


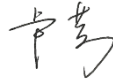



# TEST REPORT

Report Number: C21T00056-SRD04-V02

|              |   |
|--------------|---|
| Applicant    | Toast, Incorporated                         |
| Product Name | Data Processing machine                     |
| Model Name   | TT204W, TT204, TT202W, TT203, TK200, TT203W |
| Brand Name   | Toast                                       |
| FCC ID       | 2AMNG-TT200B                                |
| IC ID        | 23177-TT200B                                |

Industrial Internet Innovation Center (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in FCC Part15, ANSI C63.10-2013, KDB 558074, RSS-Gen Issue 5, RSS-247 Issue 2.

|             |   |             |   |
|-------------|---|-------------|---|
| Prepared by |  | Reviewed by |  |
| Approved by |  | Issue Date  | 2021-08-16  |

## Industrial Internet Innovation Center (Shanghai) Co., Ltd.

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Page Number: 1 of 75  
Report No.: C21T00056-SRD04-V02



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2. This report is invalid if altered.
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### **Test Laboratory:**

Industrial Internet Innovation Center (Shanghai) Co., Ltd.

Add: Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China

Tel: +86 21 68866880



### Revision Version

| Report Number       | Revision | Date       | Memo                            |
|---------------------|----------|------------|---------------------------------|
| C21T00056-SRD04-V00 | 00       | 2021-07-22 | Initial creation of test report |
| C21T00056-SRD04-V01 | 01       | 2021-08-10 | Add test setup pictures         |
| C21T00056-SRD04-V02 | 02       | 2021-08-16 | Amendment test setup pictures   |



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## 1. Test Laboratory

### 1.1. Testing Location

Primary Lab:

|                      |  |
|----------------------|--|
| Company Name         | Industrial Internet Innovation Center (Shanghai) Co., Ltd. |
| Address              | Building 4, No. 766 Jingang Rd, Pudong, Shanghai, China    |
| FCC Registration No. | 958356   |
| FCC Designation No.  | CN1177   |
| IC designation No.   | CN0067   |

Subcontracting Lab #1:

|              |     |
|--------------|-----|
| Company Name | N/A |
| Address      | N/A |

### 1.2. Testing Environment

|                    |             |
|--------------------|-------------|
| Normal Temperature | 15°C~35°C   |
| Relative Humidity  | 30%RH~60%RH |
| Supply Voltage     | 120V/60Hz   |

### 1.3. Project Information

|                    |            |
|--------------------|------------|
| Project Leader     | Lu Fang    |
| Testing Start Date | 2021-05-31 |
| Testing End Date   | 2021-07-22 |



## 2. Client Information

### 2.1. Applicant Information

|              |  |
|--------------|--|
| Company Name | Toast, Incorporated                              |
| Address      | 401 Park Drive, Suite 801, Boston, MA 02215, USA |
| Telephone    | 5625462272                                       |

### 2.2. Manufacturer Information

|              |  |
|--------------|--|
| Company Name | Toast, Incorporated                              |
| Address      | 401 Park Drive, Suite 801, Boston, MA 02215, USA |
| Telephone    | 5625462272                                       |

### 3. Equipment under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

|                                      |  |
|--------------------------------------|--|
| Product Name                         | Data Processing machine                        |
| Model name                           | TT204W, TT204, TT202W, TT203, TK200, TT203W    |
| Supported Radio Technology and Bands | BT4.2<br>WLAN 802.11b,g,n<br>WLAN 802.11a,n,ac |
| Hardware Version                     | CT541MB80C 20210226                            |
| Software Version                     | Sunmi-ct541-v2.1.59p69                         |
| WLAN Frequency                       | UNII 1: 5150MHz-5250MHz                        |
| FCC ID                               | 2AMNG-TT200B                                   |
| IC ID                                | 23177-TT200B                                   |

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

| EUT ID*                   | SN or IMEI | HW Version          | SW Version             | Date of Receipt |
|---------------------------|------------|---------------------|------------------------|-----------------|
| N05<br>(Mainly Supply)    | N/A        | CT541MB80C 20210226 | Sunmi-ct541-v2.1.59p69 | 2021/5/31       |
| N02<br>(Mainly Supply)    | N/A        | CT541MB80C 20210226 | Sunmi-ct541-v2.1.59p69 | 2021/5/31       |
| N01<br>(Secondary Supply) | N/A        | CT541MB80C 20210226 | Sunmi-ct541-v2.1.59p69 | 2021/5/31       |
| N03<br>(Thirdly Supply)   | N/A        | CT541MB80C 20210226 | Sunmi-ct541-v2.1.59p69 | 2021/5/31       |

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

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

| AE ID* | Description   | Model           | SN/Remark |
|--------|---------------|-----------------|-----------|
| CA01   | Adapter       | SOY-2400400     | N/A       |
| CB02   | Adapter       | WTA96-2400400-T | N/A       |
| CA05   | Adapter       | SOY-2400400     | N/A       |
| UA01   | Adapter Cable | N/A             | N/A       |
| UB02   | Adapter Cable | N/A             | N/A       |
| UA05   | Adapter Cable | N/A             | N/A       |
| AE1    | RF Cable      | N/A             | N/A       |

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

\*The AE is provided by the client.



## 4. Reference Documents

### 4.1. Reference Documents for testing

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

| Reference       | Title  | Version    |
|-----------------|--|------------|
| FCC Part15      | Title 47 of the Code of Federal Regulations; Chapter I<br>Part 15 - Radio frequency devices  | 2018-10-01 |
| ANSI 63.10      | 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       |
| KDB 789033      | Information Infrastructure (U-NII) Devices - Part 15,<br>Subpart E   | 2017       |
| KDB 905462      | COMPLIANCE MEASUREMENT PROCEDURES FOR<br>UNLICENSED-NATIONAL INFORMATION<br>INFRASTRUCTURE DEVICES OPERATING IN THE<br>5250-5350 MHz AND 5470-5725 MHz BANDS<br>INCORPORATING DYNAMIC FREQUENCY<br>SELECTION | 2016       |
| RSS-247 Issue 2 | Digital Transmission Systems (DTSs), Frequency<br>Hopping Systems (FHSs) and Licence-Exempt Local<br>Area Network (LE-LAN) Devices   | 2017       |
| RSS-Gen Issue 5 | General Requirements for Compliance of Radio<br>Apparatus  | 2019       |

### 4.2. Reference Information from client

Information of the test sample provided by the client.

Antenna gain of EUT 1.92 dBi

## 5. Test Summary

### 5.1. Summary of Test Results

| Measurement Items                       | Sub-clause of Part15C | Sub-clause of IC                | Verdict |
|---|-----------------------|---------------------------------|---------|
| Maximum Output Power                    | 15.407(a)             | RSS-247 6.2                     | Pass    |
| Power Spectral Density                  | 15.407(a)             | RSS-247 6.2                     | Pass    |
| 99% Occupied Bandwidth                  | N/A                   | RSS-Gen 6.7                     | Pass    |
| -26dB                                   | 15.407(a)             | RSS-247 6.2                     | Pass    |
| Band edge compliance                    | 15.407(b)             | RSS-247 6.2                     | Pass    |
| Transmitter spurious emissions radiated | 15.407(b)             | RSS-247 6.2                     | Pass    |
| Spurious emissions radiated < 30 MHz    | 15.209 & 15.407(b)    | RSS-247 6.2<br>RSS-Gen 8.9,8.10 | Pass    |
| Spurious emissions conducted < 30 MHz   | 15.407(b)             | RSS-247 6.2                     | Pass    |
| Frequency Stability                     | 15.407(g)             | RSS-Gen 8.11                    | Pass    |
| Transmit Power Control                  | 15.407(h)             | RSS-247 6.2                     | N/A     |

#### Test Conditions

|      |                    |
|------|--------------------|
| Tnom | Normal Temperature |
| Tmin | Low Temperature    |
| Tmax | High Temperature   |
| Vnom | Normal Voltage     |
| Vmin | Low Voltage        |
| Vmax | High Voltage       |
| Hnom | Norm Humidity      |
| Anom | Norm Air Pressure  |

For this report, all the test case listed above are tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

|              |      |         |
|--------------|------|---------|
| Temperature  | Tnom | 24°C    |
| Voltage      | Vnom | 24V     |
| Humidity     | Hnom | 48%     |
| Air Pressure | Anom | 1010hPa |

## 5.2. Statements

The TT204W, TT204, TT202W, TT203, TK200, TT203W supporting BT/WLAN, manufactured by Toast, Incorporated are new products for testing.

This project have three sets of configured sample N05(N02)/N01/N03, and we mainly tested sample N05(N02) tested the worst mode N01/N03, the main difference is as below:

|                  |                |  |
|------------------|----------------|--|
| Mainly Supply    | TT204          | Main LCD panel Terminal + Sub LCD panel Terminal + Attached base support |
|                  | TT204W         | The same with TT204, just the color is White                             |
| Secondary Supply | TT203          | Main LCD panel Terminal + Attached base support                          |
|                  | TT202W, TT203W | The same with TT203, just the color is White                             |
| Thirdly Supply   | TK200          | Main LCD panel Terminal + Add POE module + Add one speaker               |

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 5.1.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

## 6. Measurement Results

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

|                          |                            |
|--------------------------|----------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C |
| Relative humidity        | Min. = 20 %, Max. = 75 %   |
| Shielding effectiveness  | > 100 dB                   |
| Ground system resistance | < 0.5 Ω                    |
| Temperature              | Min. = 15 °C, Max. = 35 °C |

**Control room** did not exceed following limits along the EMC testing:

|                          |                            |
|--------------------------|----------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C |
| Relative humidity        | Min. = 30 %, Max. = 60 %   |
| Shielding effectiveness  | > 100 dB                   |
| Electrical insulation    | > 10 kΩ                    |
| Ground system resistance | < 0.5 Ω                    |

**Fully-anechoic chamber1** (6.9 meters×10.9 meters×5.4 meters) did not exceed following limits along the EMC testing:

|                              |  |
|------------------------------|--|
| Temperature                  | Min. = 15 °C, Max. = 35 °C                 |
| Relative humidity            | Min. = 25 %, Max. = 75 %                   |
| Shielding effectiveness      | > 100 dB                                   |
| Electrical insulation        | > 10 kΩ                                    |
| Ground system resistance     | < 0.5 Ω                                    |
| VSWR                         | Between 0 and 6 dB, from 1GHz to 18GHz     |
| Site Attenuation Deviation   | Between -4 and 4 dB, 30MHz to 1GHz         |
| Uniformity of field strength | Between 0 and 6 dB, from 80MHz to 3000 MHz |

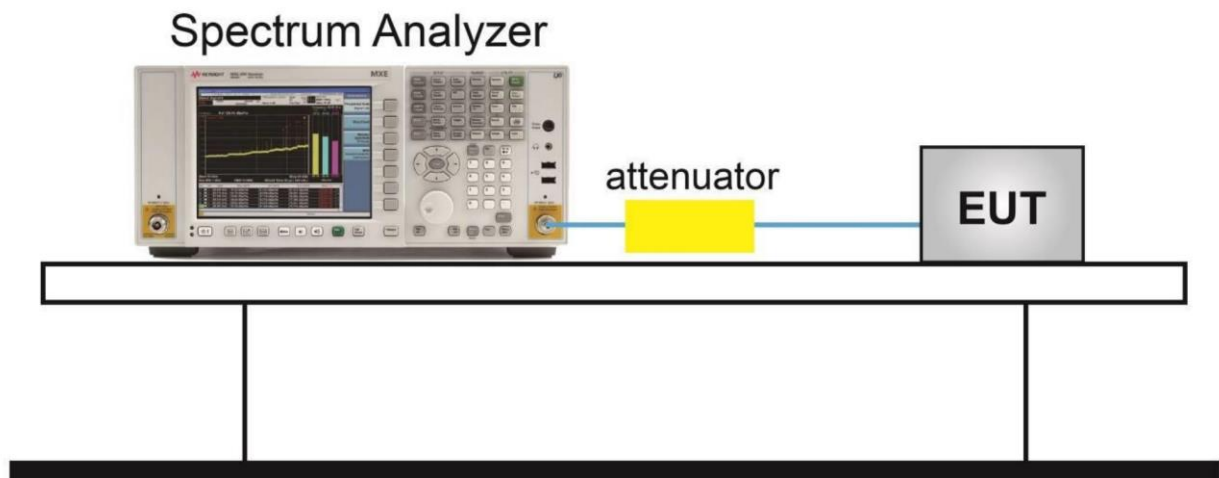
## 6.1. Maximum output Power

### 6.1.1. Measurement Limit and Method

| Standard                         | Limit (dBm)              |
|----------------------------------|--------------------------|
| FCC 47 CFR Part 15.407(a)(1)(iv) | 23 or $10+10 \log_{10}B$ |
| RSS-247 6.2.1.1                  | 23 or $10+10 \log_{10}B$ |

Limit use the less value, and B is the 26dB bandwidth.

### 6.1.2. Test Setup



### 6.1.3. The measurement method SA-1 is made according to KDB 789033

Set the spectrum analyzer in the following:

Detector: RMS.

RBW=1MHz.

VBW=3MHz.

Sweep time = AUTO.

Span: 30MHz (for 20MHz); 60MHz (for 40MHz); 120MHz (for 80MHz).

Method AVGPM-G (Measurement using a gated RF average-reading power meter)

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. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required



**Measurement Results**  
**802.11a mode U-NII-1**

| Mode    | Data Rate(Mbps) | Reading Power (dBm)    |         |         |
|---------|-----------------|------------------------|---------|---------|
|         |                 | 5180MHz                | 5200MHz | 5240MHz |
| 802.11a | 6               | 7.57                   | 8.40    | 7.04    |
| \Mode   | Data Rate(Mbps) | Max Power (dBm)        |         |         |
|         |                 | 5180MHz                | 5200MHz | 5240MHz |
| 802.11a | 6               | 7.57                   | 8.40    | 7.04    |
| Mode    | Data Rate(Mbps) | EIRP(dBm)              |         |         |
|         |                 | 5180MHz                | 5200MHz | 5240MHz |
| 802.11a | 6               | 9.49                   | 10.32   | 8.96    |
| Mode    | Data Rate(Mbps) | Duty Cycle Factor (dB) |         |         |
|         |                 | 5180MHz                | 5200MHz | 5240MHz |
| 802.11a | 6               | 0.00                   | 0.00    | 0.00    |

Note: Max power(dBm)= Reading Power (dBm)+ Duty Cycle Factor (dB)

E.I.R.P (dBm) = Max Power (dBm) + Antenna Gain (dBi), Antenna Gain = 1.92 dBi.

