18GHz)**



**Fig. 8 Radiated Spurious Emission (802.11a, Ch157, 18 GHz-26.5 GHz)**

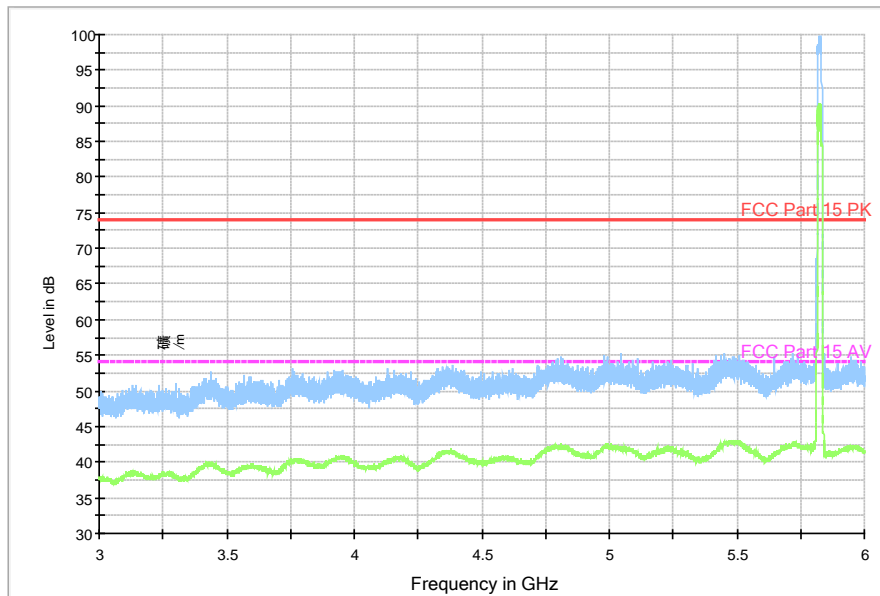


**Fig. 9 Radiated Spurious Emission (802.11a, Ch157, 26.5 GHz - 40 GHz)**



**Fig. 10 Radiated Spurious Emission (802.11a, Ch165, 1 GHz-3 GHz)**

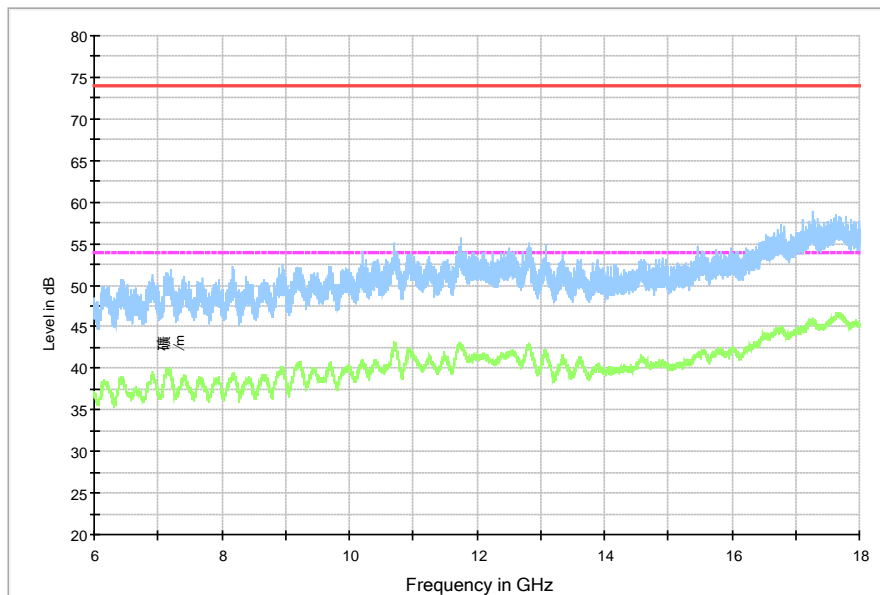
RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

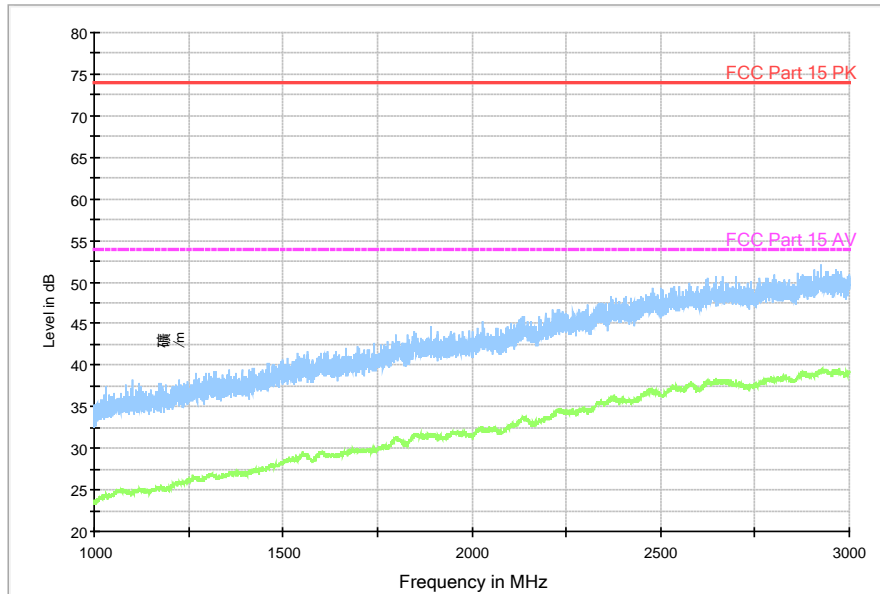
**Fig. 11 Radiated Spurious Emission (802.11a, Ch165, 3 GHz-6 GHz)**

RE - 6GHz-18GHz



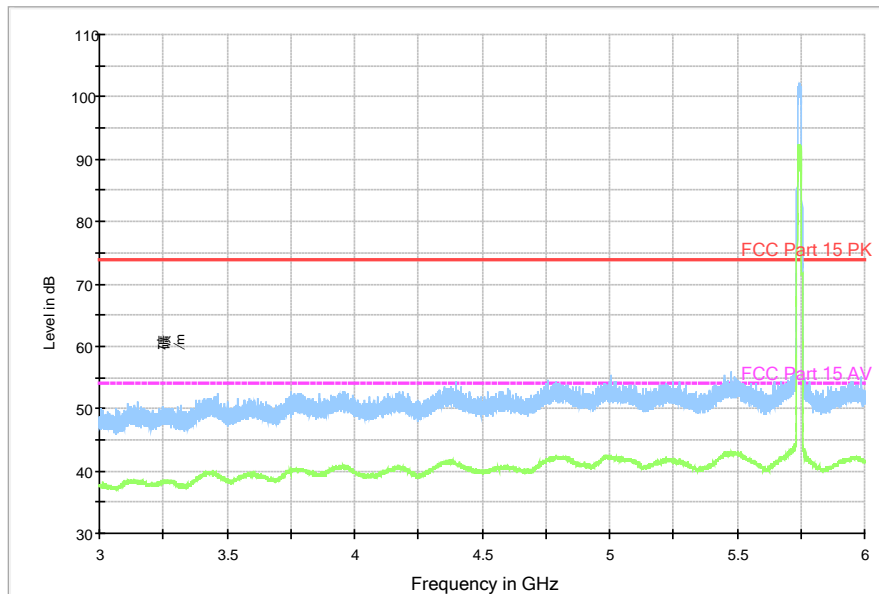
**Fig. 12 Radiated Spurious Emission (802.11a, Ch165, 6 GHz-18 GHz)**

RE - 1GHz-3GHz



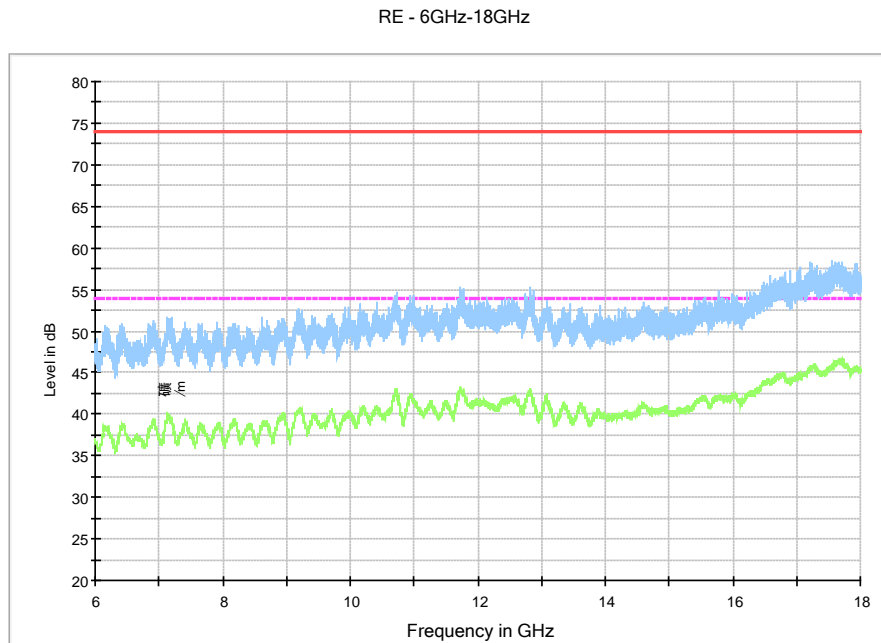
**Fig. 13 Radiated Spurious Emission (802.11n-HT20, Ch149, 1 GHz-3 GHz)**

RE - 3GHz-6GHz

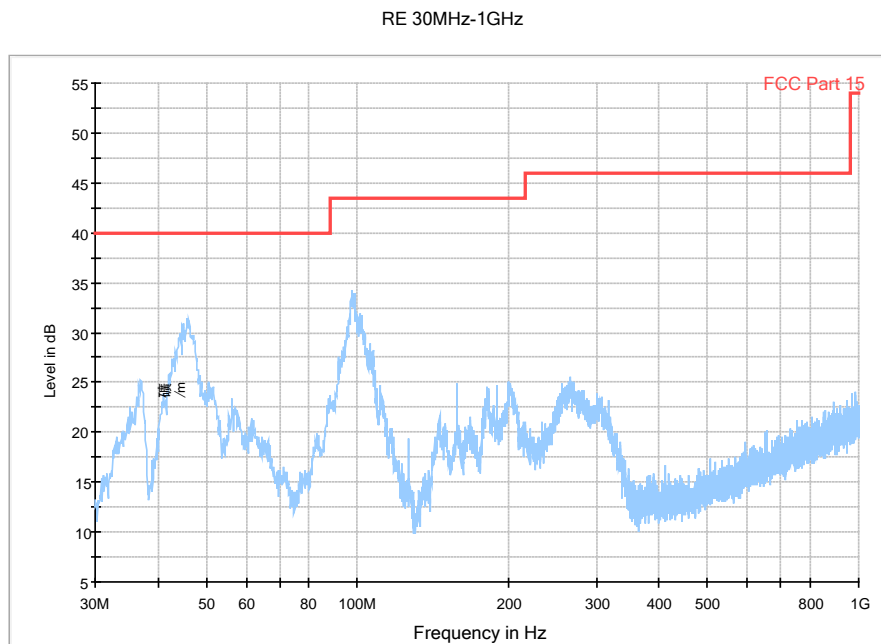


Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 14 Radiated Spurious Emission (802.11n-HT20, Ch149, 3 GHz-6GHz)**



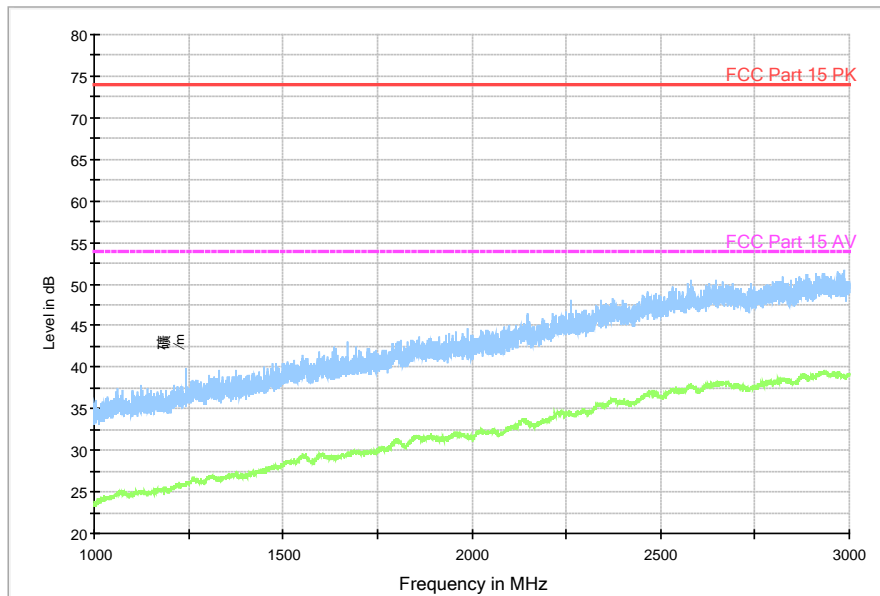
**Fig. 15 Radiated Spurious Emission (802.11n-HT20, Ch149, 6 GHz-18 GHz)**