The data rate 6Mbps is selected as worse condition, and the following cases are performed with this condition.

**802.11n-HT20 mode U-NII-1**

| Mode           | Data Rate(Index) | Reading Power (dBm)    |         |         |
|----------------|------------------|------------------------|---------|---------|
|                |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11n(20MHz) | MCS0             | 7.07                   | 8.34    | 7.97    |
| Mode           | Data Rate(Index) | Max Power (dBm)        |         |         |
|                |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11n(20MHz) | MCS0             | 7.30                   | 8.57    | 8.20    |
| Mode           | Data Rate(Index) | EIRP(dBm)              |         |         |
|                |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11n(20MHz) | MCS0             | 9.22                   | 10.49   | 10.12   |
| Mode           | Data Rate(Index) | Duty Cycle Factor (dB) |         |         |
|                |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11n(20MHz) | MCS0             | 0.23                   | 0.23    | 0.23    |

Note: Max power(dBm)= Reading Power (dBm)+ Duty Cycle Factor (dB)

E.I.R.P (dBm) = Max Power (dBm) + Antenna Gain (dBi), Antenna Gain = 1.92 dBi.

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

**802.11n-HT40 mode U-NII-1**

| Mode           | Data Rate(Index) | Reading Power (dBm)    |   |         |
|----------------|------------------|------------------------|---|---------|
|                |                  | 5190MHz                | / | 5230MHz |
| 802.11n(40MHz) | MCS0             | 3.51                   | / | 7.37    |
| Mode           | Data Rate(Index) | Max Power (dBm)        |   |         |
|                |                  | 5190MHz                | / | 5230MHz |
| 802.11n(40MHz) | MCS0             | 3.97                   | / | 7.83    |
| Mode           | Data Rate(Index) | EIRP(dBm)              |   |         |
|                |                  | 5190MHz                | / | 5230MHz |
| 802.11n(40MHz) | MCS0             | 5.89                   | / | 9.75    |
| Mode           | Data Rate(Index) | Duty Cycle Factor (dB) |   |         |
|                |                  | 5190MHz                | / | 5230MHz |
| 802.11n(40MHz) | MCS0             | 0.46                   | / | 0.46    |

Note: Max power(dBm)= Reading Power (dB)+ Duty Cycle Factor (dB)

E.I.R.P (dBm) = Max Power (dBm) + Antenna Gain (dBi), Antenna Gain = 1.92 dBi.

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.



**802.11ac-HT20 mode U-NII-1**

| Mode                | Data Rate(Index) | Reading Power (dBm)    |         |         |
|---------------------|------------------|------------------------|---------|---------|
|                     |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11ac<br>(20MHz) | MCS0             | 8.48                   | 8.62    | 8.41    |
| Mode                | Data Rate(Index) | Max Power (dBm)        |         |         |
|                     |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11ac<br>(20MHz) | MCS0             | 8.71                   | 8.85    | 8.64    |
| Mode                | Data Rate(Index) | EIRP(dBm)              |         |         |
|                     |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11ac<br>(20MHz) | MCS0             | 10.63                  | 10.77   | 10.56   |
| Mode                | Data Rate(Index) | Duty Cycle Factor (dB) |         |         |
|                     |                  | 5180MHz                | 5200MHz | 5240MHz |
| 802.11ac<br>(20MHz) | MCS0             | 0.23                   | 0.23    | 0.23    |

Note: Max power(dBm)= Reading Power (dB)+ Duty Cycle Factor (dB)

E.I.R.P (dBm) = Max Power (dBm) + Antenna Gain (dBi), Antenna Gain = 1.92 dBi.

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

**802.11ac-HT40 mode U-NII-1**

| Mode                | Data Rate(Index) | Reading Power (dBm)    |   |         |
|---------------------|------------------|------------------------|---|---------|
|                     |                  | 5190MHz                | / | 5230MHz |
| 802.11ac<br>(40MHz) | MCS0             | 8.87                   | / | 8.34    |
| Mode                | Data Rate(Index) | Max Power (dBm)        |   |         |
|                     |                  | 5190MHz                | / | 5230MHz |
| 802.11ac<br>(40MHz) | MCS0             | 9.30                   | / | 8.77    |
| Mode                | Data Rate(Index) | EIRP(dBm)              |   |         |
|                     |                  | 5190MHz                | / | 5230MHz |
| 802.11ac<br>(40MHz) | MCS0             | 11.2                   | / | 10.69   |
| Mode                | Data Rate(Index) | Duty Cycle Factor (dB) |   |         |
|                     |                  | 5190MHz                | / | 5230MHz |
| 802.11ac<br>(40MHz) | MCS0             | 0.43                   | / | 0.43    |

Note: Max power(dBm)= Reading Power (dB)+ Duty Cycle Factor (dB)

E.I.R.P (dBm) = Max Power (dBm) + Antenna Gain (dBi), Antenna Gain = 1.92 dBi.

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

**802.11ac-HT80 mode U-NII-1**

| Mode             | Data Rate(Index) | Reading Power (dBm)    |         |   |
|------------------|------------------|------------------------|---------|---|
|                  |                  | /                      | 5210MHz | / |
| 802.11ac (80MHz) | MCS0             | /                      | 8.56    | / |
| Mode             | Data Rate(Index) | Max Power (dBm)        |         |   |
|                  |                  | /                      | 5210MHz | / |
| 802.11ac (80MHz) | MCS0             | /                      | 9.25    | / |
| Mode             | Data Rate(Index) | EIRP(dBm)              |         |   |
|                  |                  | /                      | 5210MHz | / |
| 802.11ac (80MHz) | MCS0             | /                      | 11.17   | / |
| Mode             | Data Rate(Index) | Duty Cycle Factor (dB) |         |   |
|                  |                  | /                      | 5210MHz | / |
| 802.11ac (80MHz) | MCS0             | /                      | 0.69    | / |

Note: Max power(dBm)= Reading Power (dB)+ Duty Cycle Factor (dB)

E.I.R.P (dBm) = Max Power (dBm) + Antenna Gain (dBi), Antenna Gain = 1.92 dBi.

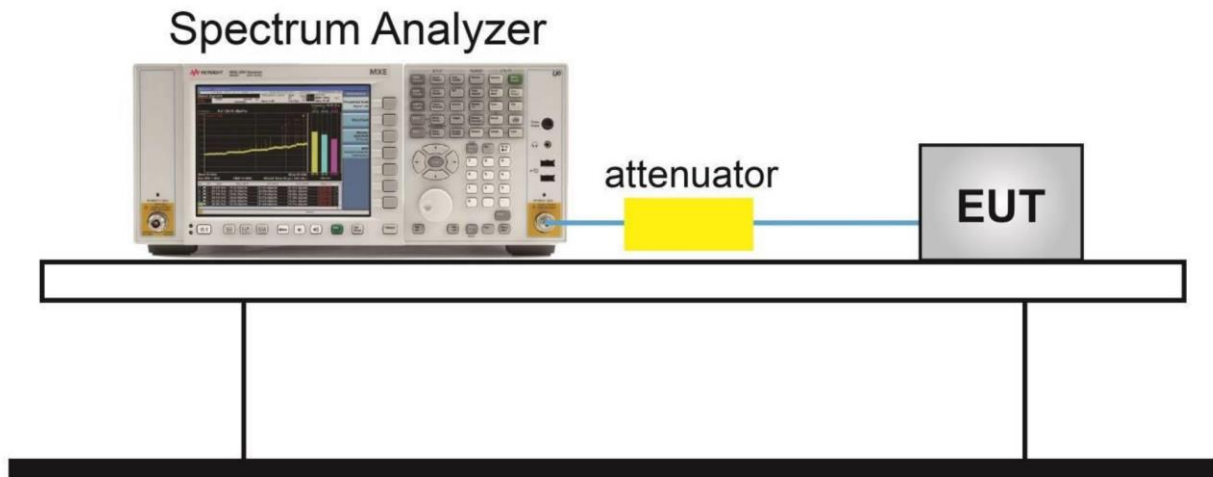
The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

## 6.2. Peak Power Spectral Density

### 6.2.1. Measurement Limit

| Standard                         | Limit (dBm) |
|----------------------------------|-------------|
| FCC 47 CFR Part 15.407(a)(1)(iv) | ≤11         |
| RSS-247 6.2.1.1                  | ≤11         |

### 6.2.2. Test Setup



### 6.2.3. The output power measurement method SA-1 is made according to KDB 789033

#### Measurement Results

| Mode             | Channel  | Power Spectral Density (dBm/MHz) | Conclusion |
|------------------|----------|----------------------------------|------------|
| 802.11a          | 5180 MHz | <b>1.165</b>                     | P          |
|                  | 5200 MHz | 1.011                            | P          |
|                  | 5240 MHz | -0.472                           | P          |
| 802.11n<br>HT20  | 5180 MHz | <b>1.214</b>                     | P          |
|                  | 5200 MHz | 0.632                            | P          |
|                  | 5240 MHz | -0.799                           | P          |
| 802.11n<br>HT40  | 5190 MHz | <b>-2.168</b>                    | P          |
|                  | 5230 MHz | -3.181                           | P          |
| 802.11ac<br>HT20 | 5180 MHz | <b>1.099</b>                     | P          |
|                  | 5200 MHz | 0.729                            | P          |
|                  | 5240MHz  | -0.734                           | P          |
| 802.11ac<br>HT40 | 5190 MHz | <b>-1.996</b>                    | P          |
|                  | 5230 MHz | -3.229                           | P          |
| 802.11ac<br>HT80 | 5210MHz  | <b>-4.386</b>                    | P          |



Note: Bold font is the maximum Value

**U-NII-1:**

|   |                                  |   |                     |
|---|----------------------------------|---|---------------------|
| <p>Power Spectral Density(dBm/MHz)<br/>(802.11a, 5180MHz)</p> | <p><b>1.165</b></p>              | <p>Power Spectral Density(dBm/MHz)<br/>(802.11a, 5200MHz)</p>       | <p>1.011</p>        |
| <p>Date: 8.JUN.2021 16:27:49</p>                              | <p>Date: 8.JUN.2021 16:28:59</p> |   |                     |
| <p>Power Spectral Density(dBm/MHz)<br/>(802.11a, 5240MHz)</p> | <p>-0.472</p>                    | <p>Power Spectral Density(dBm/MHz)<br/>(802.11n-HT20), 5180MHz)</p> | <p><b>1.214</b></p> |
| <p>Date: 8.JUN.2021 16:29:41</p>                              | <p>Date: 8.JUN.2021 16:40:51</p> |   |                     |

|  |               |  |               |
|--|---------------|--|---------------|
| <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11n-HT20), 5200MHz)</b>  | <b>0.632</b>  | <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11n-HT20), 5240MHz)</b>  | <b>-0.799</b> |
|  |               |  |               |
| <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11n-HT40), 5190MHz)</b>  | <b>-2.168</b> | <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11n-HT40), 5230MHz)</b>  | <b>-3.181</b> |
|  |               |  |               |
| <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11ac-HT20), 5180MHz)</b> | <b>1.099</b>  | <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11ac-HT20), 5200MHz)</b> | <b>0.729</b>  |
|  |               |  |               |

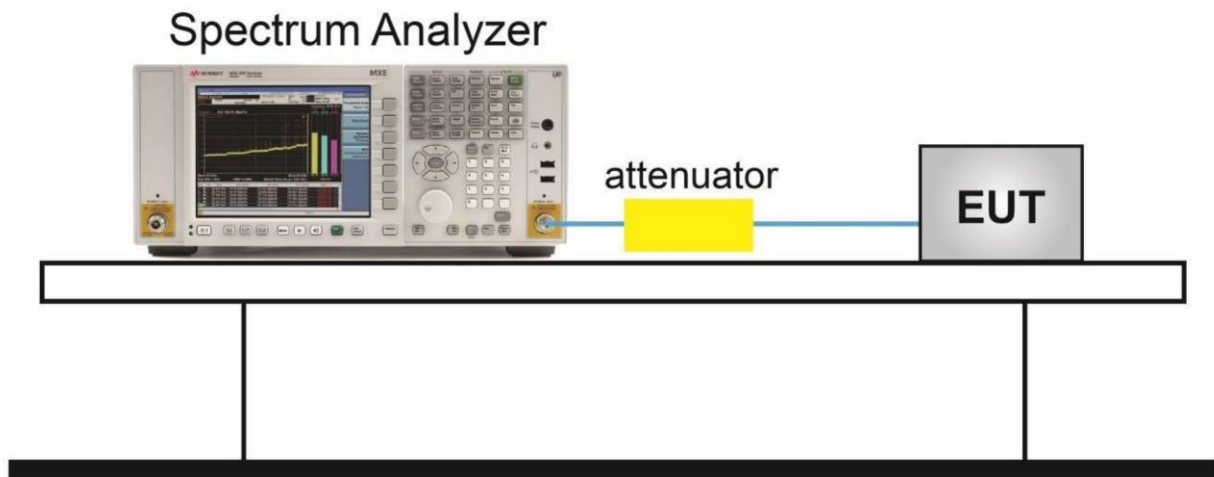
|  |                                  |  |               |
|--|----------------------------------|--|---------------|
| <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11ac-HT20), 5240MHz)</b> | <b>-0.734</b>                    | <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11ac-HT40), 5190MHz)</b> | <b>-1.996</b> |
| <p>Date: 8.JUN.2021 16:47:44</p>   | <p>Date: 8.JUN.2021 16:48:51</p> |  |               |
| <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11ac-HT40), 5230MHz)</b> | <b>-3.229</b>                    | <b>Power Spectral Density(dBm/MHz)</b><br><b>(802.11ac-HT80), 5210MHz)</b> | <b>-4.386</b> |
| <p>Date: 8.JUN.2021 16:49:59</p>   | <p>Date: 8.JUN.2021 16:51:01</p> |  |               |

### 6.3. Occupied 26dB Bandwidth(conducted)

#### 6.3.1. Measurement Limit:

| Standard                  | Limit (MHz) |
|---------------------------|-------------|
| FCC 47 CFR Part 15.407(a) | N/A         |
| RSS-247 6.2               | N/A         |

#### 6.3.2. Test Setup



#### 6.3.3. The measurement is made according to KDB 789033

#### Measurement Result

##### U-NII-1:

| Mode             | Channel  | Occupied 26dB Bandwidth (MHz) | Conclusion |
|------------------|----------|-------------------------------|------------|
| 802.11a          | 5180 MHz | <b>23.72</b>                  | P          |
|                  | 5200 MHz | 22.28                         | P          |
|                  | 5240 MHz | 21.96                         | P          |
| 802.11n<br>HT20  | 5180 MHz | <b>24.20</b>                  | P          |
|                  | 5200 MHz | 23.80                         | P          |
|                  | 5240 MHz | 22.68                         | P          |
| 802.11n<br>HT40  | 5190 MHz | <b>58.81</b>                  | P          |
|                  | 5230 MHz | 43.43                         | P          |
| 802.11ac<br>HT20 | 5180 MHz | <b>22.68</b>                  | P          |
|                  | 5200 MHz | 22.60                         | P          |
|                  | 5240MHz  | 22.44                         | P          |
| 802.11ac<br>HT40 | 5190 MHz | <b>64.26</b>                  | P          |
|                  | 5230 MHz | 51.12                         | P          |
| 802.11ac         | 5210MHz  | <b>81.41</b>                  | P          |



|      |  |  |  |
|------|--|--|--|
| HT80 |  |  |  |
|------|--|--|--|

Note: Bold font is the maximum Value

|   |              |   |              |
|---|--------------|---|--------------|
| <b>Occupied 26dB Bandwidth<br/>(MHz) (802.11a, 5180MHz)</b> | <b>23.72</b> | <b>Occupied 26dB Bandwidth<br/>(MHz) (802.11a, 5200MHz)</b>       | <b>22.28</b> |
| <p>Date: 8.JUN.2021 15:48:30</p>                            |              | <p>Date: 8.JUN.2021 15:49:01</p>                                  |              |
| <b>Occupied 26dB Bandwidth<br/>(MHz) (802.11a, 5240MHz)</b> | <b>21.96</b> | <b>Occupied 26dB Bandwidth<br/>(MHz) (802.11n-HT20), 5180MHz)</b> | <b>24.20</b> |
| <p>Date: 8.JUN.2021 15:50:33</p>                            |              | <p>Date: 8.JUN.2021 15:51:49</p>                                  |              |

|  |              |  |              |
|--|--------------|--|--------------|
| <p>Occupied 26dB Bandwidth<br/>(MHz) (802.11n-HT20), 5200MHz)</p>  | <p>23.80</p> | <p>Occupied 26dB Bandwidth<br/>(MHz) (802.11n-HT20), 5240MHz)</p>  | <p>22.68</p> |
| <p>Date: 8 JUN.2021 15:50:42</p>                                   |              | <p>Date: 8 JUN.2021 15:52:49</p>                                   |              |
| <p>Occupied 26dB Bandwidth<br/>(MHz) (802.11n-HT40), 5190MHz)</p>  | <p>58.81</p> | <p>Occupied 26dB Bandwidth<br/>(MHz) (802.11n-HT40), 5230MHz)</p>  | <p>43.43</p> |
| <p>Date: 8 JUN.2021 15:55:09</p>                                   |              | <p>Date: 8 JUN.2021 15:56:12</p>                                   |              |
| <p>Occupied 26dB Bandwidth( MHz)<br/>(802.11ac-HT20), 5180MHz)</p> | <p>22.68</p> | <p>Occupied 26dB Bandwidth (MHz)<br/>(802.11ac-HT20), 5200MHz)</p> | <p>22.60</p> |
| <p>Date: 8 JUN.2021 15:57:26</p>                                   |              | <p>Date: 8 JUN.2021 15:58:31</p>                                   |              |

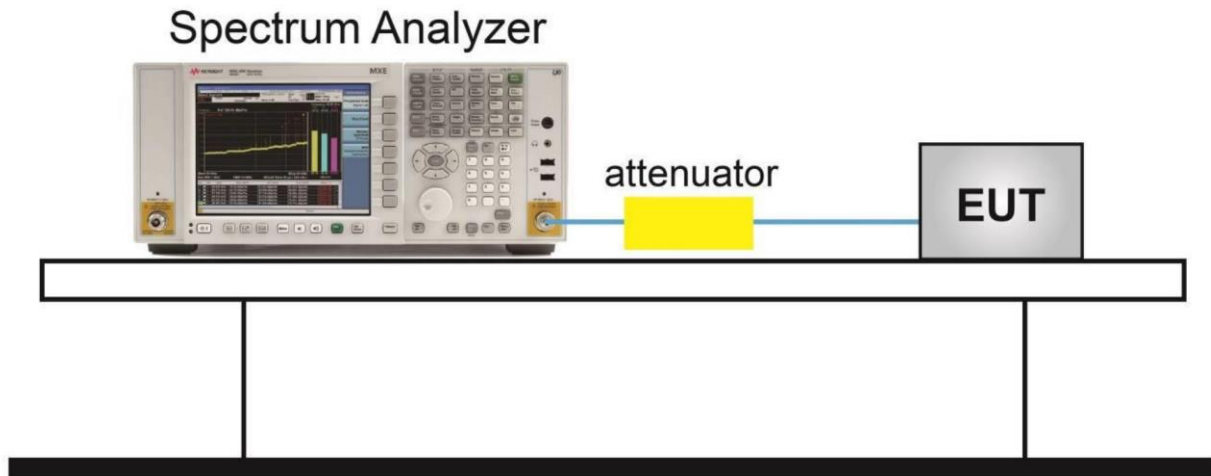
|  |              |  |              |
|--|--------------|--|--------------|
| <p>Occupied 26dB Bandwidth( MHz)<br/>(802.11ac-HT20), 5240MHz)</p> | <p>22.44</p> | <p>Occupied 26dB Bandwidth( MHz)<br/>(802.11ac-HT40), 5190MHz)</p> | <p>64.26</p> |
|  |              |  |              |
| <p>Occupied 26dB Bandwidth( MHz)<br/>(802.11ac-HT40), 5230MHz)</p> | <p>51.12</p> | <p>Occupied 26dB Bandwidth( MHz)<br/>(802.11ac-HT80), 5210MHz)</p> | <p>81.41</p> |
|  |              |  |              |

## 6.4. 99% Occupied Bandwidth(conducted)

### 6.4.1. Measurement Limit:

| Standard    | Limit (MHz) |
|-------------|-------------|
| RSS-Gen 6.7 | N/A         |

### 6.4.2. Test Setup



### 6.4.3. The measurement is made according to KDB 789033

| Mode             | Channel  | 99% Occupied Bandwidth (MHz) | Conclusion |
|------------------|----------|------------------------------|------------|
| 802.11a          | 5180 MHz | 17.147                       | P          |
|                  | 5200 MHz | <b>17.228</b>                | P          |
|                  | 5240 MHz | 17.147                       | P          |
| 802.11n<br>HT20  | 5180 MHz | <b>18.109</b>                | P          |
|                  | 5200 MHz | 18.109                       | P          |
|                  | 5240 MHz | 18.029                       | P          |
| 802.11n<br>HT40  | 5190 MHz | <b>36.859</b>                | P          |
|                  | 5230 MHz | 36.538                       | P          |
| 802.11ac<br>HT20 | 5180 MHz | 18.109                       | P          |
|                  | 5200 MHz | <b>18.189</b>                | P          |
|                  | 5240MHz  | 18.109                       | P          |
| 802.11ac<br>HT40 | 5190 MHz | <b>36.859</b>                | P          |
|                  | 5230 MHz | 36.538                       | P          |
| 802.11ac<br>HT80 | 5210MHz  | <b>75.962</b>                | P          |

Note: Bold font is the maximum Value

|  |               |   |               |
|--|---------------|---|---------------|
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11a, 5180MHz)</p> | <p>17.147</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11a, 5200MHz)</p>      | <p>17.228</p> |
| <p>Date: 8.JUN.2021 16:05:22</p>                           |               | <p>Date: 8.JUN.2021 16:06:26</p>                                |               |
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11a, 5240MHz)</p> | <p>17.147</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11n-HT20, 5180MHz)</p> | <p>18.109</p> |
| <p>Date: 8.JUN.2021 16:07:19</p>                           |               | <p>Date: 8.JUN.2021 16:08:31</p>                                |               |

|  |               |  |               |
|--|---------------|--|---------------|
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11n-HT20), 5200MHz)</p> | <p>18.109</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11n-HT20), 5240MHz)</p> | <p>18.029</p> |
| <p>Date: 8.JUN.2021 16:09:34</p>                                 |               | <p>Date: 8.JUN.2021 16:10:39</p>                                 |               |
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11n-HT40), 5190MHz)</p> | <p>36.859</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11n-HT40), 5230MHz)</p> | <p>36.538</p> |
| <p>Date: 8.JUN.2021 16:12:22</p>                                 |               | <p>Date: 8.JUN.2021 16:13:54</p>                                 |               |

|   |               |   |               |
|---|---------------|---|---------------|
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11ac-HT20), 5180MHz)</p> | <p>18.109</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11ac-HT20), 5200MHz)</p> | <p>18.189</p> |
| <p>Date: 8.JUN.2021 16:15:09</p>                                  |               | <p>Date: 8.JUN.2021 16:16:14</p>                                  |               |
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11ac-HT20), 5240MHz)</p> | <p>18.109</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11ac-HT40), 5190MHz)</p> | <p>36.859</p> |
| <p>Date: 8.JUN.2021 16:17:19</p>                                  |               | <p>Date: 8.JUN.2021 16:18:37</p>                                  |               |

|  |               |  |               |
|--|---------------|--|---------------|
| <p>99% Occupied Bandwidth (MHz)<br/>(802.11ac-HT40), 5230MHz)</p>  | <p>36.538</p> | <p>99% Occupied Bandwidth (MHz)<br/>(802.11ac-HT80), 5210MHz)</p>  | <p>75.962</p> |
| <p>Ref: 15 dBm, Att: 15 dB, SWT: 20 ms, RBW: 500 kHz, VBW: 2 MHz, Marker 1 [T1]: 5.211730769 GHz, -1.82 dBm</p> <p>Date: 8.JUN.2021 16:19:40</p> |               | <p>Ref: 15 dBm, Att: 15 dB, SWT: 20 ms, RBW: 1 MHz, VBW: 3 MHz, Marker 1 [T1]: 5.215234602 MHz, -1.65 dBm</p> <p>Date: 8.JUN.2021 16:21:07</p> |               |



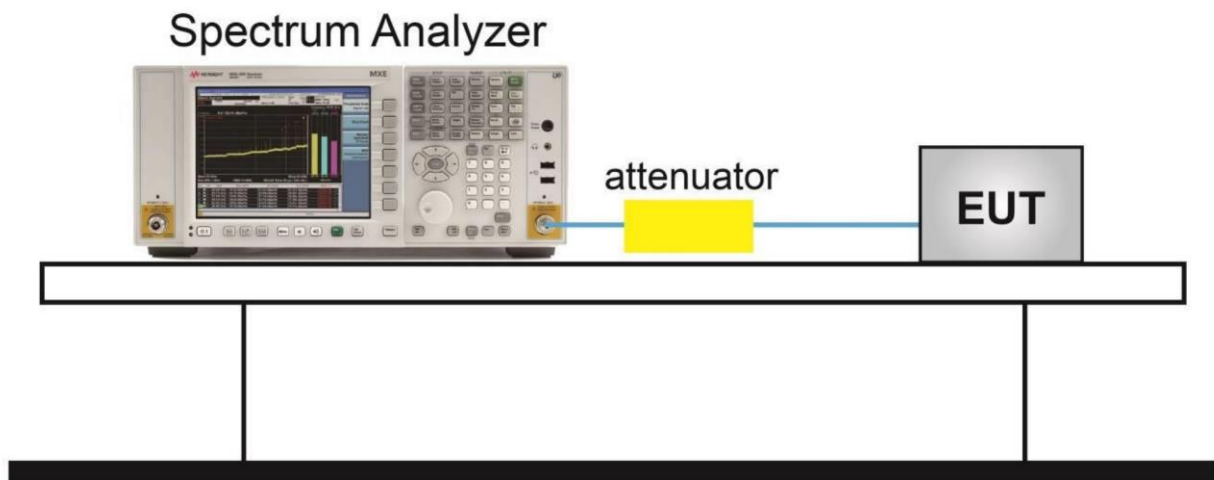
## 6.5. Band Edges Compliance

### 6.5.1. Band Edges - conducted

Measurement Limit:

| Standard                     | Limit (dBm/MHz) |
|------------------------------|-----------------|
| FCC 47 CFR Part 15.407(b)(1) | < -27           |
| RSS-247 6.2.1.2              | < -27           |