**Fig. 16 Radiated Spurious Emission (802.11n-HT20, Ch157, 30 MHz-1 GHz)**

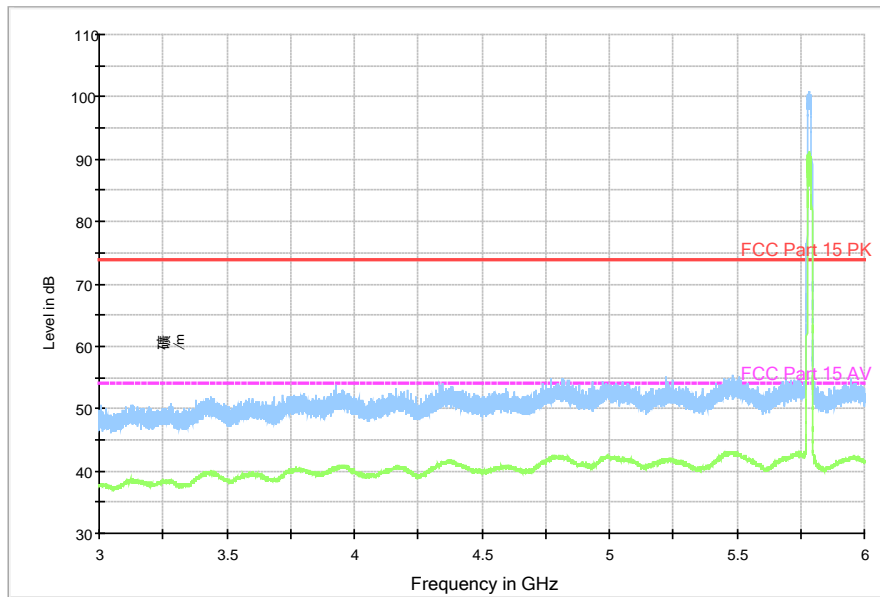


RE - 1GHz-3GHz



**Fig. 17 Radiated Spurious Emission (802.11n-HT20, Ch157, 1 GHz-3 GHz)**

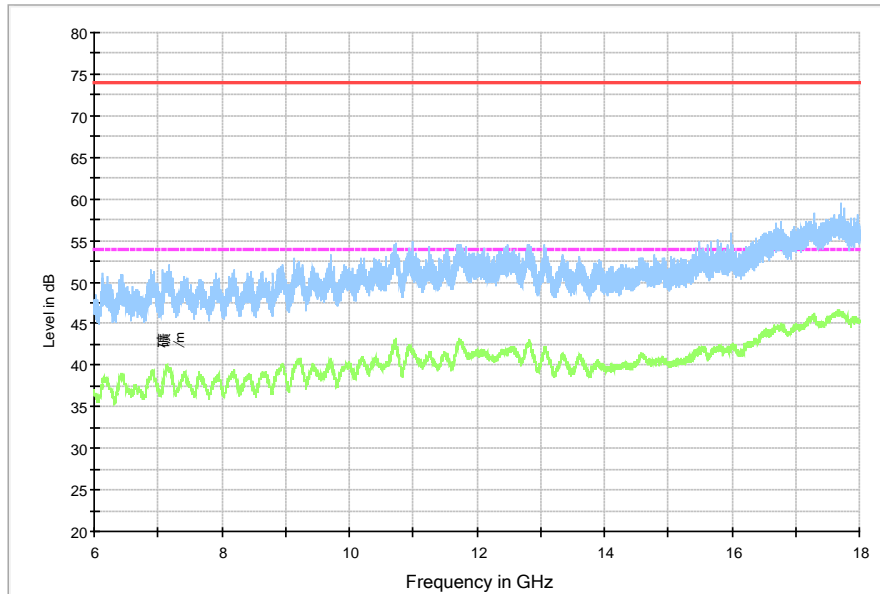
RE - 3GHz-6GHz



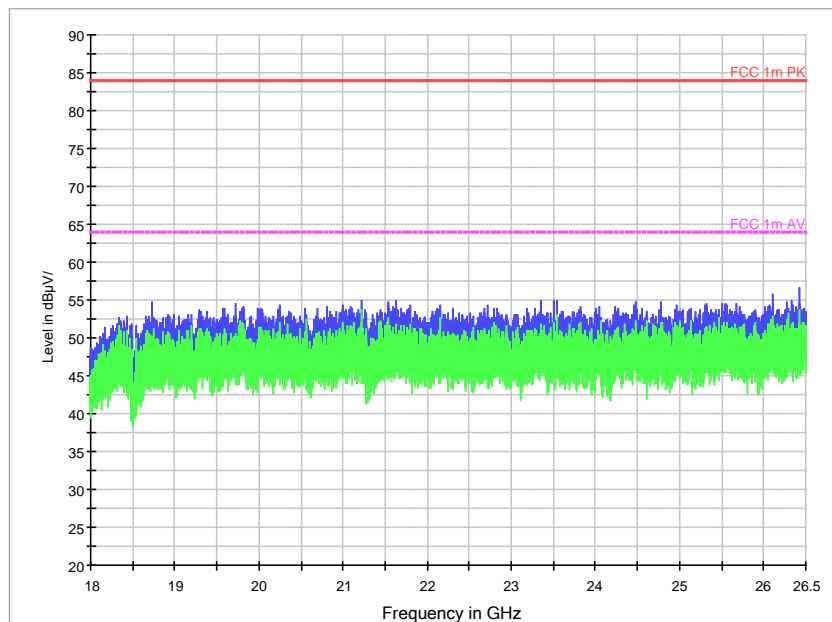
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 18 Radiated Spurious Emission (802.11n-HT20, Ch157, 3 GHz-6 GHz)**

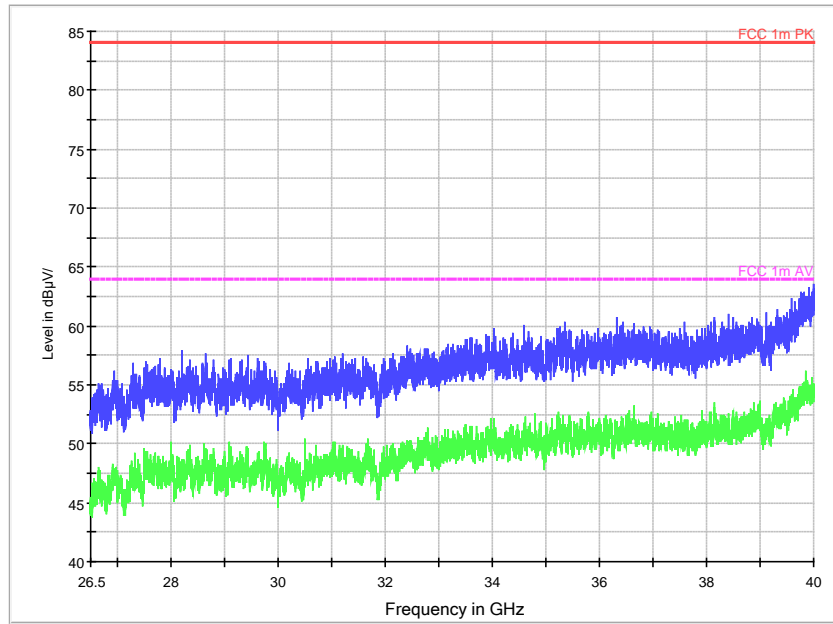
RE - 6GHz-18GHz



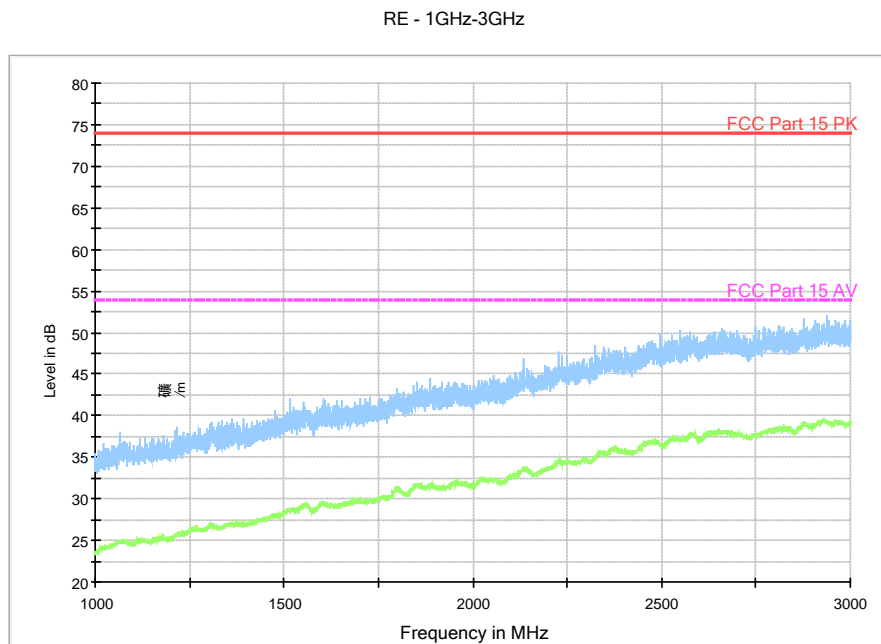
**Fig. 19 Radiated Spurious Emission (802.11n-HT20, Ch157, 6 GHz-18 GHz)**



**Fig. 20 Radiated Spurious Emission (802.11n-HT20, Ch157, 18 GHz-26.5 GHz)**

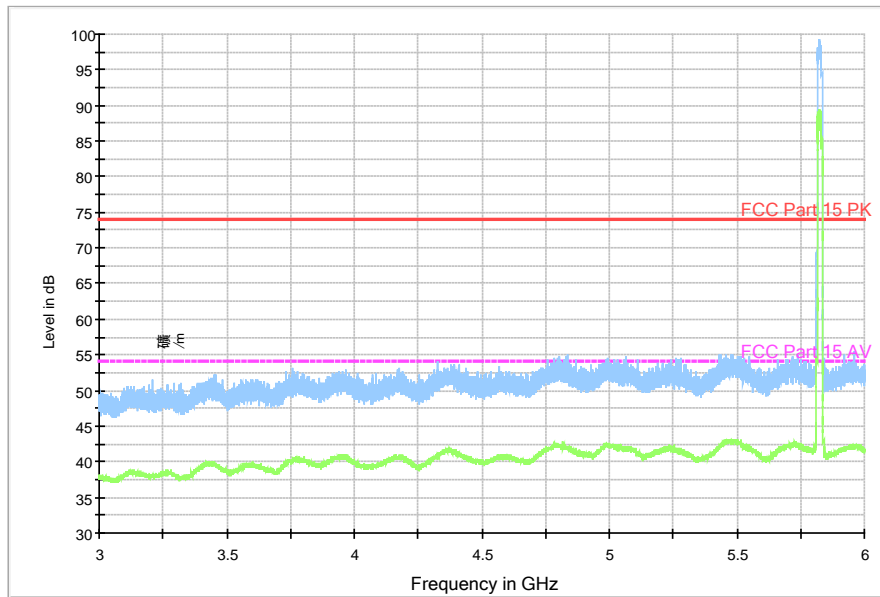


**Fig. 21 Radiated Spurious Emission (802.11n-HT20, Ch157, 26.5 GHz - 40 GHz)**



**Fig. 22 Radiated Spurious Emission (802.11n-HT20, Ch165, 1 GHz-3 GHz)**

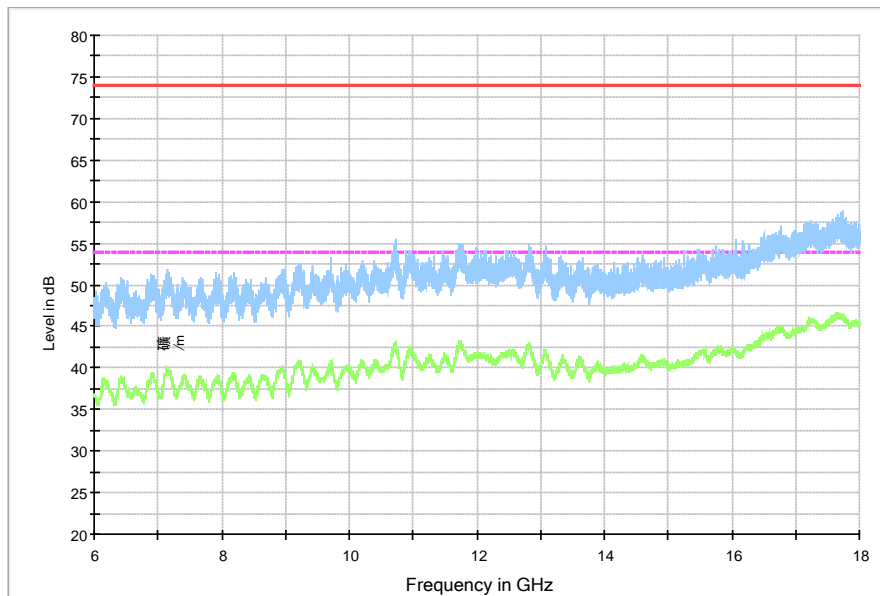
RE - 3GHz-6GHz



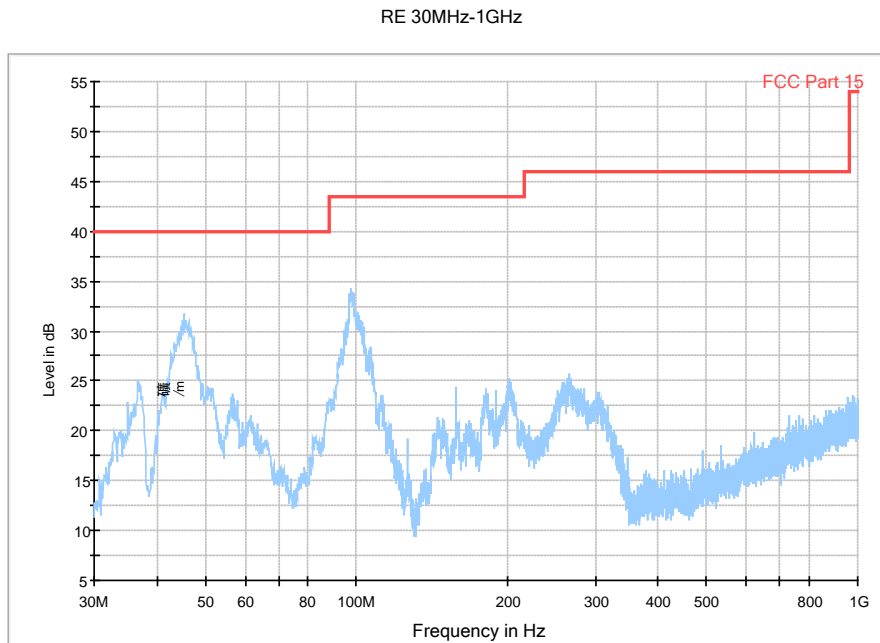
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 23 Radiated Spurious Emission (802.11n-HT20, Ch165, 3 GHz-6 GHz)**

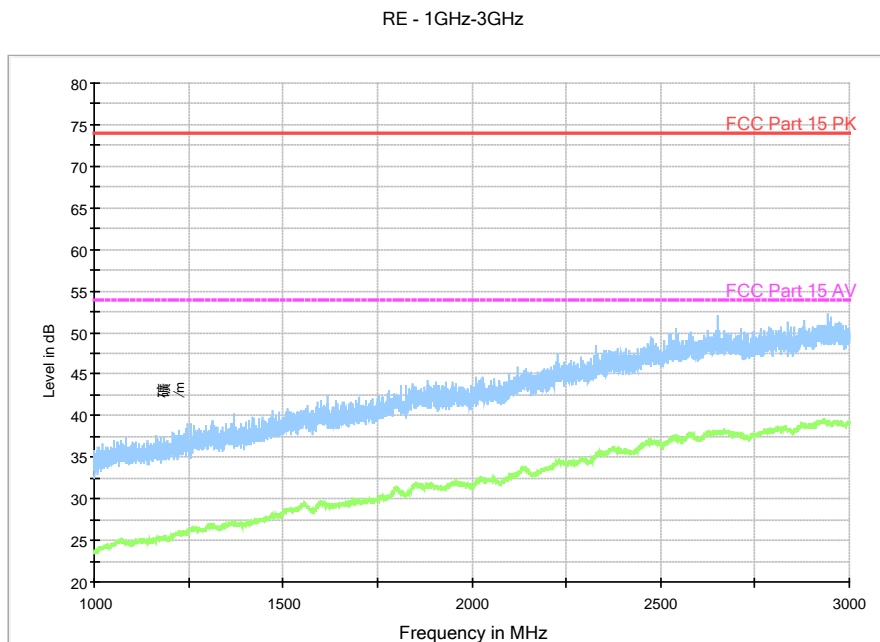
RE - 6GHz-18GHz



**Fig. 24 Radiated Spurious Emission (802.11n-HT20, Ch165, 6 GHz-18 GHz)**

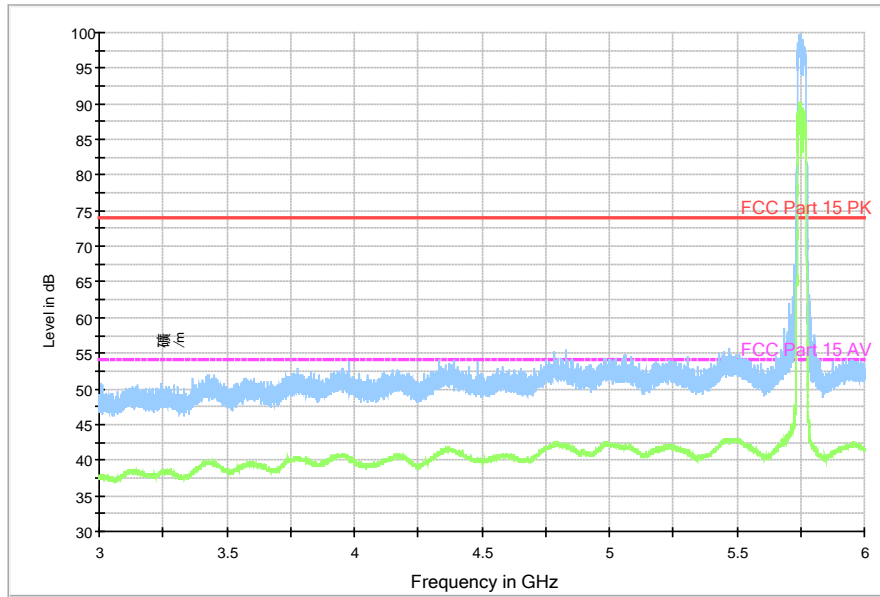


**Fig. 25 Radiated Spurious Emission (802.11n-HT40, Ch151, 30 MHz-1 GHz)**



**Fig. 26 Radiated Spurious Emission (802.11n-HT40, Ch151, 1 GHz-3GHz)**

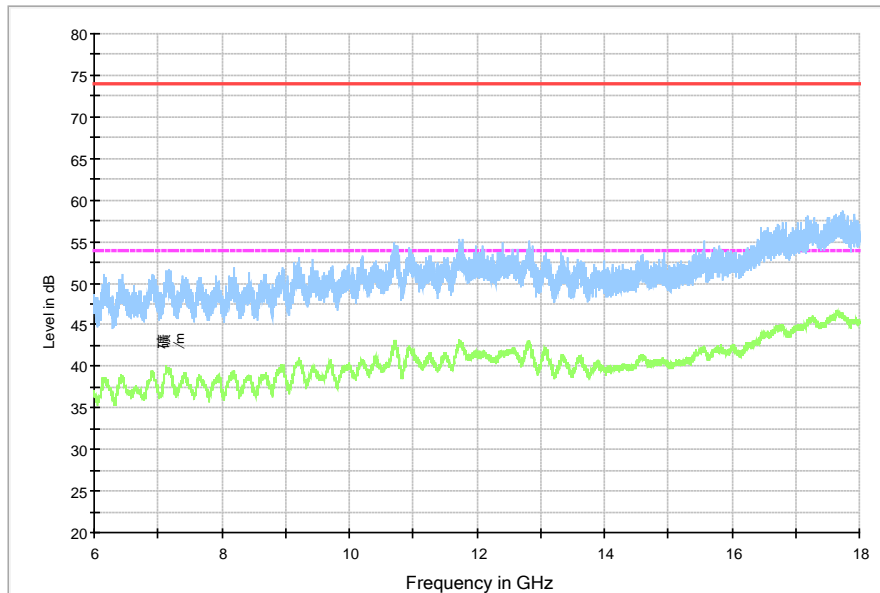
RE - 3GHz-6GHz



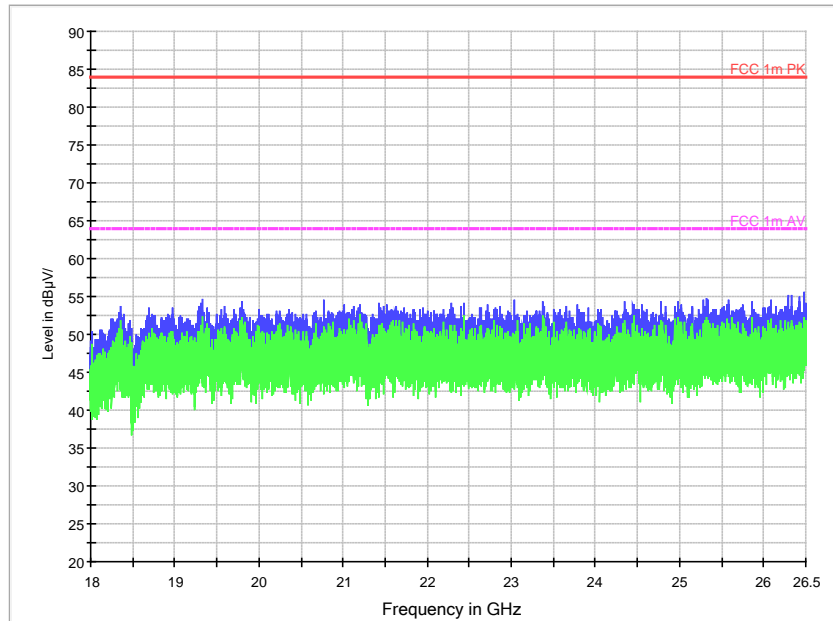
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 27 Radiated Spurious Emission (802.11n-HT40, Ch151, 3 GHz-6GHz)**

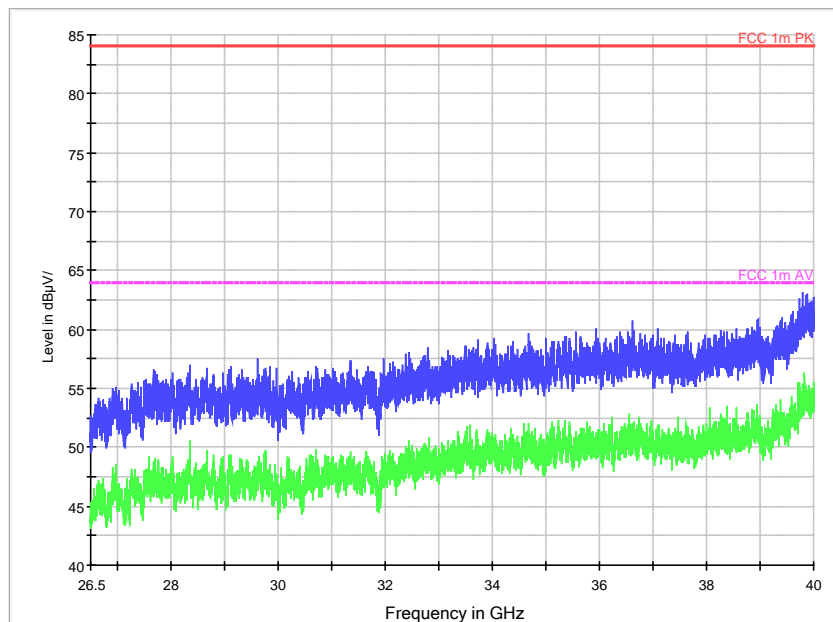
RE - 6GHz-18GHz



**Fig. 28 Radiated Spurious Emission (802.11n-HT40, Ch151, 6 GHz-18 GHz)**

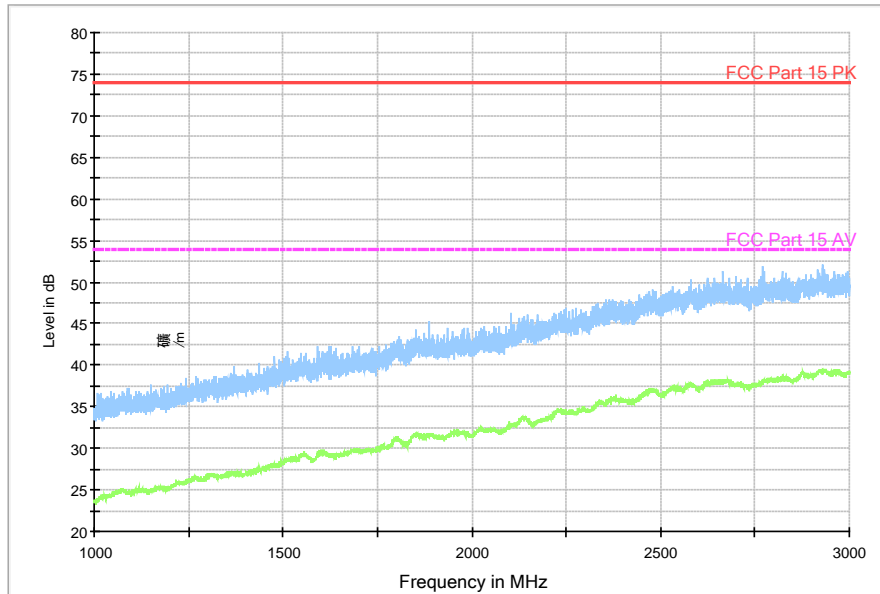


**Fig. 29 Radiated Spurious Emission (802.11n-HT40, Ch151, 18 GHz-26.5 GHz)**



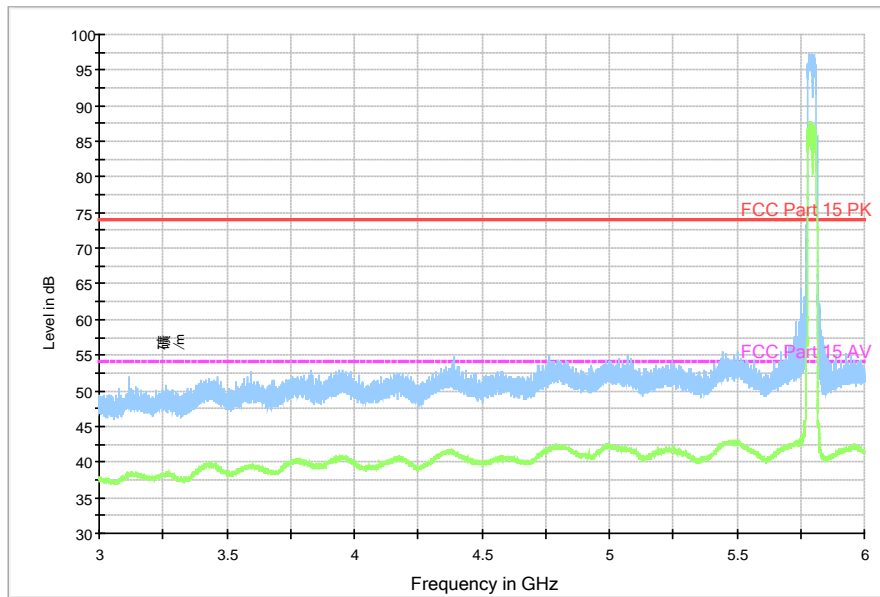
**Fig. 30 Radiated Spurious Emission (802.11n-HT40, Ch151, 26.5 GHz - 40 GHz)**

RE - 1GHz-3GHz



**Fig. 31 Radiated Spurious Emission (802.11n-HT40, Ch159 1 GHz-3GHz)**

RE - 3GHz-6GHz

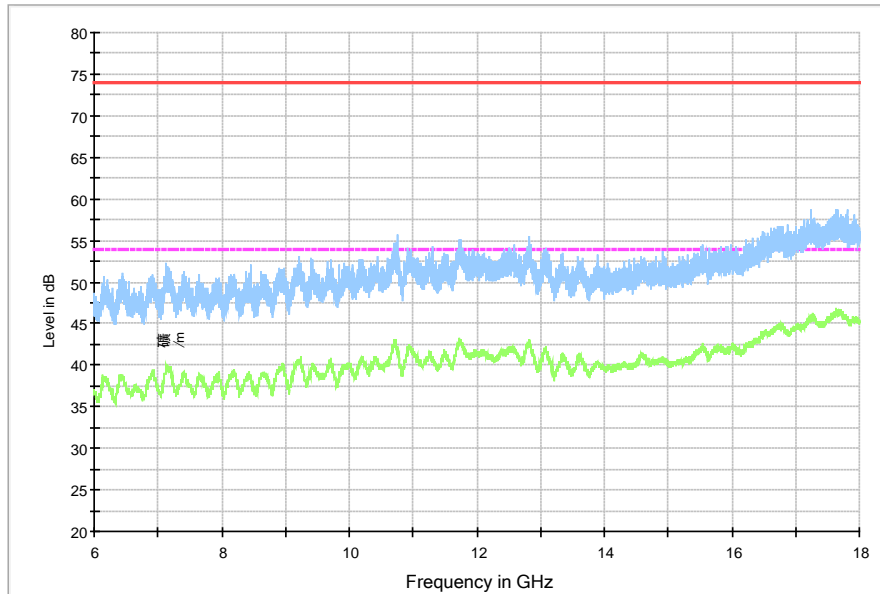


Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 32 Radiated Spurious Emission (802.11n-HT40, Ch159 3 GHz-6GHz)**