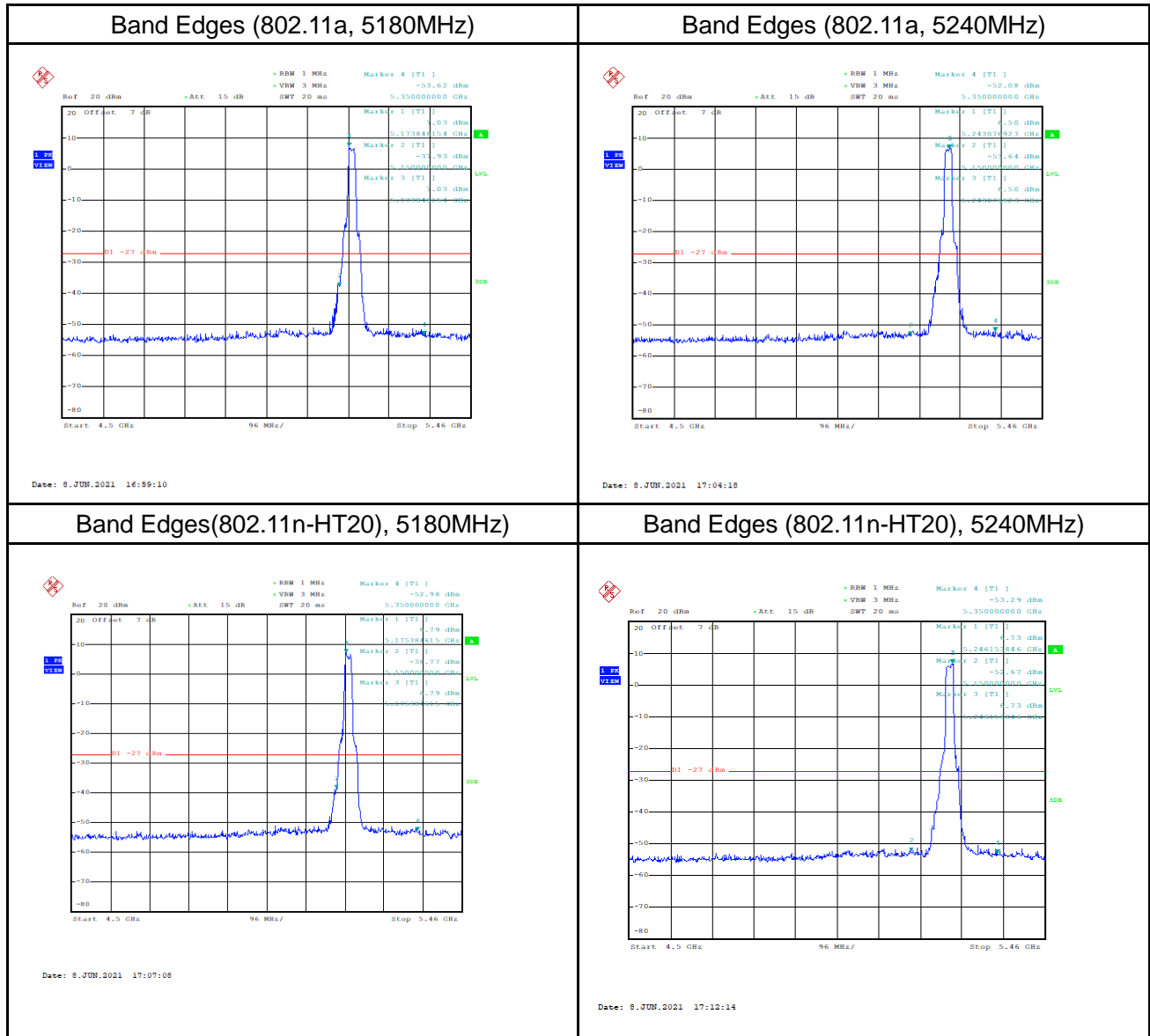
#### 6.5.1.1. Test Setup



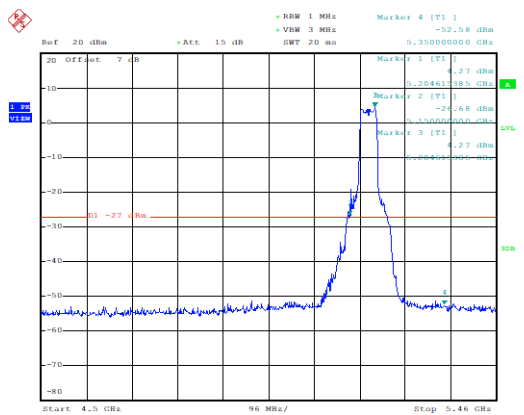
#### 6.5.1.2. The measurement is made according to KDB 789033

# Measurement Result

## U-NII-1:

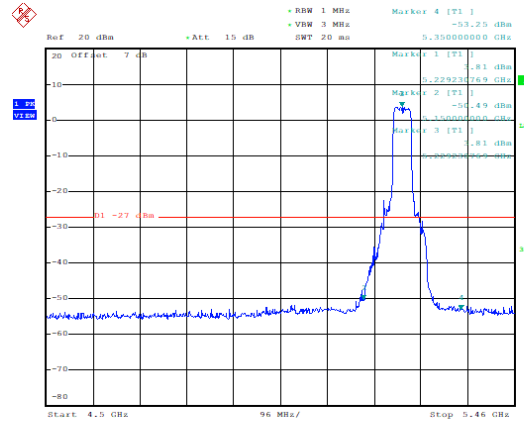


Band Edges(802.11n-HT40), 5190MHz



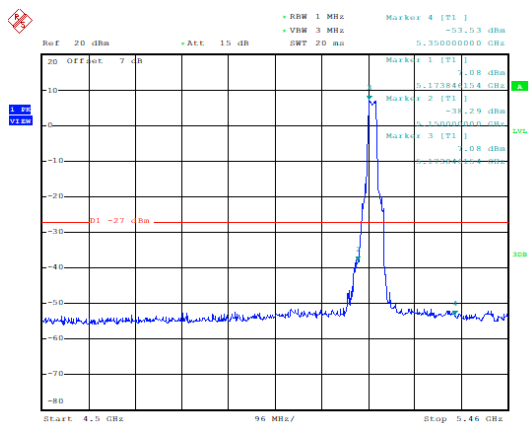
Date: 8 JUN 2021 17:15:02

Band Edges (802.11n-HT40), 5230MHz



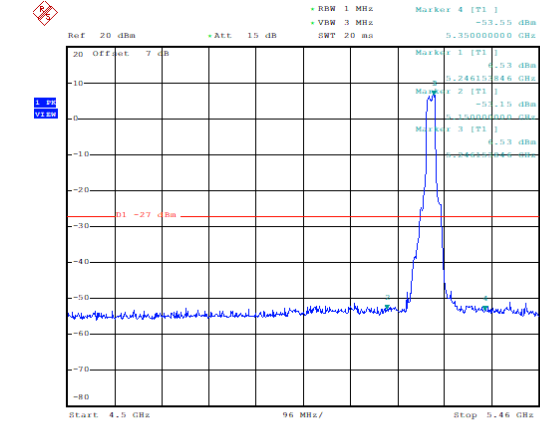
Date: 8 JUN 2021 17:17:34

Band Edges (802.11ac-HT20), 5180MHz



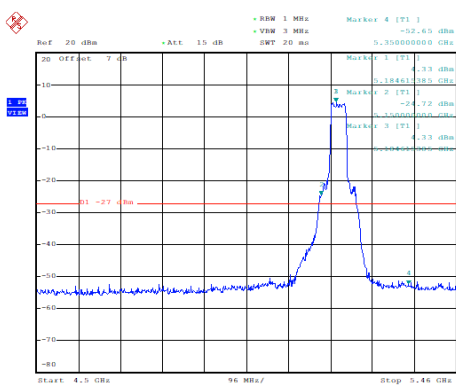
Date: 8 JUN 2021 17:20:24

Band Edges (802.11ac-HT20), 5240MHz



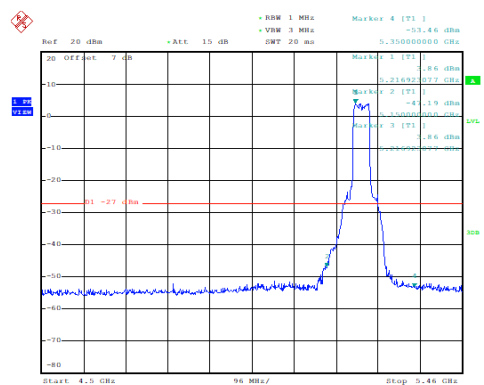
Date: 8 JUN 2021 17:26:47

Band Edges (802.11ac-HT40), 5190MHz

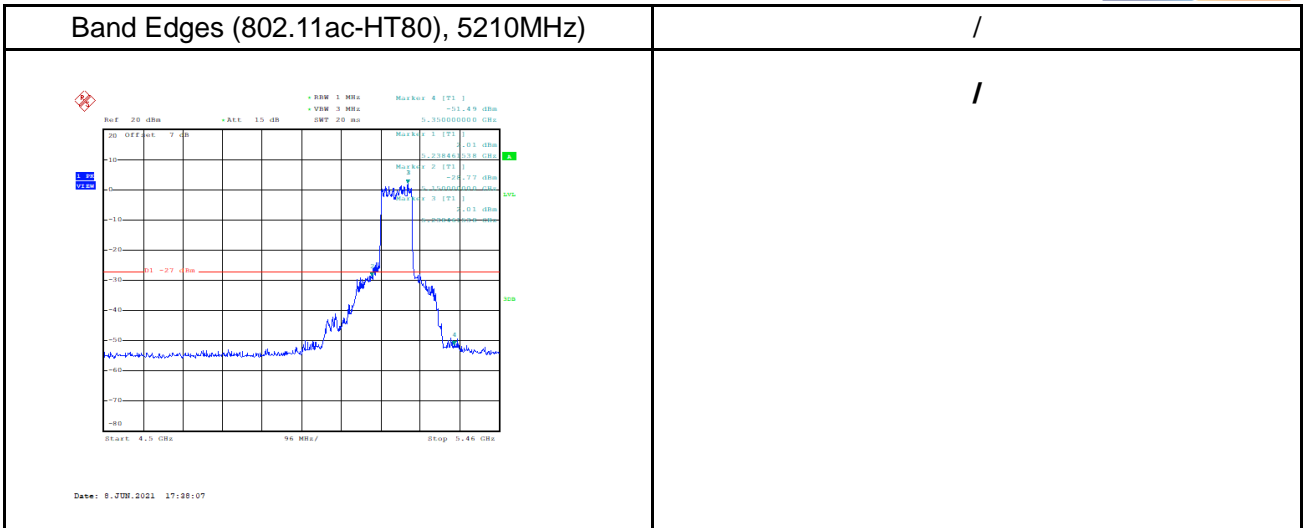


Date: 8 JUN 2021 17:29:42

Band Edges (802.11ac-HT40), 5230MHz



Date: 8 JUN 2021 17:32:02



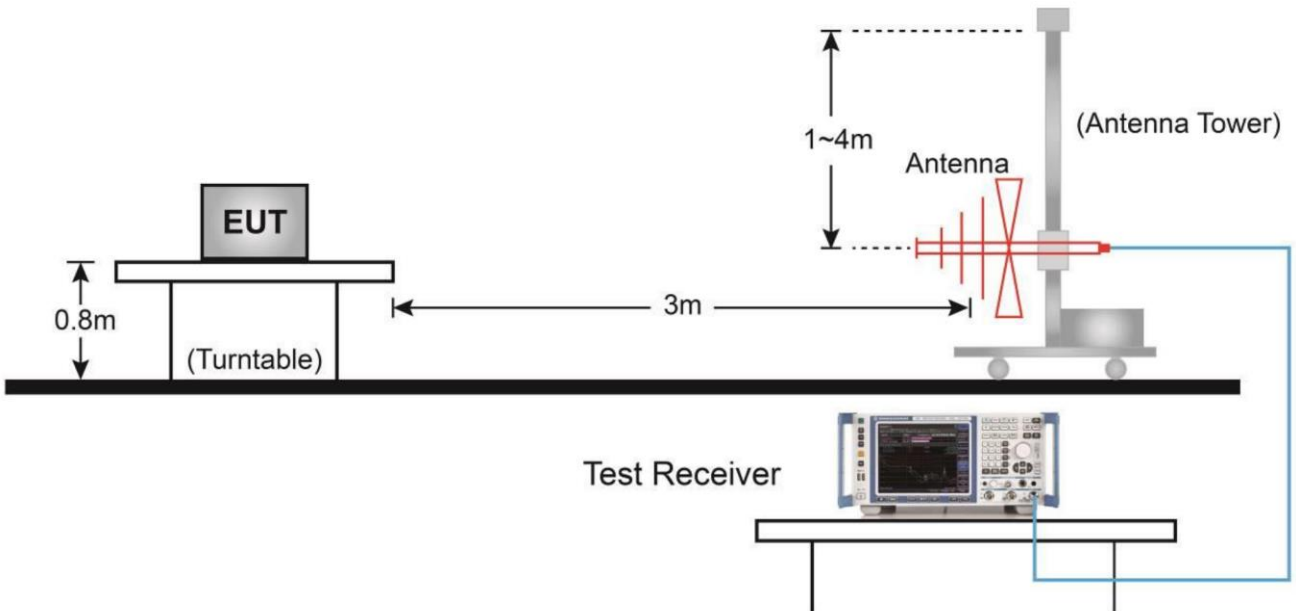
### 6.5.2. Band Edges - Radiated

#### 6.5.2.1 Measurement Limit:

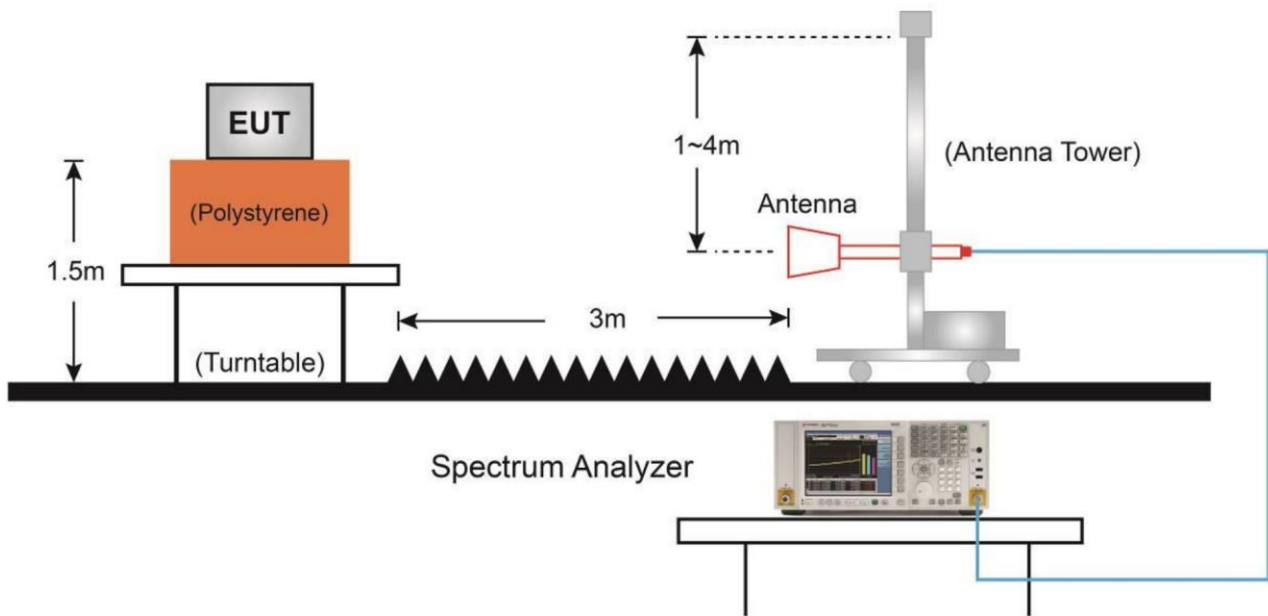
| Standard                                   | Limit (dB $\mu$ V/m) |    |
|--|----------------------|----|
| FCC 47 CFR Part 15.209 & 15.407(b)(9),(10) | Peak                 | 74 |
|  | Average              | 54 |
| RSS-Gen 8.9,8.10<br>RSS-247 6.2.1.2        | Peak                 | 74 |
|  | Average              | 54 |