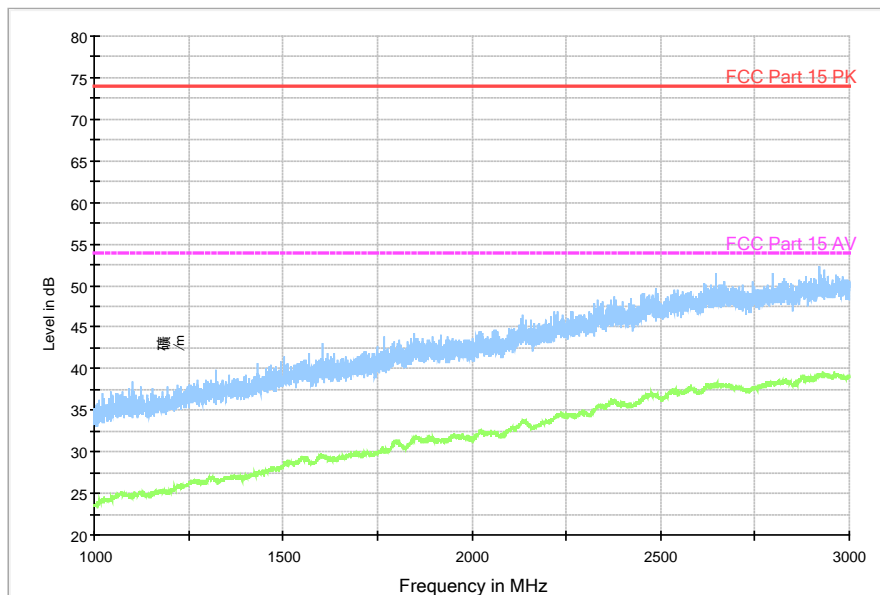


RE - 6GHz-18GHz



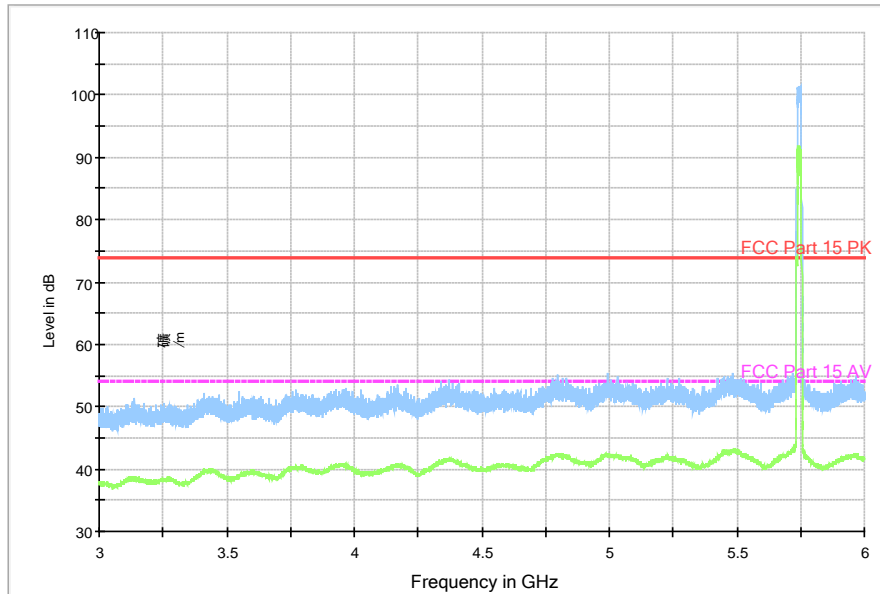
**Fig. 33 Radiated Spurious Emission (802.11n-HT40, Ch159, 6 GHz-18 GHz)**

RE - 1GHz-3GHz



**Fig. 34 Radiated Spurious Emission (802.11ac-HT20, Ch149, 1 GHz-3 GHz)**

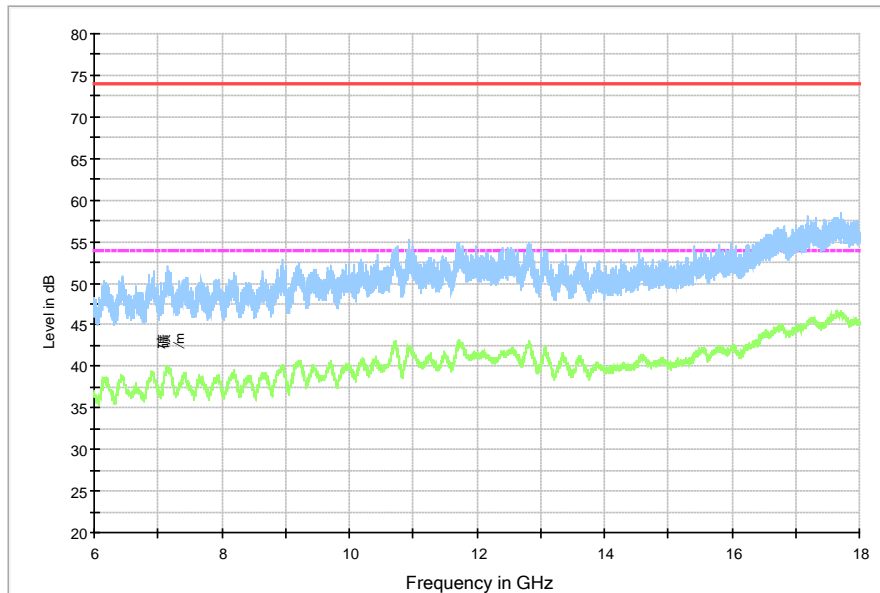
RE - 3GHz-6GHz



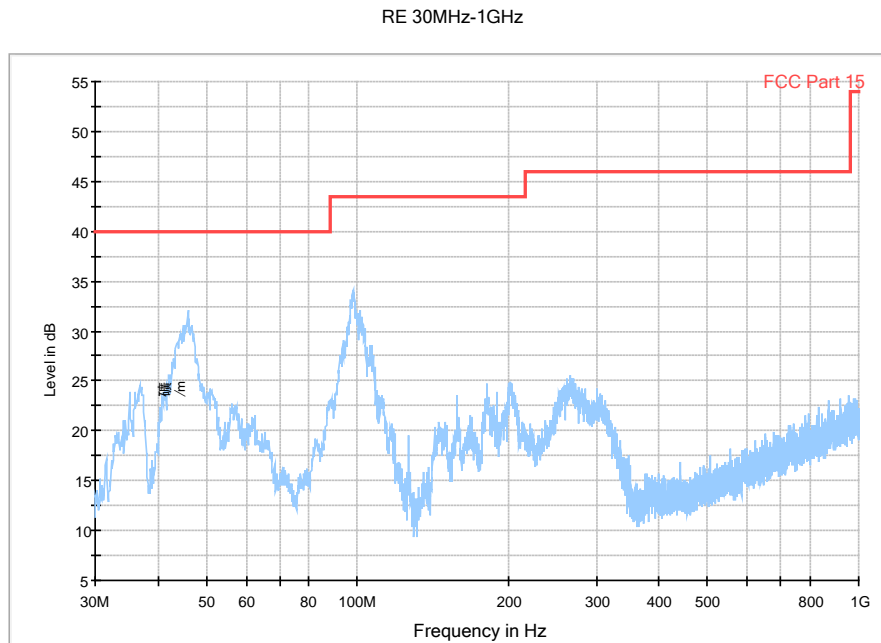
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 35 Radiated Spurious Emission (802.11ac-HT20, Ch149, 3 GHz-6 GHz)**

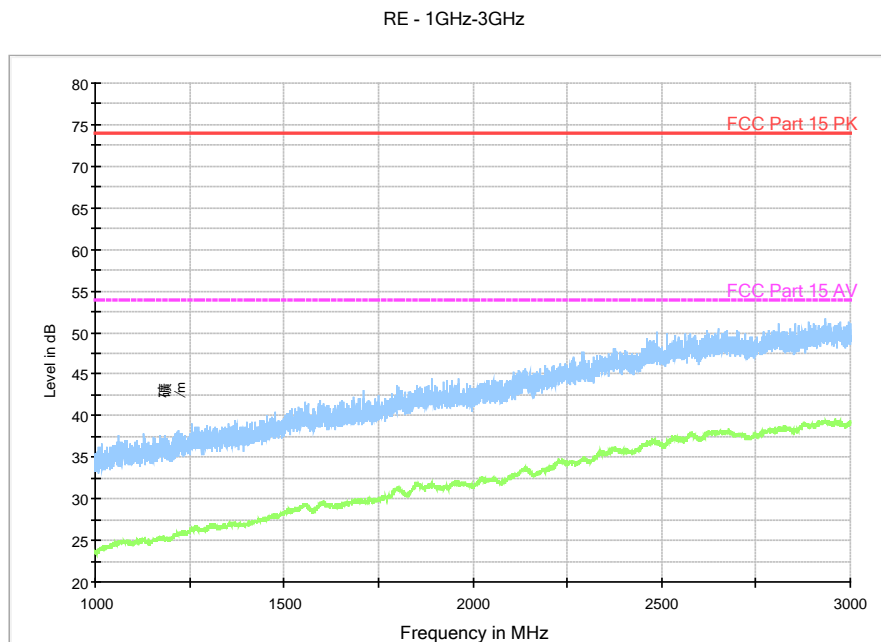
RE - 6GHz-18GHz



**Fig. 36 Radiated Spurious Emission (802.11ac-HT20, Ch149, 6 GHz-18 GHz)**

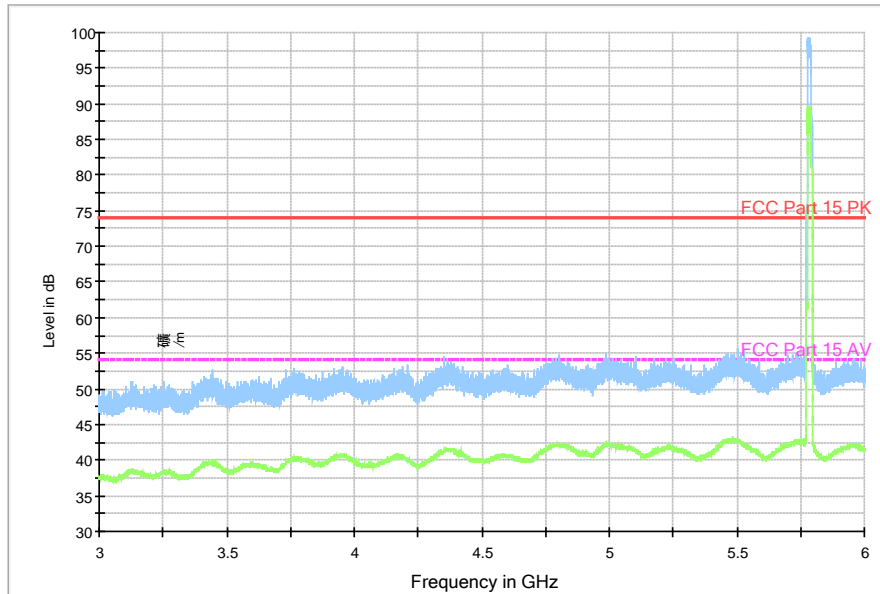


**Fig. 37 Radiated Spurious Emission (802.11ac-HT20, Ch157, 30 MHz-1 GHz)**



**Fig. 38 Radiated Spurious Emission (802.11ac-HT20, Ch157, 1 GHz-3 GHz)**

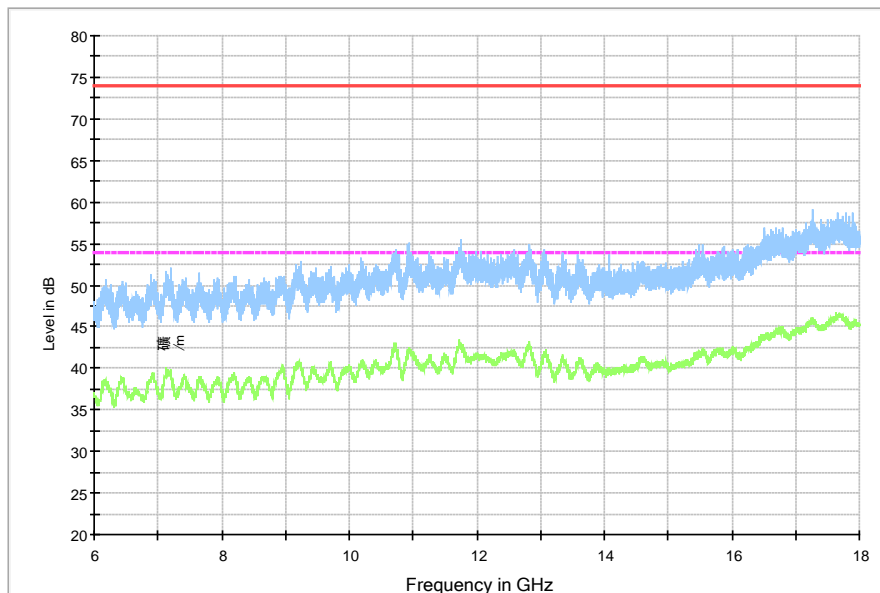
RE - 3GHz-6GHz



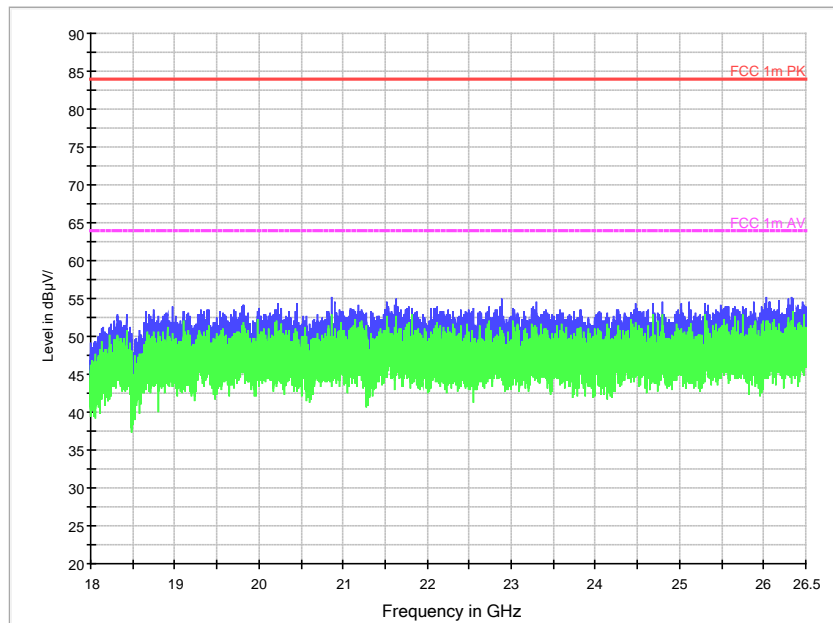
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 39 Radiated Spurious Emission (802.11ac-HT20, Ch157, 3 GHz-6 GHz)**