#### 6.5.2.2. Test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup

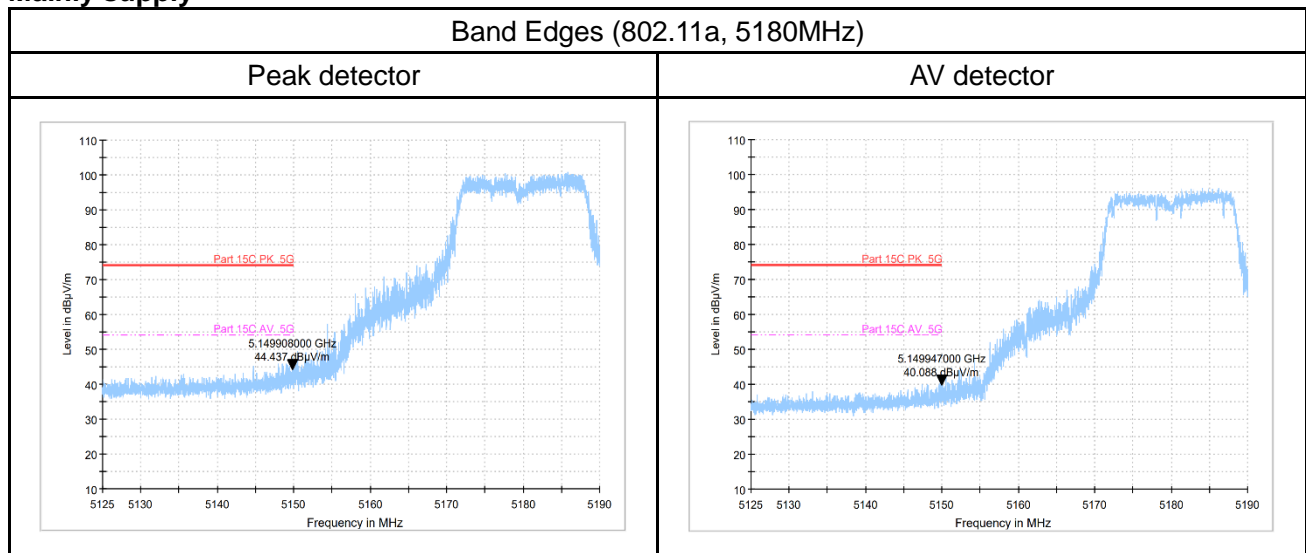


6.5.2.3. The measurement is made according to KDB 789033.

Measurement Result

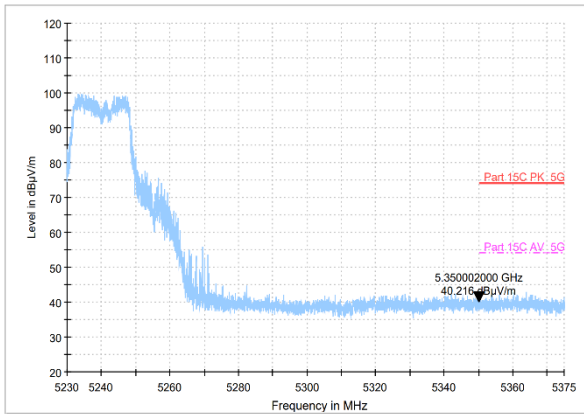
U-NII-1:

Mainly supply

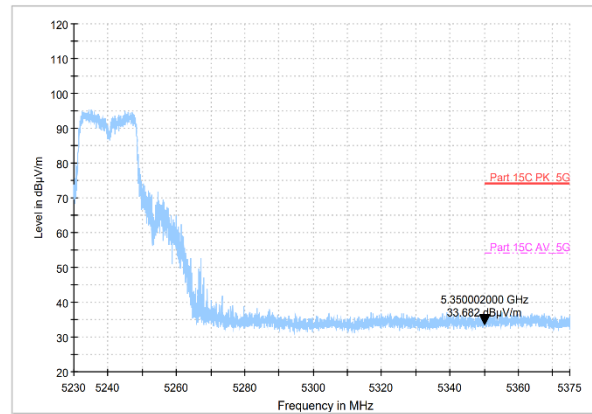


### Band Edges (802.11a, 5240MHz)

Peak detector

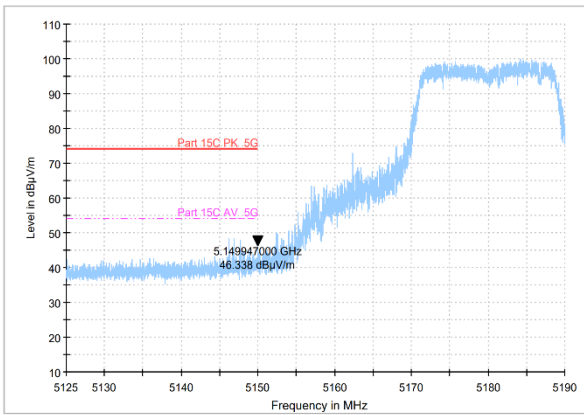


AV detector

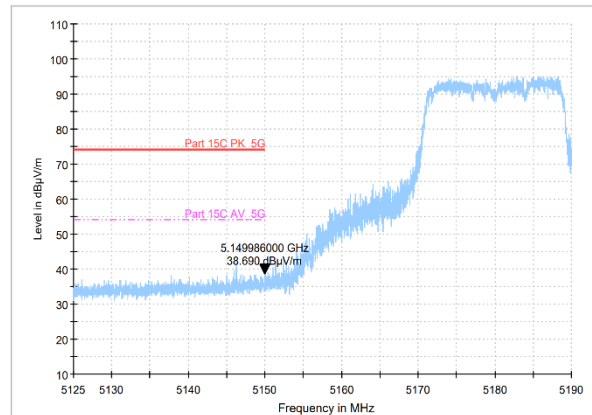


### Band Edges (802.11n-HT20, 5180MHz)

Peak detector

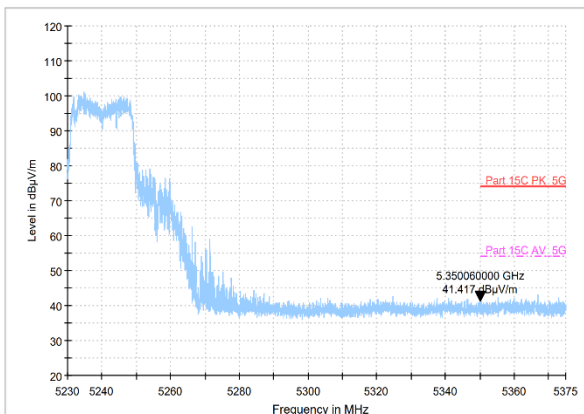


AV detector

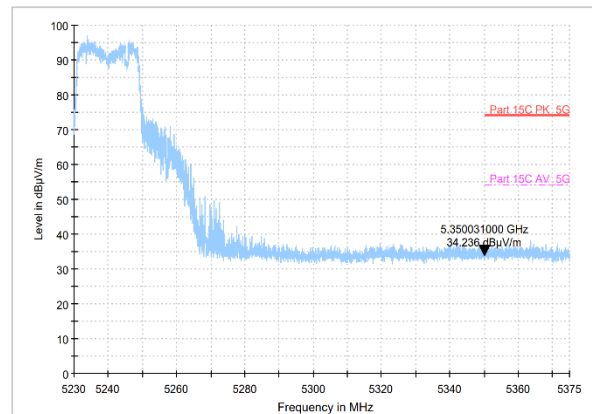


### Band Edges (802.11n-HT20, 5240MHz)

Peak detector

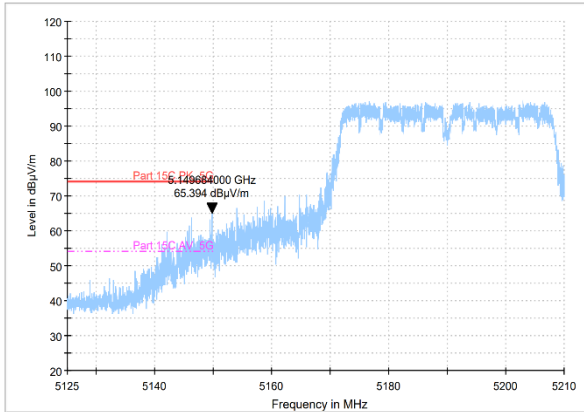


AV detector

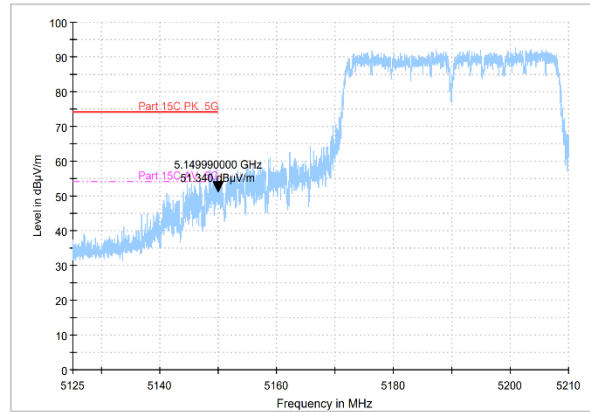


### Band Edges (802.11n-HT40, 5190MHz)

Peak detector

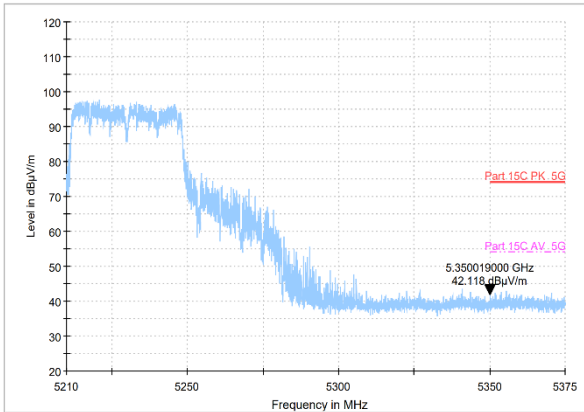


AV detector

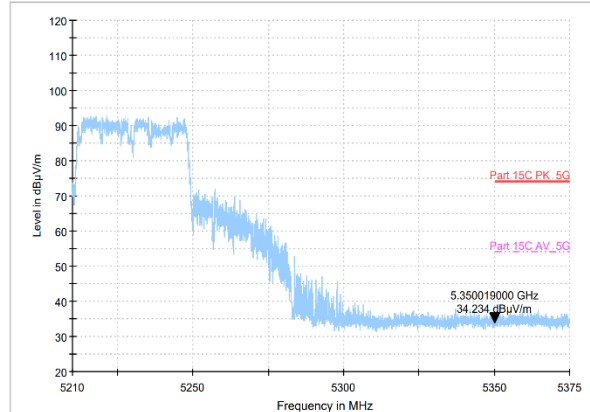


### Band Edges (802.11n-HT40, 5230MHz)

Peak detector

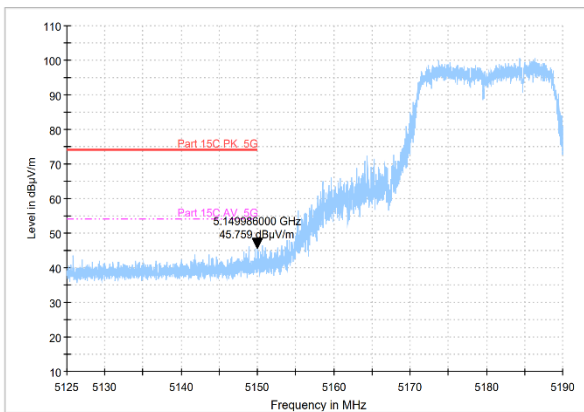


AV detector

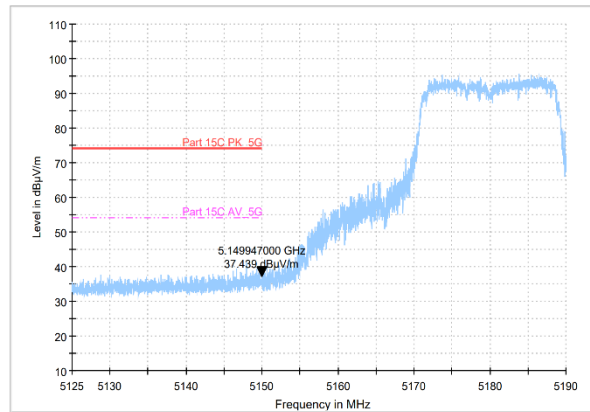


### Band Edges (802.11ac-HT20, 5180MHz)

Peak detector

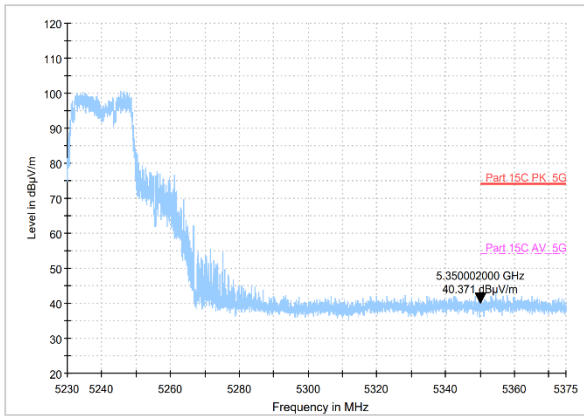


AV detector

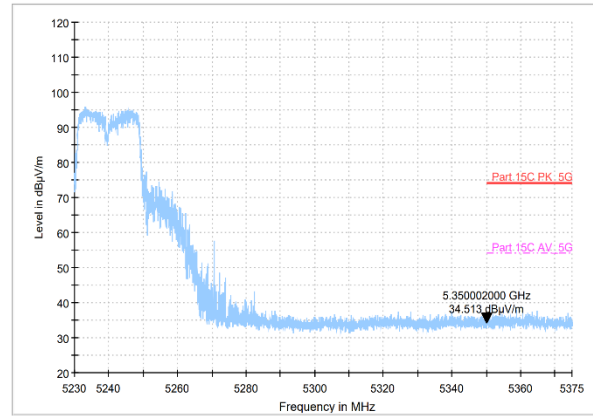


### Band Edges (802.11ac-HT20, 5240MHz)

Peak detector

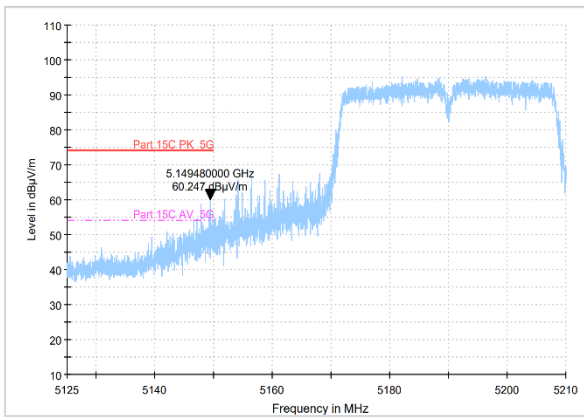


AV detector

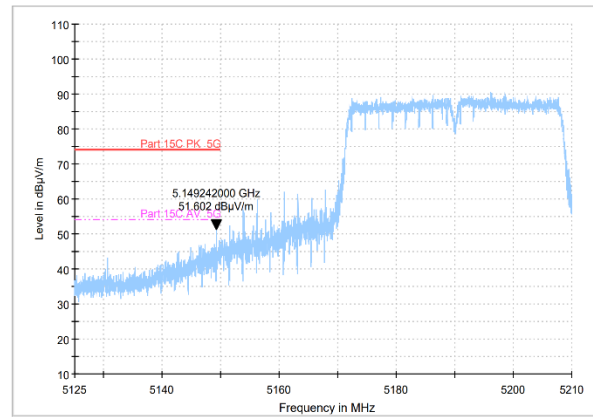


### Band Edges (802.11ac-HT40, 5190MHz)

Peak detector

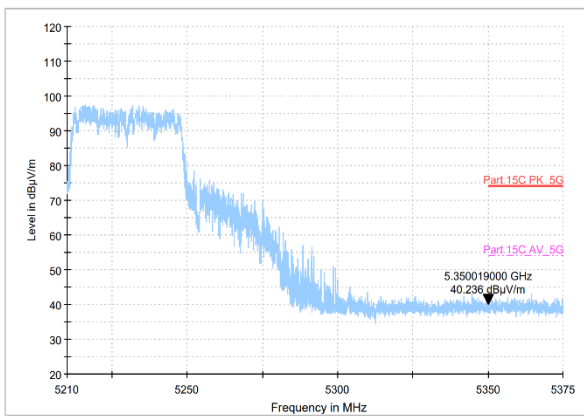


AV detector

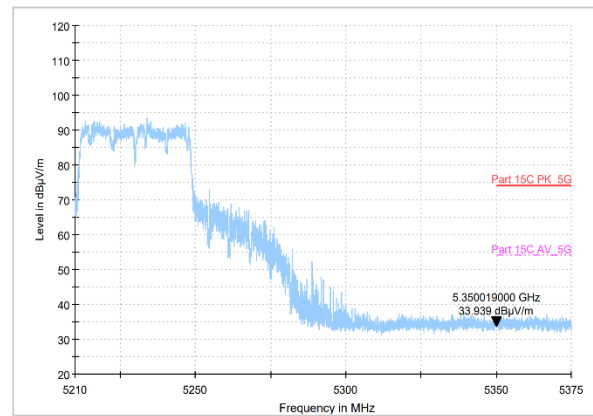


### Band Edges (802.11ac-HT40, 5230MHz)

Peak detector



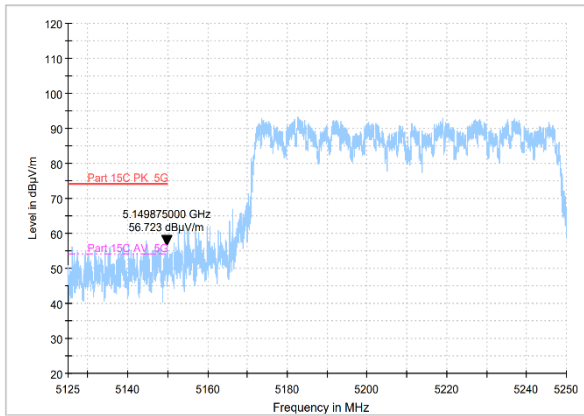
AV detector



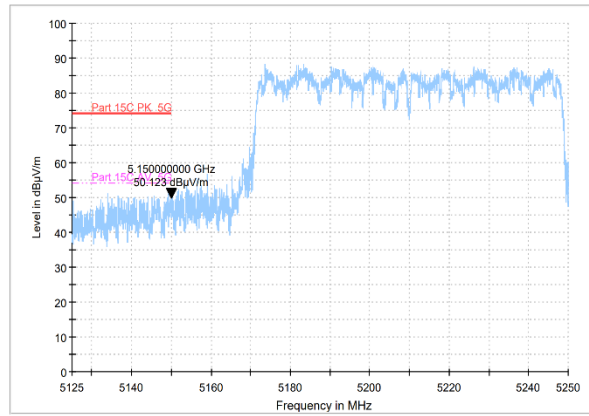


### Band Edges (802.11ac-HT80, 5210MHz)

Peak detector



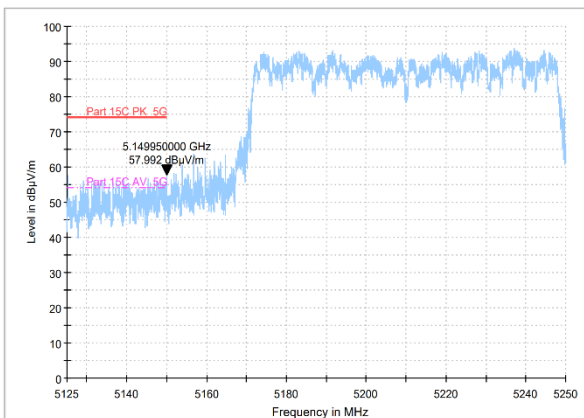
AV detector



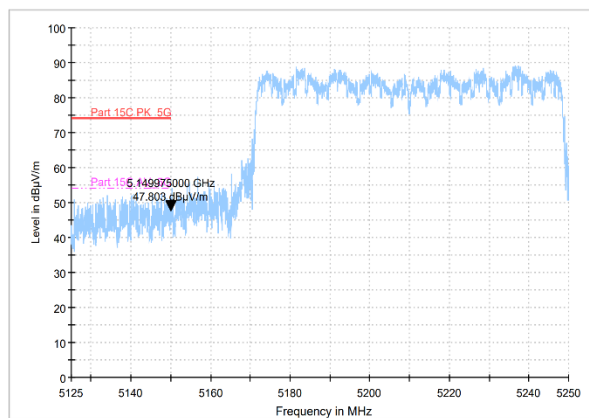
### Secondary Supply

### Band Edges (802.11ac-HT80, 5210MHz)

Peak detector



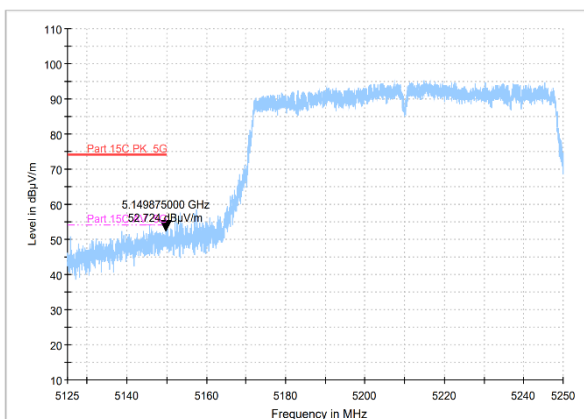
AV detector



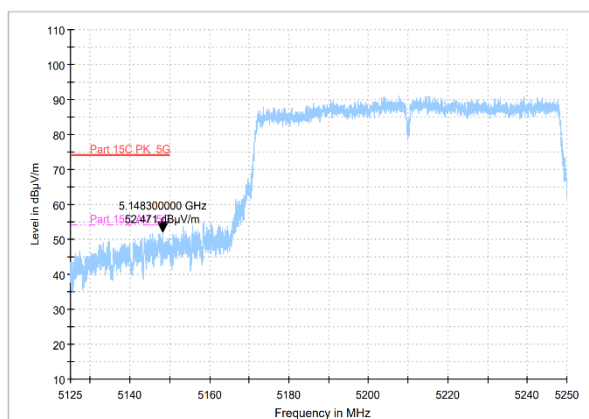
### Thirdly Supply

### Band Edges (802.11ac-HT80, 5210MHz)

Peak detector



AV detector

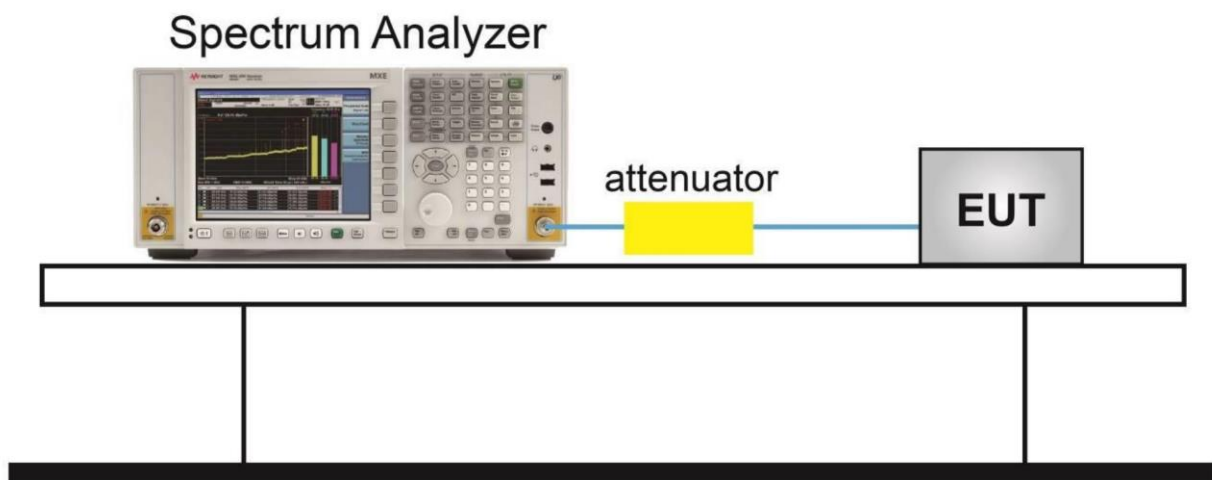


## 6.6. Transmitter Spurious Emission

### 6.6.1. Measurement Limit

| Standard                            | Limit (dB $\mu$ V/m)                       |      |
|-------------------------------------|--|------|
|                                     | FCC 47 CFR Part 15.209 & 15.407(b)(9),(10) | Peak |
| Average                             |  | 54   |
| RSS-Gen 8.9,8.10<br>RSS-247 6.2.1.2 | Peak                                       | 74   |
|                                     | Average                                    | 54   |

### 6.6.2. Test Setup



### 6.6.3. The measurement is made according to KDB 789033

Set the spectrum analyzer in the following:

Below 1GHz (detector: Peak and Quasi-Peak)

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz (detector: Peak):

(a) PEAK: RBW=1MHz / VBW=3MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=3MHz / Sweep= AUTO

#### Limit in restricted band:

| Frequency of emission (MHz) | Field strength(dB $\mu$ V/m) | Measurement distance(m) |
|-----------------------------|------------------------------|-------------------------|
| 0.009-0.490                 | 129-94                       | 3                       |
| 0.490-1.705                 | 74-63                        | 3                       |
| 1.705-30                    | 70                           | 3                       |
| 30-88                       | 40.0                         | 3                       |
| 88-216                      | 43.5                         | 3                       |
| 216-960                     | 46.0                         | 3                       |
| Above 960                   | 54.0                         | 3                       |



Note: for frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m

Modulation type and data rate tested (Only worst case result is given below):

**U-NII-1:**

| <b>Mode</b>   | <b>Data rate</b> | <b>Channel</b> |
|---------------|------------------|----------------|
| 802.11a       | 6Mbps            | 36(5180MHz)    |
| 802.11n-HT20  | MCS0             | 36(5180MHz)    |
| 802.11n-HT40  | MCS0             | 38(5190MHz)    |
| 802.11ac-HT20 | MCS0             | 36(5180MHz)    |
| 802.11ac-HT40 | MCS0             | 38(5190MHz)    |
| 802.11ac-HT80 | MCS0             | 42(5210MHz)    |