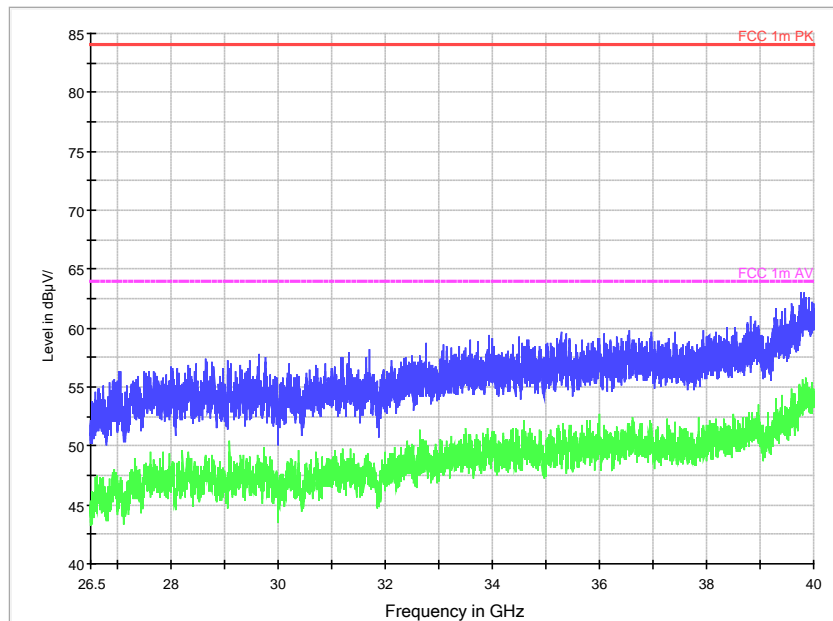
RE - 6GHz-18GHz



**Fig. 40 Radiated Spurious Emission (802.11ac-HT20, Ch157, 6 GHz-18 GHz)**

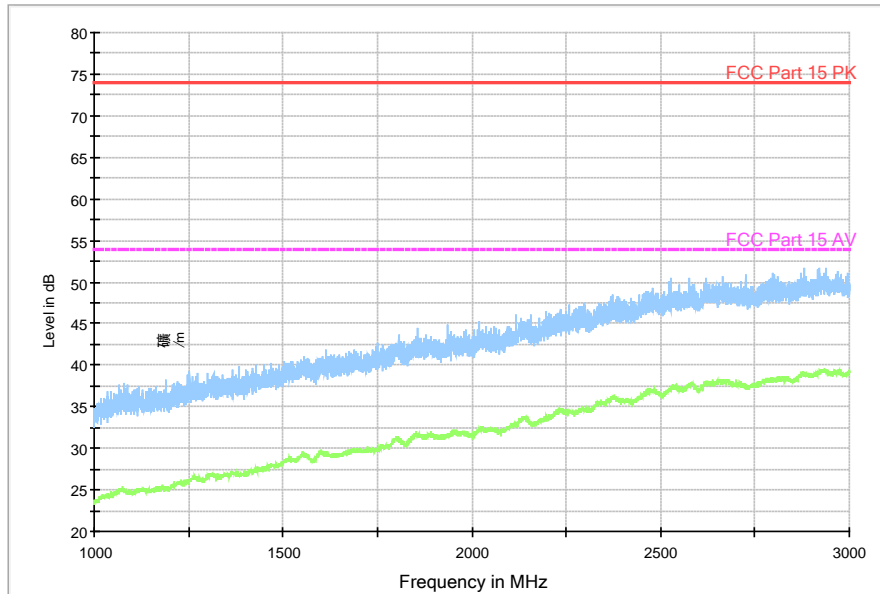


**Fig. 41 Radiated Spurious Emission (802.11ac-HT20, Ch157, 18 GHz-26.5 GHz)**



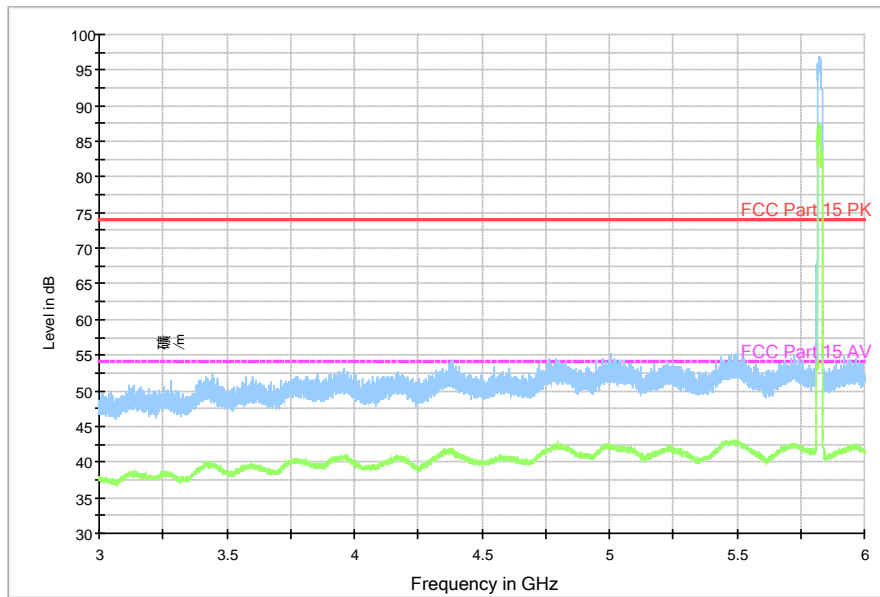
**Fig. 42 Radiated Spurious Emission (802.11ac-HT20, Ch157, 26.5 GHz - 40 GHz)**

RE - 1GHz-3GHz



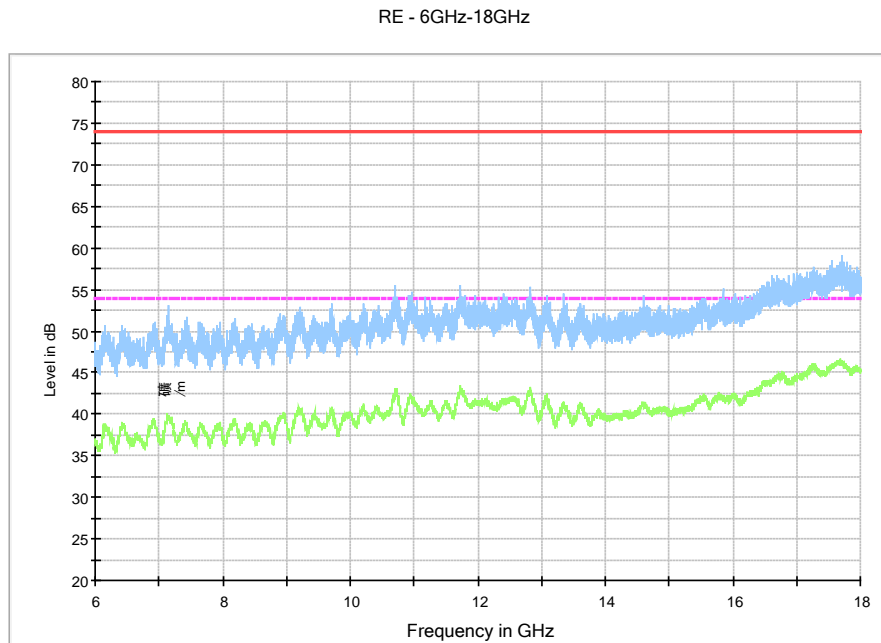
**Fig. 43 Radiated Spurious Emission (802.11ac-HT20, Ch165, 1 GHz-3 GHz)**

RE - 3GHz-6GHz

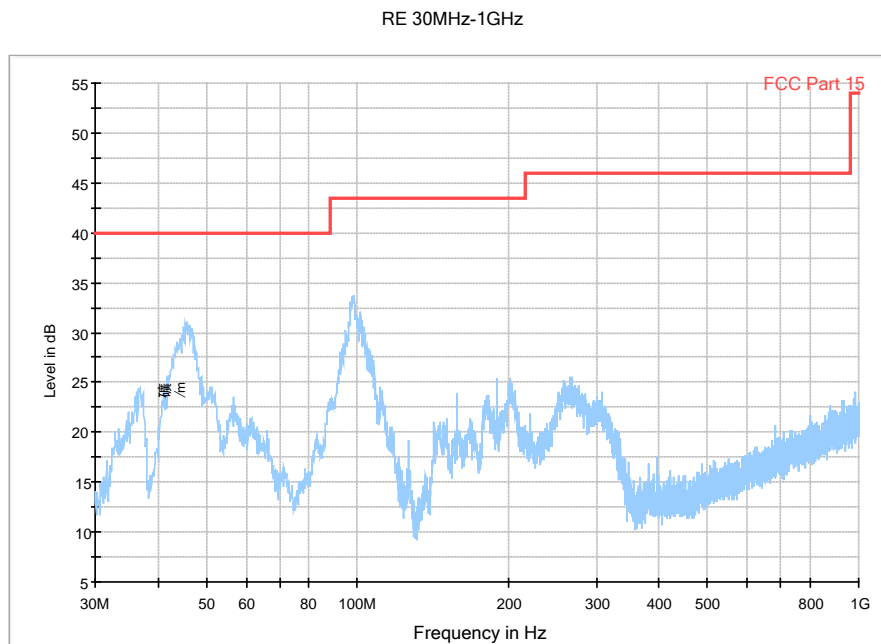


Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 44 Radiated Spurious Emission (802.11ac-HT20, Ch165, 3 GHz-6 GHz)**

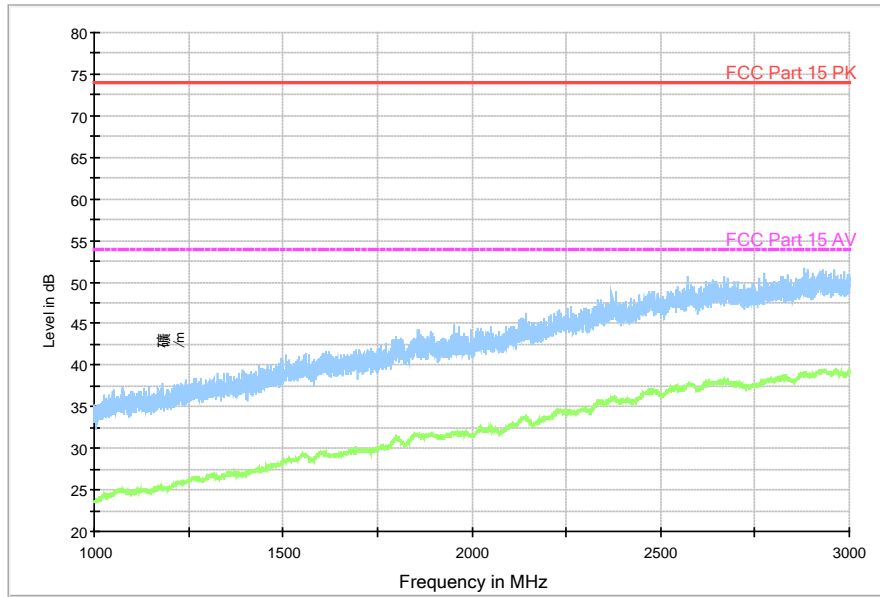


**Fig. 45 Radiated Spurious Emission (802.11ac-HT20, Ch165, 6 GHz-18 GHz)**



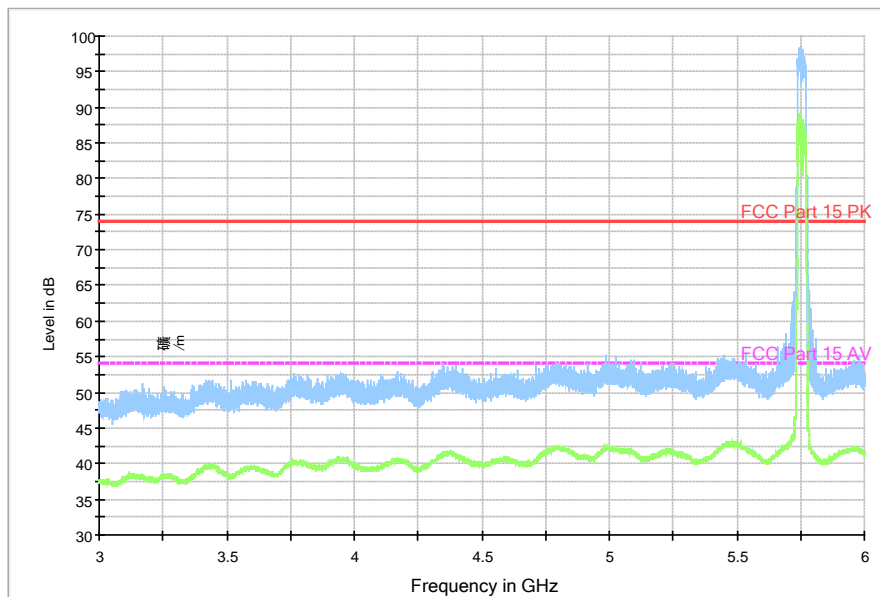
**Fig. 46 Radiated Spurious Emission (802.11ac-HT40, Ch151, 30 MHz-1 GHz)**

RE - 1GHz-3GHz



**Fig. 47 Radiated Spurious Emission (802.11ac-HT40, Ch151, 1 GHz-3GHz)**

RE - 3GHz-6GHz

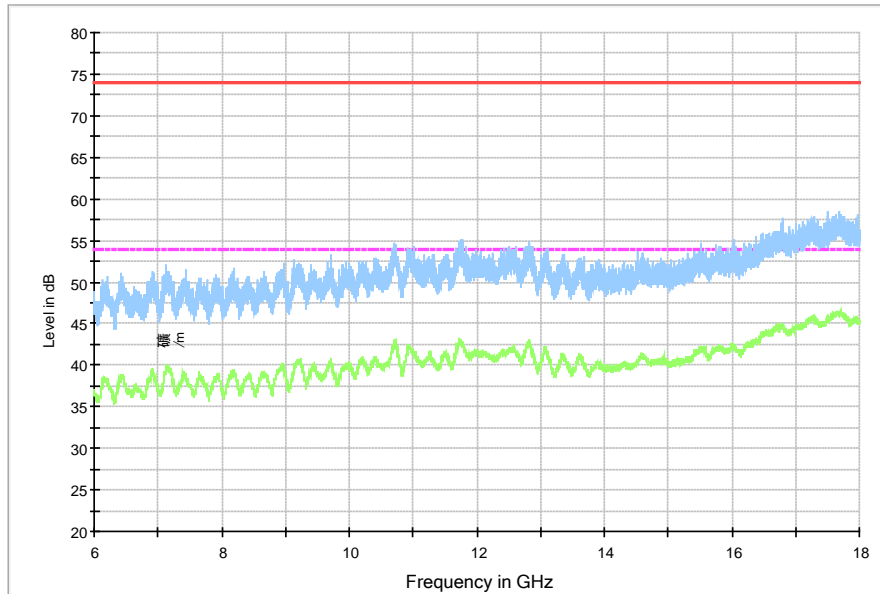


Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

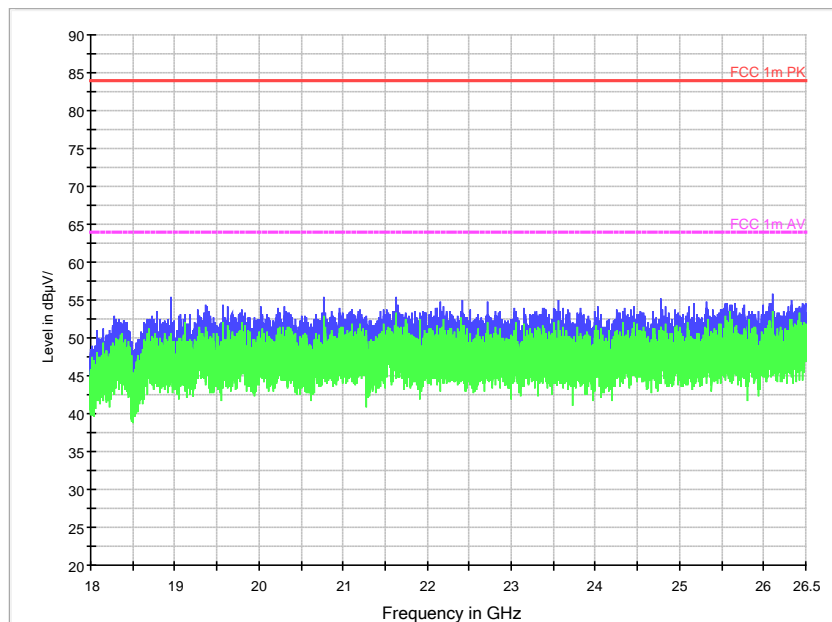
**Fig. 48 Radiated Spurious Emission (802.11ac-HT40, Ch151, 3 GHz-6GHz)**



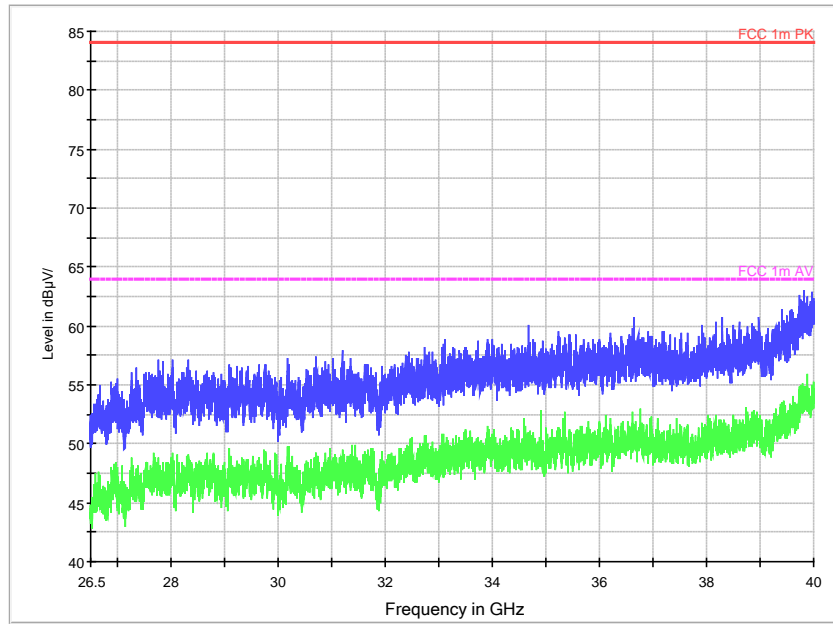
RE - 6GHz-18GHz



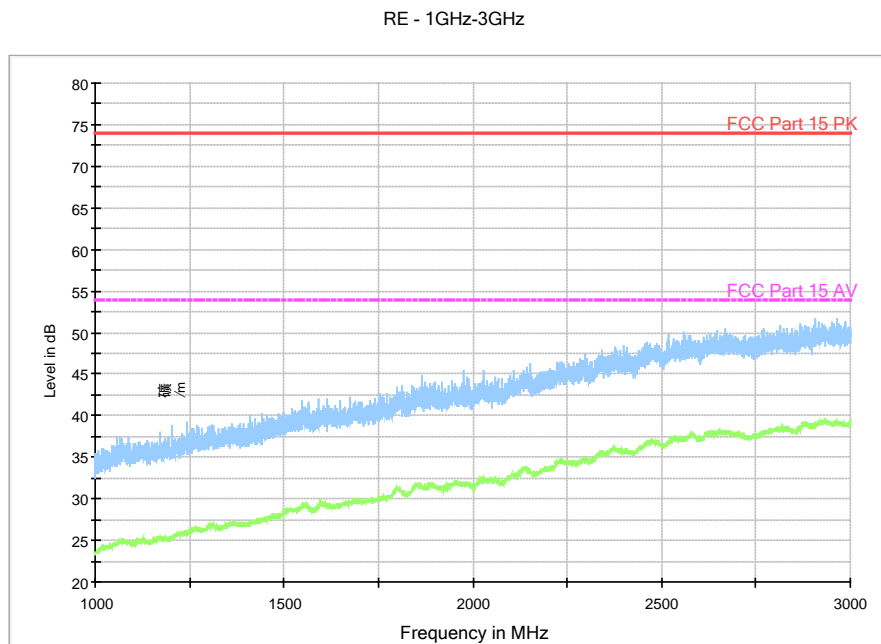
**Fig. 49 Radiated Spurious Emission (802.11ac-HT40, Ch151, 6 GHz-18 GHz)**



**Fig. 50 Radiated Spurious Emission (802.11ac-HT40, Ch151, 18 GHz-26.5 GHz)**

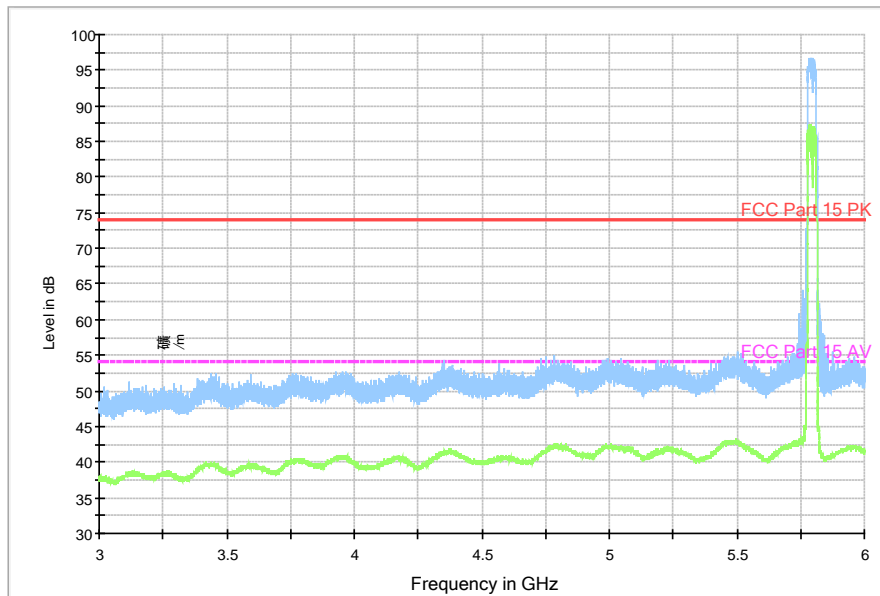


**Fig. 51 Radiated Spurious Emission (802.11ac-HT40, Ch151, 26.5 GHz - 40 GHz)**



**Fig. 52 Radiated Spurious Emission (802.11ac-HT40, Ch159 1 GHz-3GHz)**

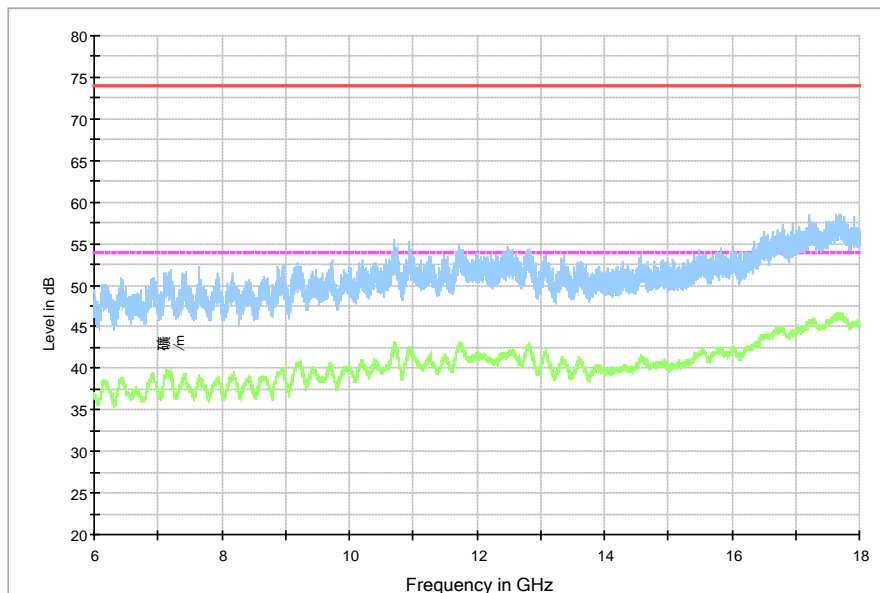
RE - 3GHz-6GHz



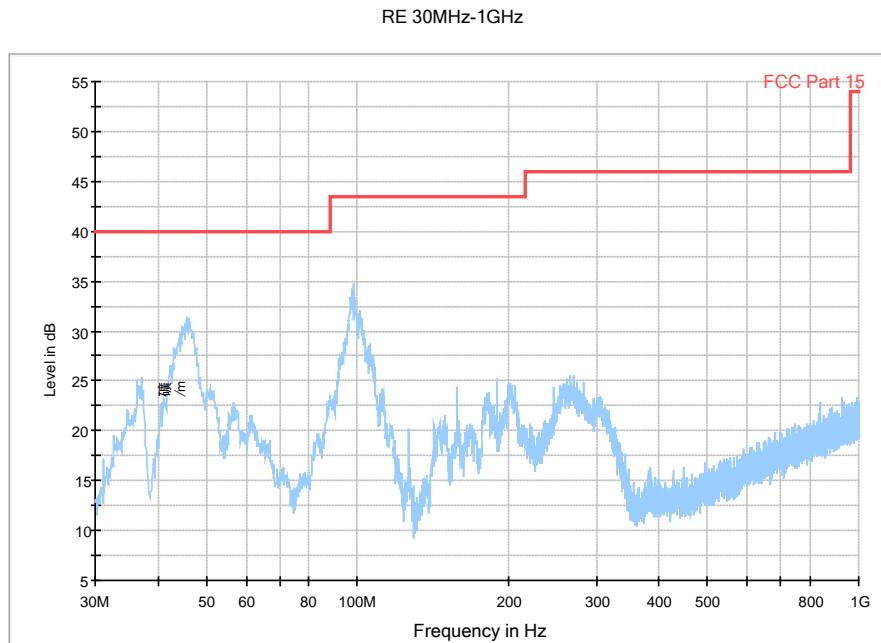
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 53 Radiated Spurious Emission (802.11ac-HT40, Ch159 3 GHz-6GHz)**