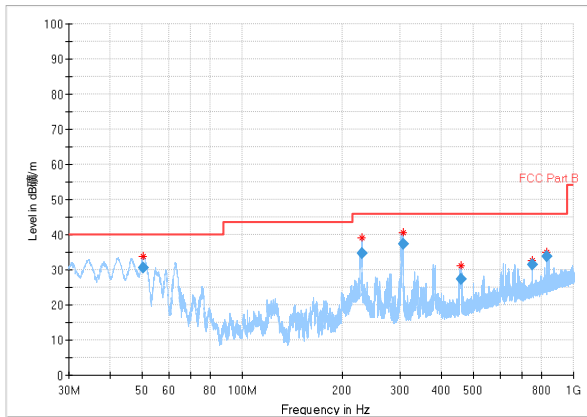
Measurement Results

U-NII-1

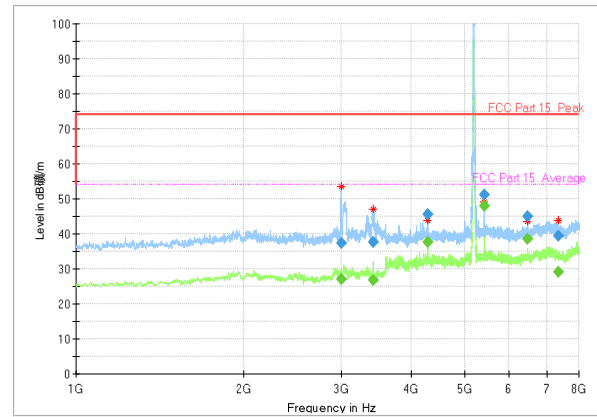
Main supply

|  |  |
|--|--|
| <p>Radiated Spurious Emission<br/>(802.11a, ch36, 30MHz-1GHz)</p>      | <p>Radiated Spurious Emission<br/>(802.11a, ch36, 1GHz-8GHz)</p>     |
|  |  |
| <p>Radiated Spurious Emission<br/>(802.11a, ch36, 8GHz-18GHz)</p>      | <p>Radiated Spurious Emission<br/>(802.11a, ch36, 18GHz-26.5GHz)</p> |
|  |  |
| <p>Radiated Spurious Emission<br/>(802.11a, ch36, 26.5 GHz-40 GHz)</p> | <p>/</p>   |
|  | <p>/</p>   |

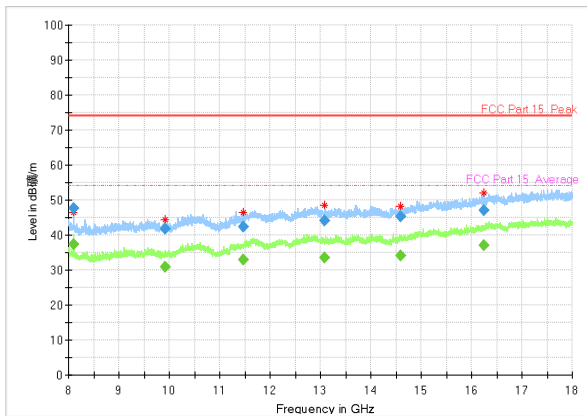
**Radiated Spurious Emission  
(802.11n-HT20, ch36, 30MHz-1GHz)**



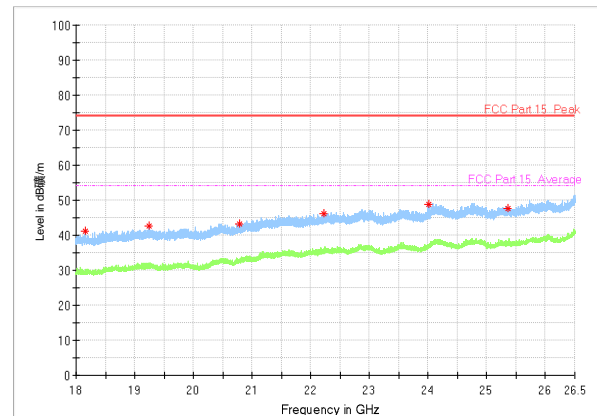
**Radiated Spurious Emission  
(802.11n-HT20, ch36, 1GHz-8GHz)**



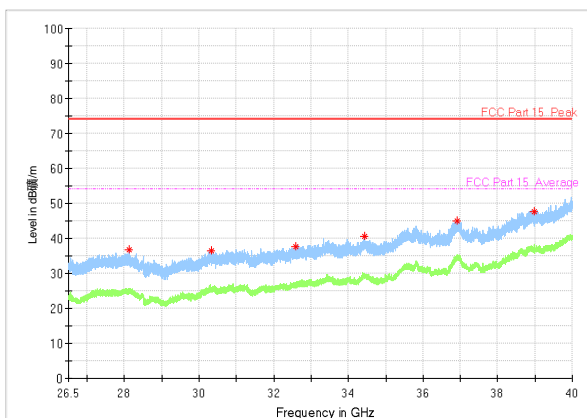
**Radiated Spurious Emission  
(802.11n-HT20, ch36, 8GHz-18GHz)**



**Radiated Spurious Emission  
(802.11n-HT20, ch36, 18GHz-26.5GHz)**



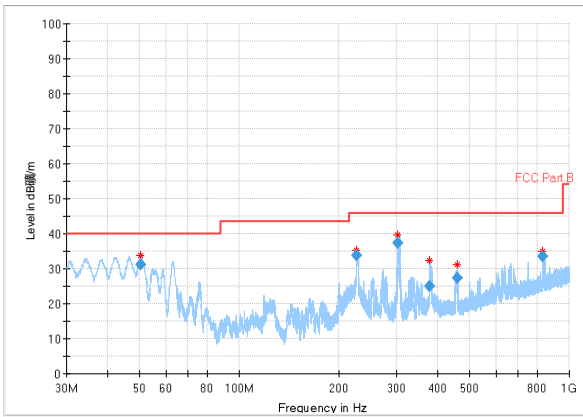
**Radiated Spurious Emission  
(802.11n-HT20, ch36, 26.5 GHz-40 GHz)**



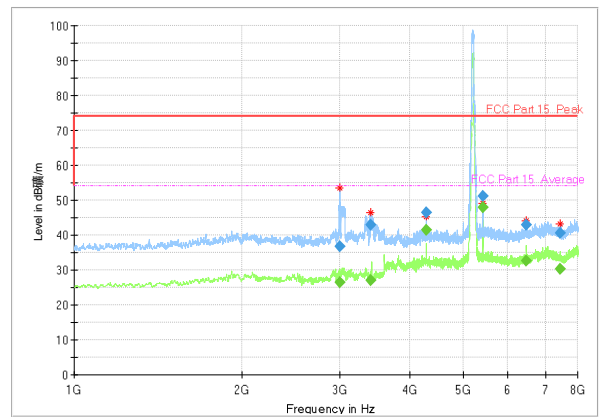
/

/

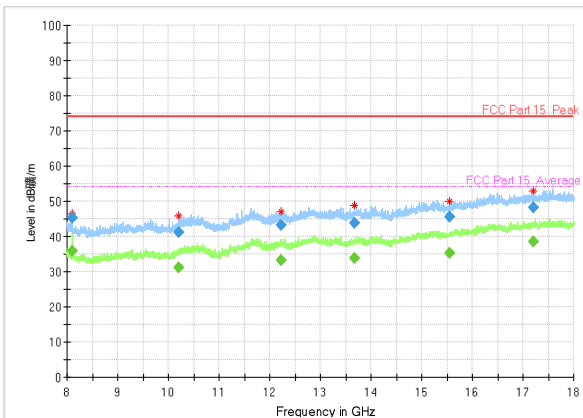
**Radiated Spurious Emission  
(802.11n-HT40, ch38, 30MHz-1GHz)**



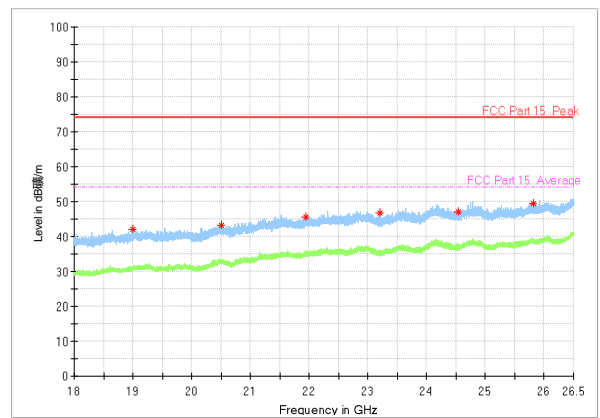
**Radiated Spurious Emission  
(802.11n-HT40, ch38, 1GHz-8GHz)**



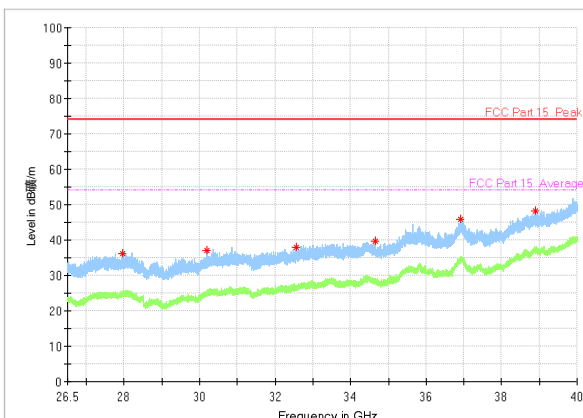
**Radiated Spurious Emission  
(802.11n-HT40, ch38, 8GHz-18GHz)**



**Radiated Spurious Emission  
(802.11n-HT40, ch38, 18GHz-26.5GHz)**



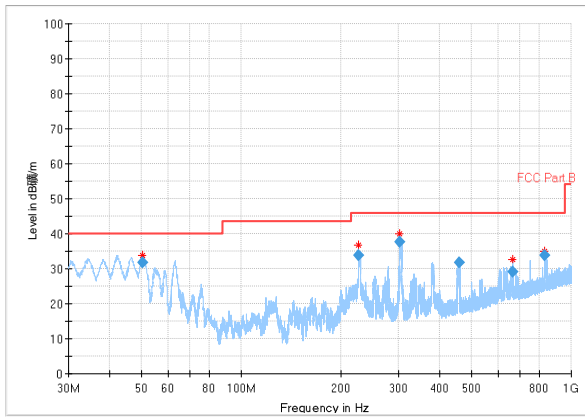
**Radiated Spurious Emission  
(802.11n-HT40, ch38, 26.5 GHz-40 GHz)**



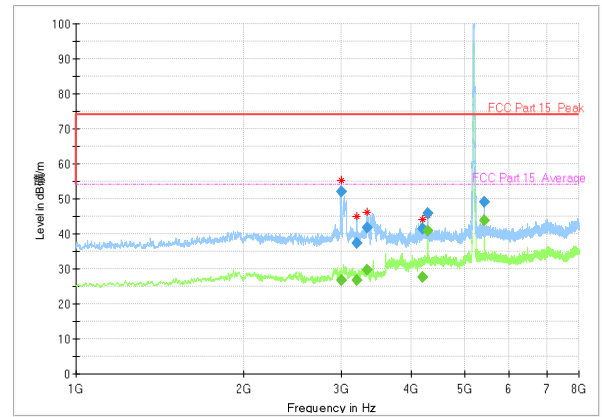
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/

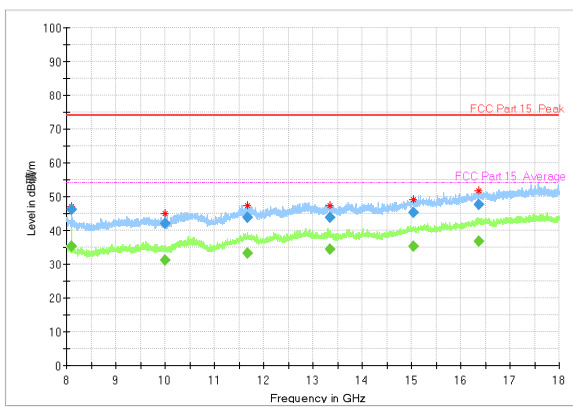
**Radiated Spurious Emission**  
(802.11ac-HT20, ch36, 30MHz-1GHz)



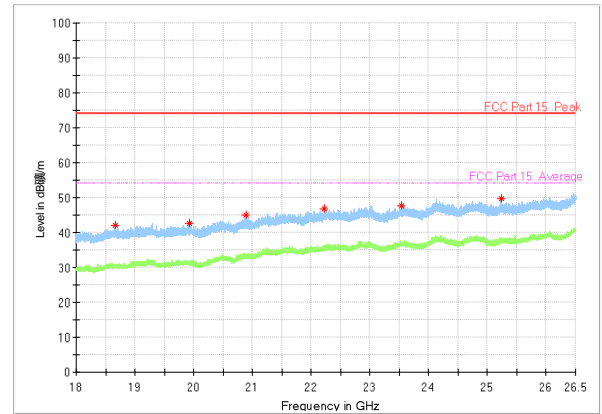
**Radiated Spurious Emission**  
(802.11ac-HT20, ch36, 1GHz-8GHz)



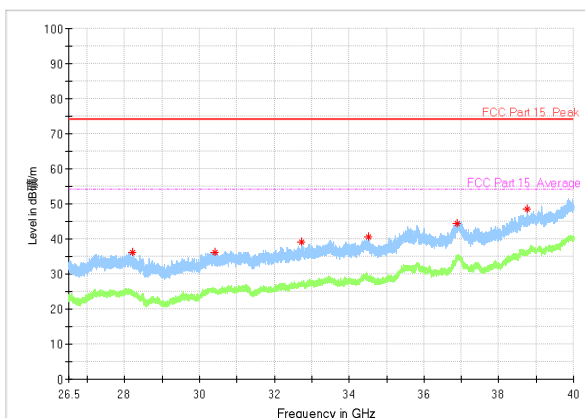
**Radiated Spurious Emission**  
(802.11ac-HT20, ch36, 8GHz-18GHz)