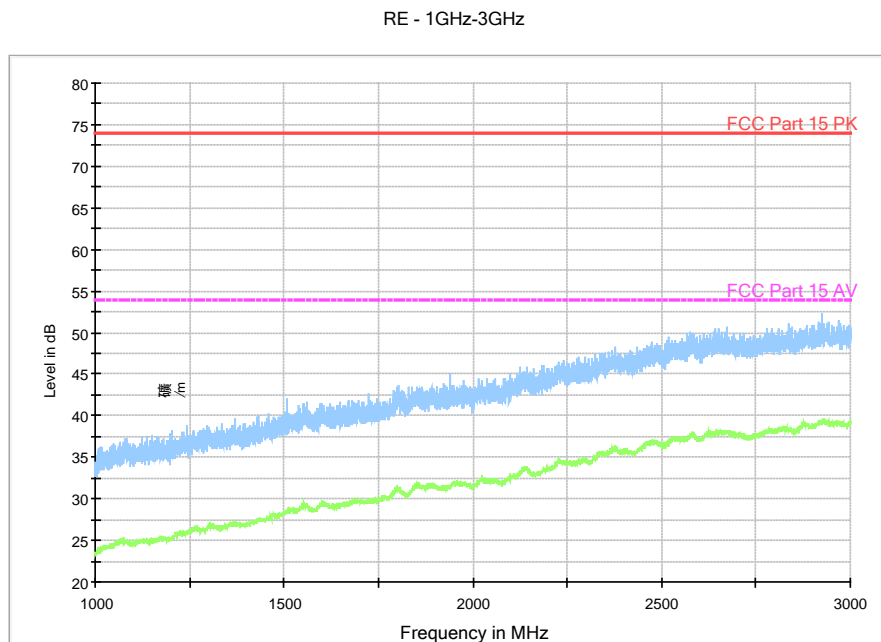
RE - 6GHz-18GHz



**Fig. 54 Radiated Spurious Emission (802.11ac-HT40, Ch159, 6 GHz-18 GHz)**

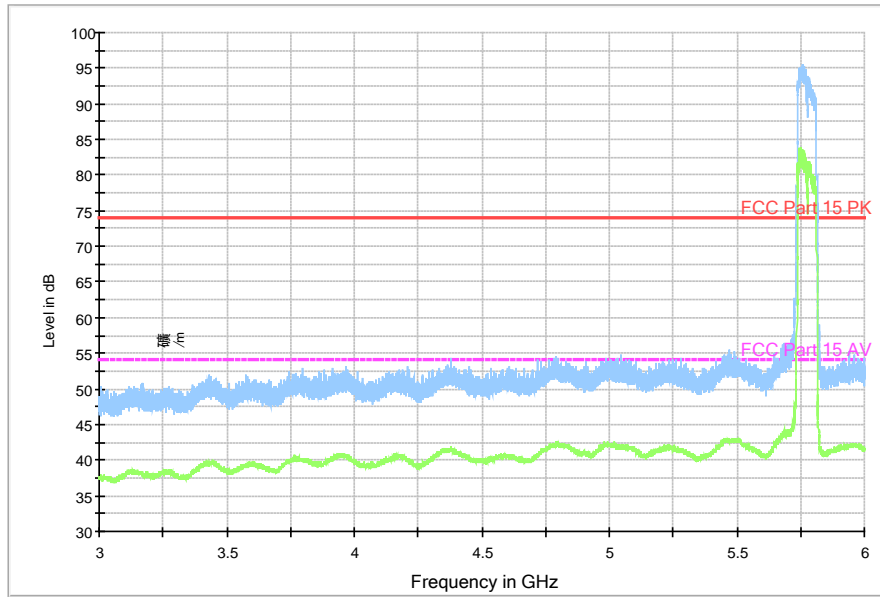


**Fig. 55 Radiated Spurious Emission (802.11ac-HT80, Ch155, 30 MHz-1 GHz)**



**Fig. 56 Radiated Spurious Emission (802.11ac-HT80, Ch155, 1 GHz-3GHz)**

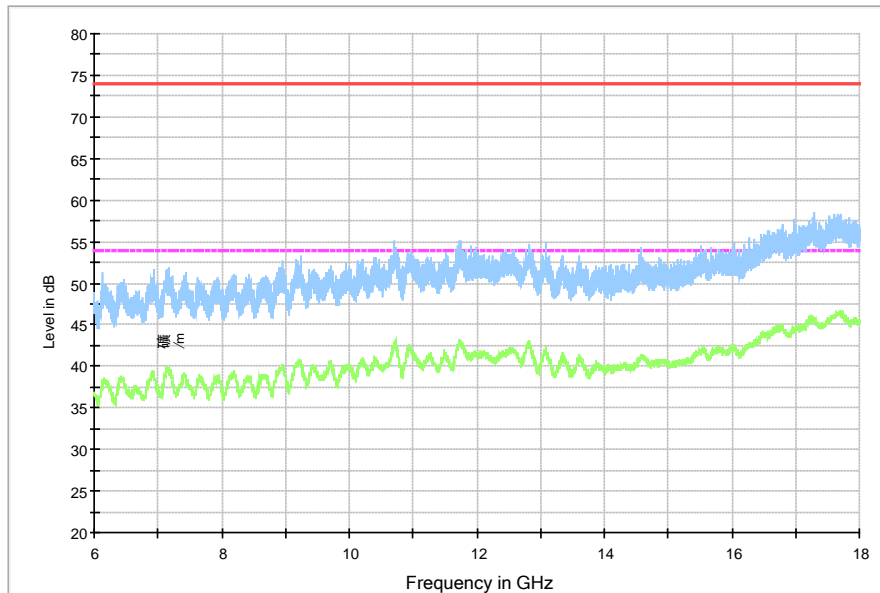
RE - 3GHz-6GHz



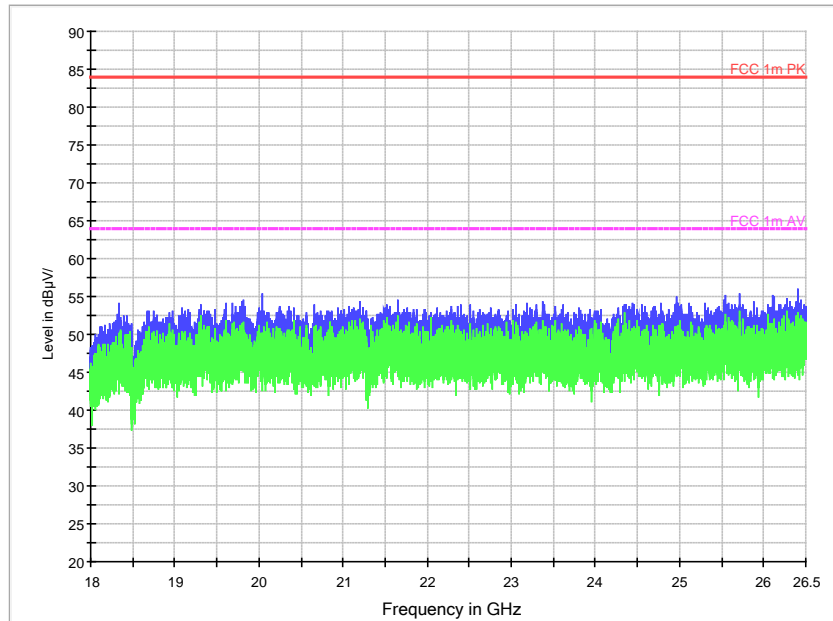
Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

**Fig. 57 Radiated Spurious Emission (802.11ac-HT80, Ch155, 3 GHz-6GHz)**

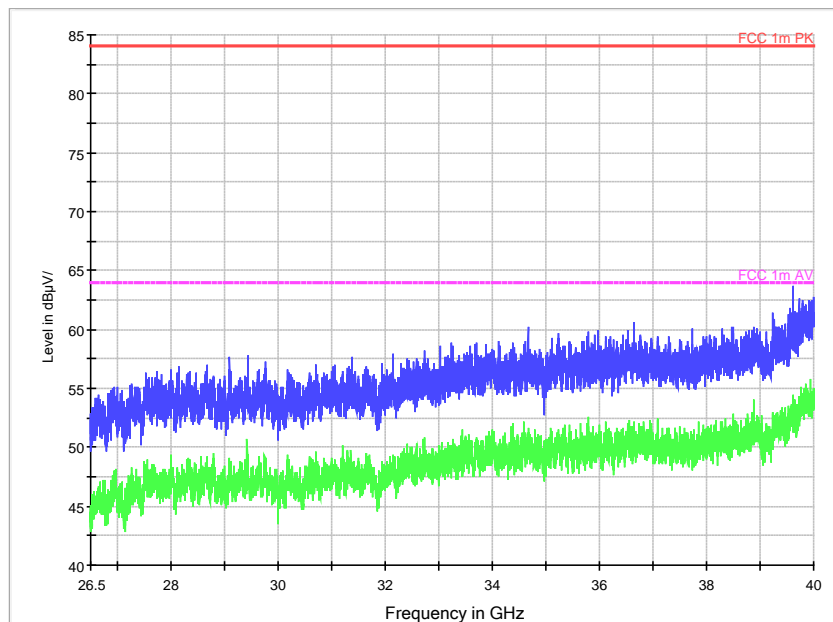
RE - 6GHz-18GHz



**Fig. 58 Radiated Spurious Emission (802.11ac-HT80, Ch155, 6 GHz-18 GHz)**



**Fig. 59 Radiated Spurious Emission (802.11ac-HT80, Ch155, 18 GHz-26.5 GHz)**



**Fig. 60 Radiated Spurious Emission (802.11ac-HT80, Ch155, 26.5 GHz - 40 GHz)**

### A.3. Band Edges Compliance

**Measurement Limit:**

| Standard               | Limit (dB $\mu$ V/m) |    |
|------------------------|----------------------|----|
| FCC 47 CFR Part 15.209 | Peak                 | 74 |
|                        | Average              | 54 |

The measurement is made according to ANSI C63.10

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)).

**Measurement Result:**

| Mode             | Channel  | Test Results | Conclusion |
|------------------|----------|--------------|------------|
| 802.11a          | 5745 MHz | Fig.61       | P          |
|                  | 5825 MHz | Fig.62       | P          |
| 802.11n<br>HT20  | 5745 MHz | Fig.63       | P          |
|                  | 5825 MHz | Fig.64       | P          |
| 802.11n<br>HT40  | 5755 MHz | Fig.65       | P          |
|                  | 5795 MHz | Fig.66       | P          |
| 802.11ac<br>HT20 | 5745 MHz | Fig.67       | P          |
|                  | 5825 MHz | Fig.68       | P          |
| 802.11ac<br>HT40 | 5755 MHz | Fig.69       | P          |
|                  | 5795 MHz | Fig.70       | P          |

**Conclusion: PASS**

Test graphs as below:

RE - Power-5.685GHz-5.765GHz

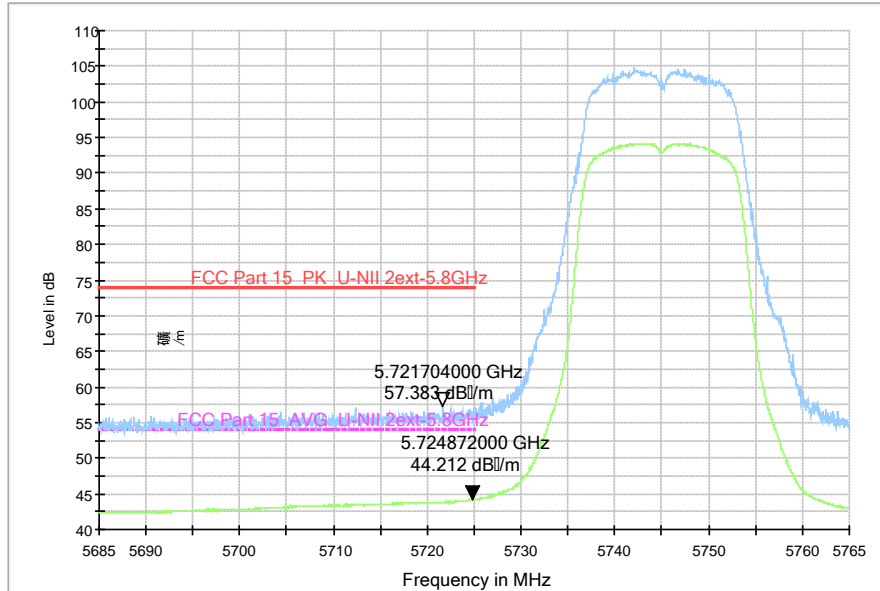


Fig. 61 Band Edges (802.11a, 5745MHz)

RE - Power-5.810GHz-5.890GHz

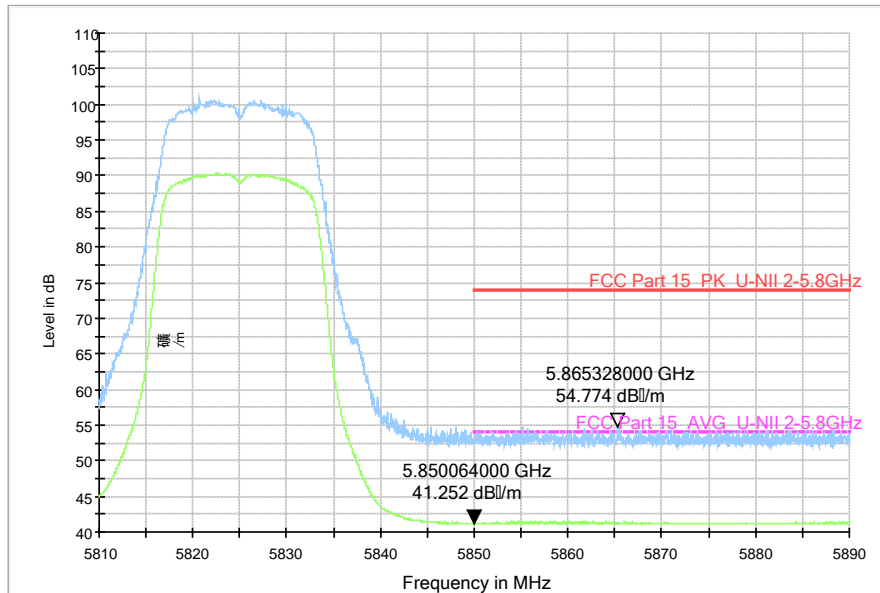
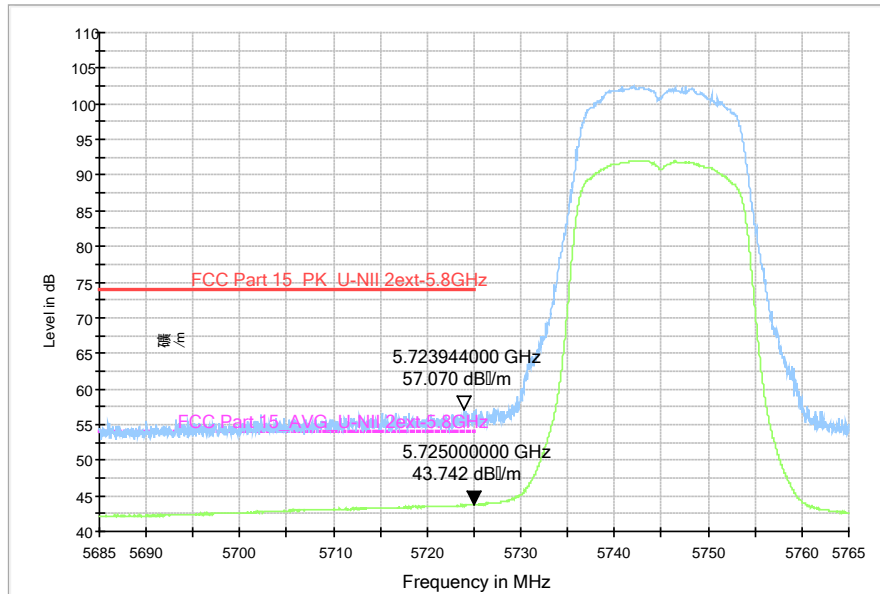


Fig. 62 Band Edges (802.11a, 5825MHz)

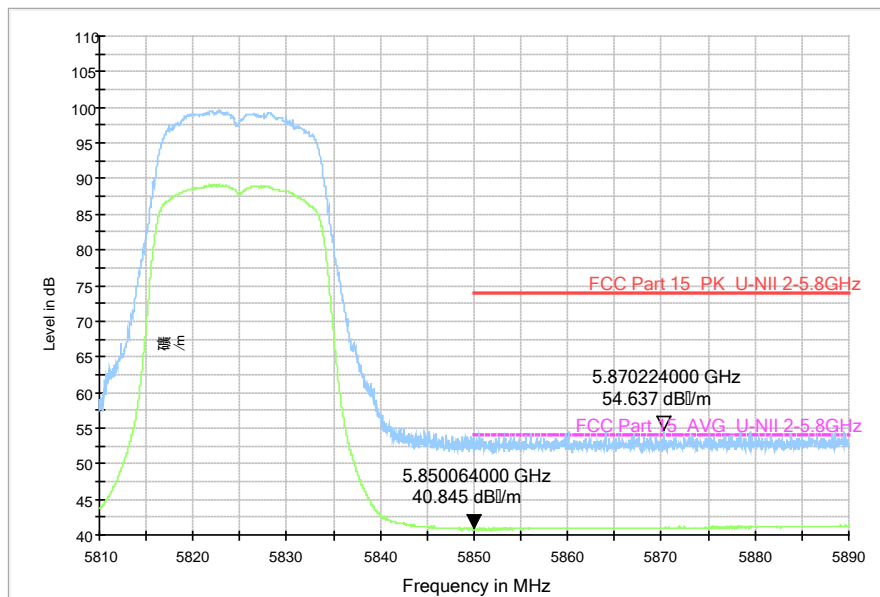


RE - Power-5.685GHz-5.765GHz



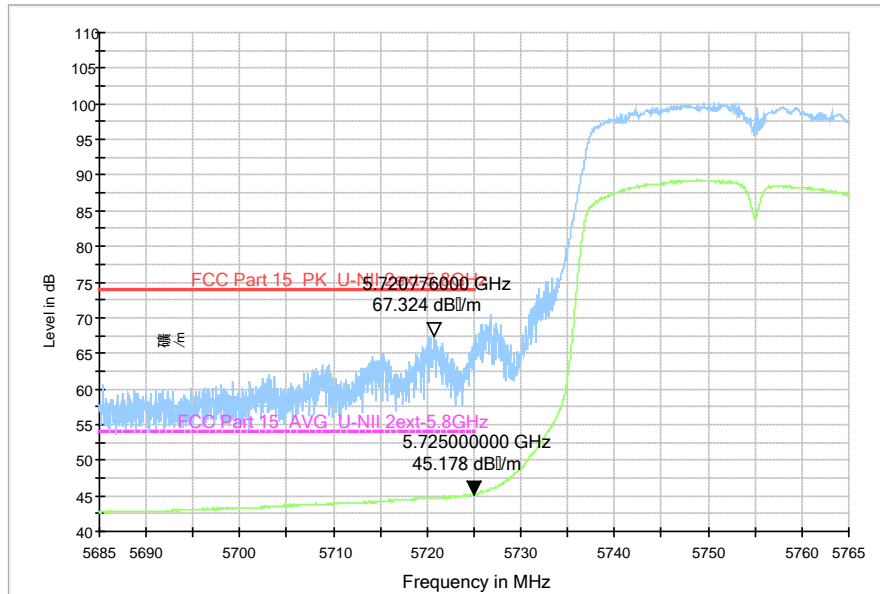
**Fig. 63 Band Edges (802.11n-HT20, 5745MHz)**

RE - Power-5.810GHz-5.890GHz



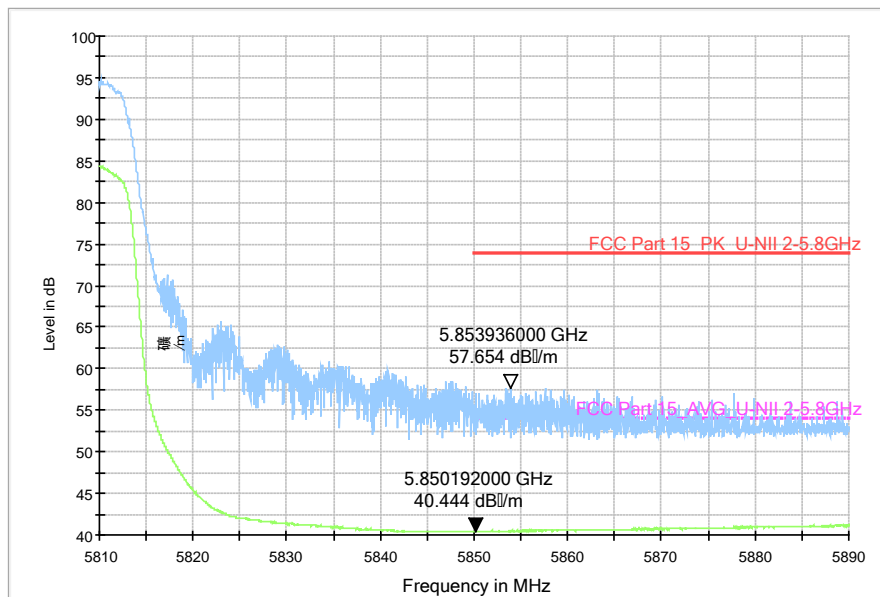
**Fig. 64 Band Edges (802.11n-HT20, 5825MHz)**

RE - Power-5.685GHz-5.765GHz



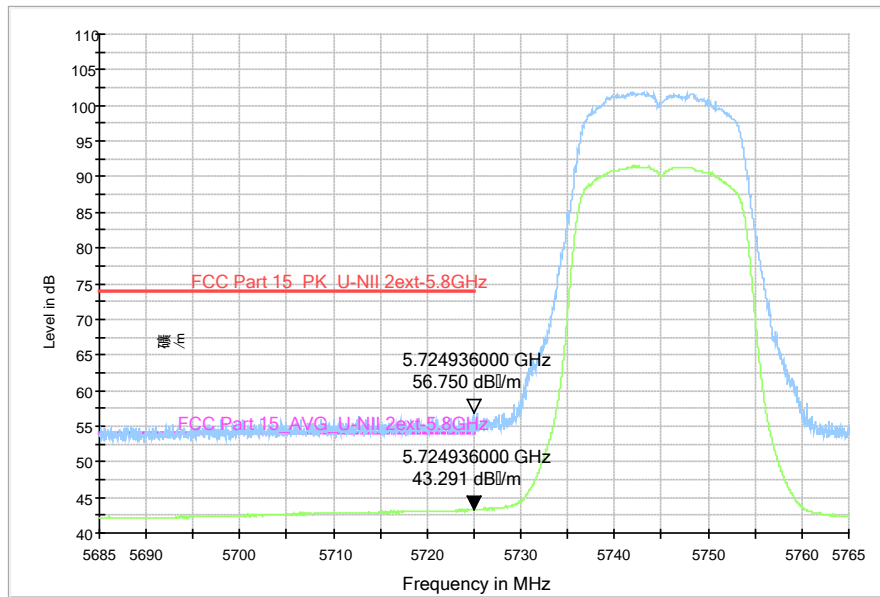
**Fig. 65 Band Edges (802.11n-HT40, 5755MHz)**

RE - Power-5.810GHz-5.890GHz



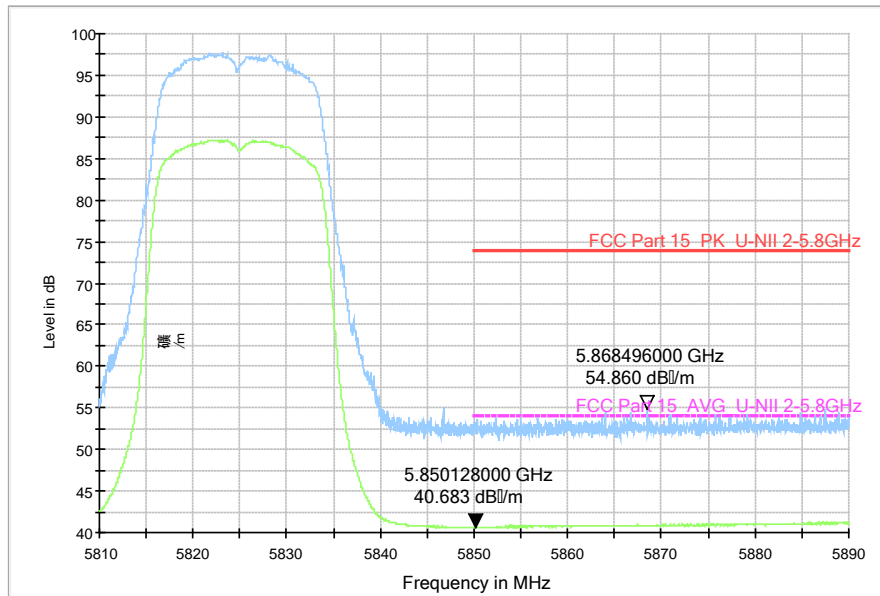
**Fig. 66 Band Edges (802.11n-HT40, 5795MHz)**

RE - Power-5.685GHz-5.765GHz



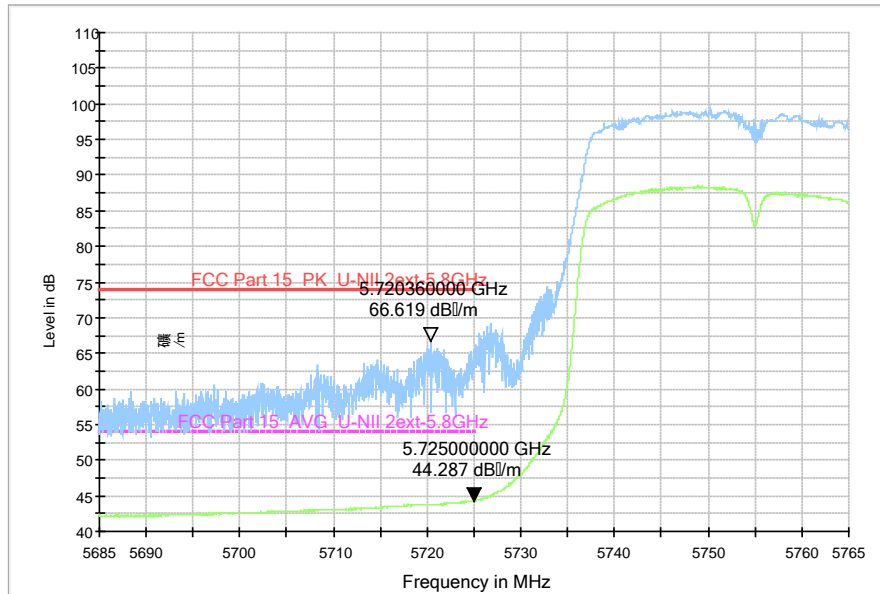
**Fig. 67 Band Edges (802.11ac-HT20, 5745MHz)**

RE - Power-5.810GHz-5.890GHz



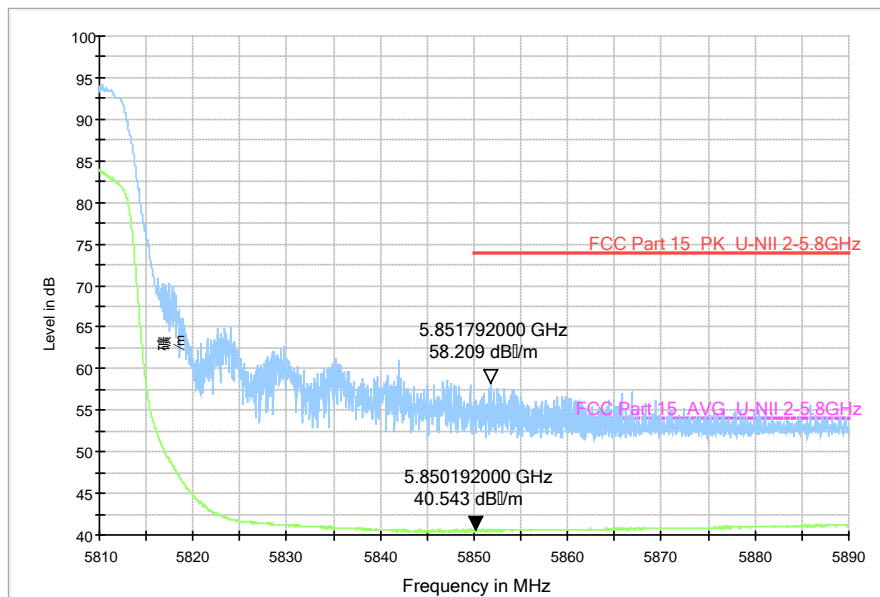
**Fig. 68 Band Edges (802.11ac-HT20, 5825MHz)**

RE - Power-5.685GHz-5.765GHz



**Fig. 69 Band Edges (802.11ac-HT40, 5755MHz)**

RE - Power-5.810GHz-5.890GHz



**Fig. 70 Band Edges (802.11ac-HT40, 5795MHz)**

#### A.4. Spurious Emissions Radiated < 30MHz

##### Measurement Limit (15.209):

| Frequency (MHz) | Field strength( $\mu\text{V/m}$ ) | Measurement distance(m) |
|-----------------|-----------------------------------|-------------------------|
| 0.009 - 0.490   | 2400/F(kHz)                       | 300                     |
| 0.490 - 1.705   | 24000/F(kHz)                      | 30                      |
| 1.705 – 30.0    | 30                                | 30                      |

The measurement is made according to ANSI 63.10.

Note: The measurement distance during the test is 3m. The limit used in plots is recalculated based on the extrapolation factor of 40 dB/decade.

##### Measurement uncertainty:

Expanded measurement uncertainty for this test item is  $U = 2.6\text{dB}$ ,  $k=2$ .

##### Measurement Results:

| Mode    | Channel      | Frequency Range | Test Results | Conclusion |
|---------|--------------|-----------------|--------------|------------|
| 802.11a | 157(5785MHz) | 9 kHz ~30 MHz   | Fig.71       | P          |

**Conclusion: PASS**

Test graphs as below:

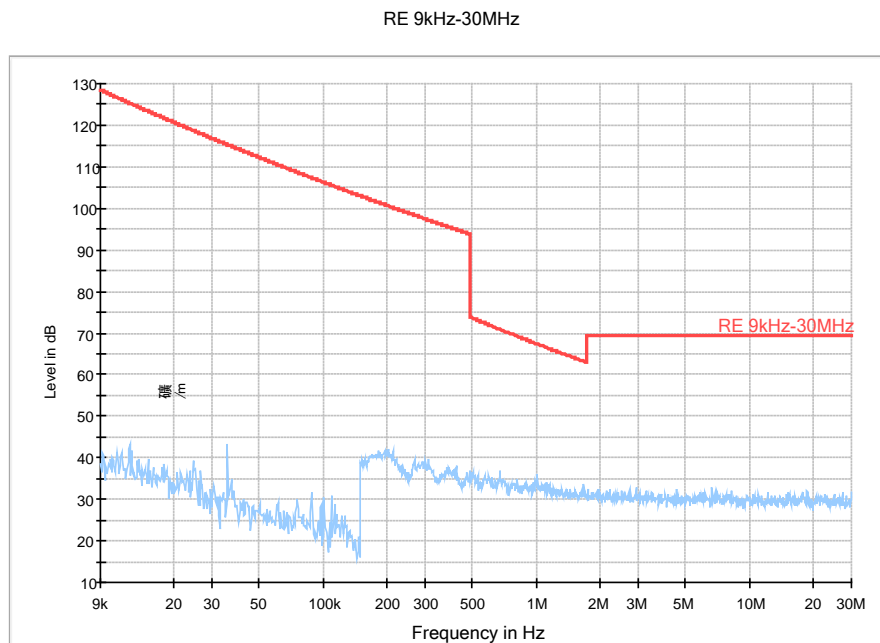


Fig. 71 Radiated Spurious Emission (802.11a, ch157, 9 kHz ~30 MHz)

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