**Radiated Spurious Emission**  
(802.11ac-HT20, ch36, 18GHz-26.5GHz)



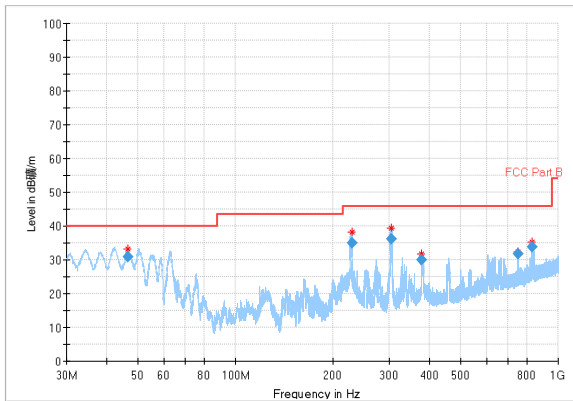
**Radiated Spurious Emission**  
(802.11ac-HT20, ch36, 26.5 GHz-40 GHz)



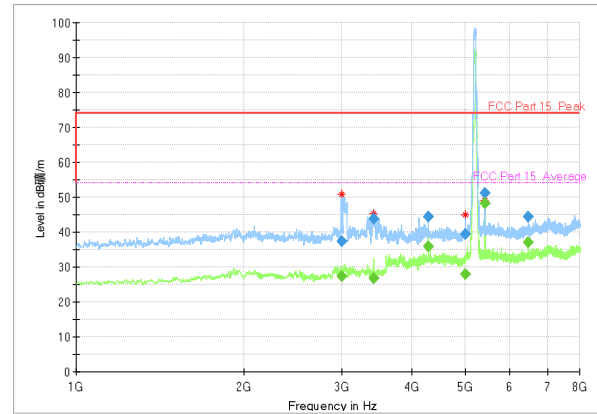
/

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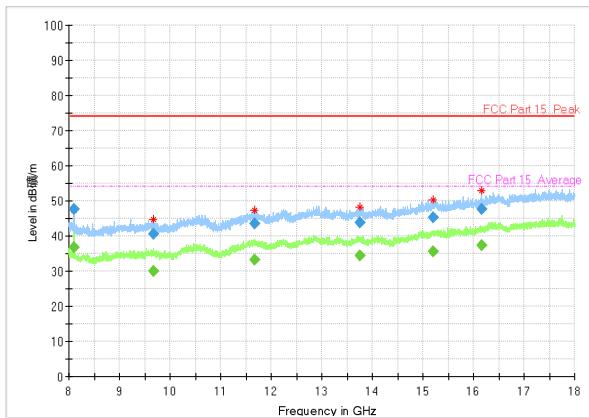
**Radiated Spurious Emission**  
(802.11ac-HT40, ch38, 30MHz-1GHz)



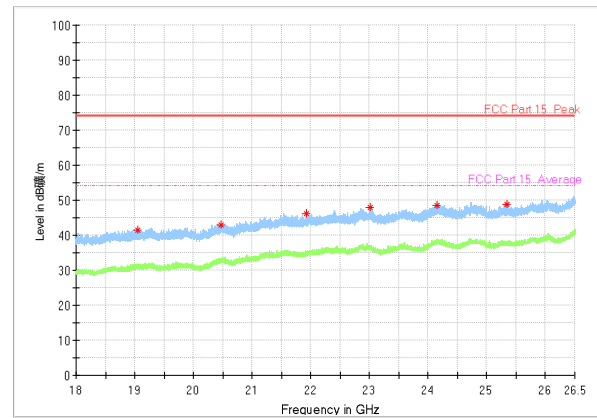
**Radiated Spurious Emission**  
(802.11ac-HT40, ch38, 1GHz-8GHz)



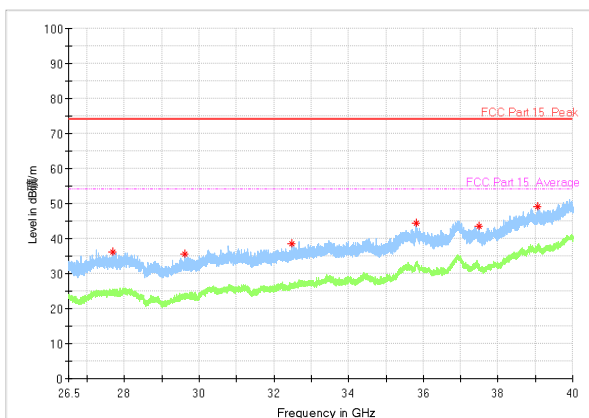
**Radiated Spurious Emission**  
(802.11ac-HT40, ch38, 8GHz-18GHz)



**Radiated Spurious Emission**  
(802.11ac-HT40, ch38, 18GHz-26.5GHz)



**Radiated Spurious Emission**  
(802.11ac-HT40, ch38, 26.5 GHz-40 GHz)

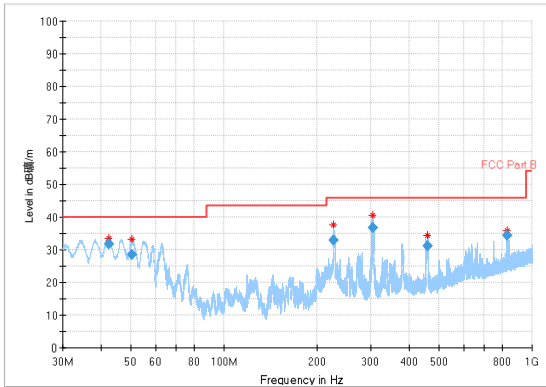


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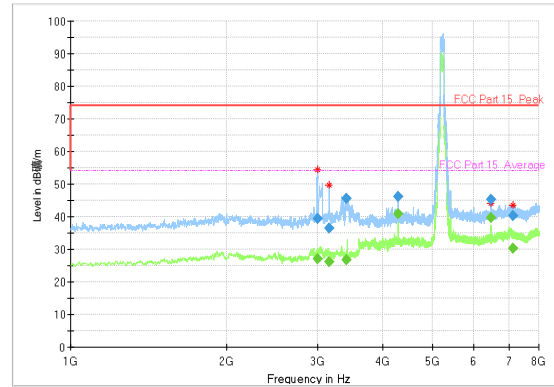
/



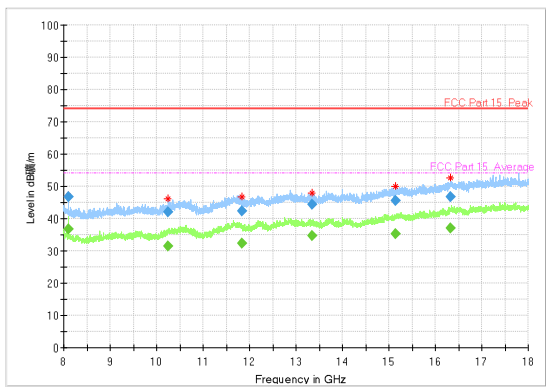
**Radiated Spurious Emission  
(802.11ac-HT80, ch42, 30MHz-1GHz)**



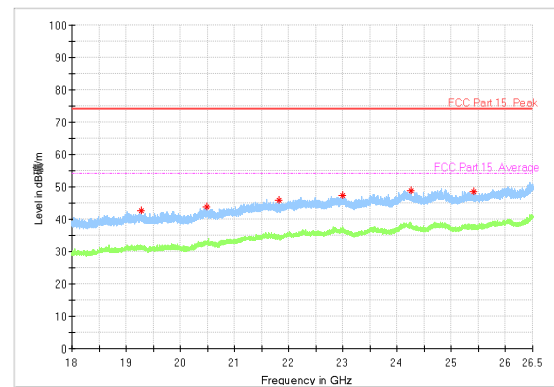
**Radiated Spurious Emission  
(802.11ac-HT80, ch42, 1GHz-8GHz)**



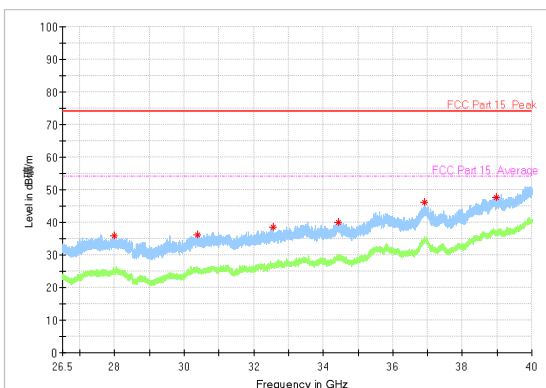
**Radiated Spurious Emission  
(802.11ac-HT80, ch42, 8GHz-18GHz)**



**Radiated Spurious Emission  
(802.11ac-HT80, ch42, 18GHz-26.5GHz)**



**Radiated Spurious Emission  
(802.11ac-HT80, ch42, 26.5 GHz-40 GHz)**



/

/

Secondary Supply

|  |  |
|--|--|
| <p>Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 30MHz-1GHz)</p>      | <p>Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 1GHz-8GHz)</p>     |
|  |  |
| <p>Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 8GHz-18GHz)</p>      | <p>Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 18GHz-26.5GHz)</p> |
|  |  |
| <p>Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 26.5 GHz-40 GHz)</p> | <p>/</p>   |
|  | <p>/</p>   |

Thirdly Supply

|   |   |
|---|---|
| <p style="text-align: center;">Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 30MHz-1GHz)</p>   | <p style="text-align: center;">Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 1GHz-8GHz))</p>   |
| <p>This graph shows the radiated spurious emission level in dBm/m versus frequency in Hz from 30M to 1G. The y-axis ranges from 0 to 100 dBm/m. A red line indicates the FCC Part 15 Peak limit, which is approximately 40 dBm/m from 30M to 60M, 45 dBm/m from 60M to 100M, and 50 dBm/m from 100M to 1G. A blue line represents the measured emission, which stays below the limit. A green line represents the FCC Part 15 Average limit, which is approximately 35 dBm/m. A pink dashed line represents the FCC Part 15 Average limit, which is approximately 55 dBm/m.</p> | <p>This graph shows the radiated spurious emission level in dBm/m versus frequency in Hz from 1G to 8G. The y-axis ranges from 0 to 100 dBm/m. A red line indicates the FCC Part 15 Peak limit at approximately 75 dBm/m. A blue line represents the measured emission, which stays below the limit. A green line represents the FCC Part 15 Average limit at approximately 35 dBm/m. A pink dashed line represents the FCC Part 15 Average limit at approximately 55 dBm/m.</p>    |
| <p style="text-align: center;">Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 8GHz-18GHz)</p>   | <p style="text-align: center;">Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 18GHz-26.5GHz)</p>  |
| <p>This graph shows the radiated spurious emission level in dBm/m versus frequency in GHz from 8 to 18. The y-axis ranges from 0 to 100 dBm/m. A red line indicates the FCC Part 15 Peak limit at approximately 75 dBm/m. A blue line represents the measured emission, which stays below the limit. A green line represents the FCC Part 15 Average limit at approximately 35 dBm/m. A pink dashed line represents the FCC Part 15 Average limit at approximately 55 dBm/m.</p>  | <p>This graph shows the radiated spurious emission level in dBm/m versus frequency in GHz from 18 to 26.5. The y-axis ranges from 0 to 100 dBm/m. A red line indicates the FCC Part 15 Peak limit at approximately 75 dBm/m. A blue line represents the measured emission, which stays below the limit. A green line represents the FCC Part 15 Average limit at approximately 35 dBm/m. A pink dashed line represents the FCC Part 15 Average limit at approximately 55 dBm/m.</p> |
| <p style="text-align: center;">Radiated Spurious Emission<br/>(802.11ac-HT80, ch42, 26.5 GHz-40 GHz)</p>  | <p style="text-align: center;">/</p>  |
| <p>This graph shows the radiated spurious emission level in dBm/m versus frequency in GHz from 26.5 to 40. The y-axis ranges from 0 to 100 dBm/m. A red line indicates the FCC Part 15 Peak limit at approximately 75 dBm/m. A blue line represents the measured emission, which stays below the limit. A green line represents the FCC Part 15 Average limit at approximately 35 dBm/m. A pink dashed line represents the FCC Part 15 Average limit at approximately 55 dBm/m.</p>   | <p style="text-align: center;">/</p>  |

**Main supply**

**802.11a**

Channel 36( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 50.62          | 31.09          | -15.3     | 46.39        | V        |
| 226.71         | 30.27          | -14.3     | 44.57        | V        |
| 301.77         | 32.57          | -12.5     | 45.07        | V        |
| 377.14         | 32.41          | -10.2     | 42.61        | V        |
| 459.34         | 34.63          | -8.2      | 42.83        | V        |
| 603.98         | 34.12          | -4.5      | 38.62        | H        |

Channel 36( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2997.2         | 37.46          | 3.2       | 34.26        | H        |
| 3417.8         | 43.97          | 1.6       | 42.37        | H        |
| 4280           | 46.85          | 1.6       | 45.25        | H        |
| 5399.6         | 50.75          | 3         | 47.75        | V        |
| 5973.2         | 38.11          | 2.7       | 35.41        | H        |
| 6480           | 46.33          | 3.6       | 42.73        | H        |

Channel 36( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2997.2         | 27.16          | 3.2       | 23.96        | H        |
| 3417.8         | 26.91          | 1.6       | 25.31        | H        |
| 4280           | 41.34          | 1.6       | 39.74        | H        |
| 5399.6         | 46.67          | 3         | 43.67        | V        |
| 5973.2         | 28.59          | 2.7       | 25.89        | H        |
| 6480           | 40.25          | 3.6       | 36.65        | H        |

Channel 36( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 50.42          | 4.3       | 46.12        | V        |
| 10356.6        | 52.36          | 7.8       | 44.56        | H        |
| 11855          | 48.17          | 9.7       | 38.47        | H        |
| 13681.4        | 51.5           | 11.6      | 39.9         | H        |
| 15070.6        | 51.09          | 13.6      | 37.49        | V        |
| 16303          | 52.95          | 16.1      | 36.85        | H        |

Channel 36( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 40.04          | 4.3       | 35.74        | V        |
| 10356.6        | 40.79          | 7.8       | 32.99        | H        |
| 11855          | 38.8           | 9.7       | 29.1         | H        |
| 13681.4        | 40.59          | 11.6      | 28.99        | H        |
| 15070.6        | 40.8           | 13.6      | 27.2         | V        |
| 16303          | 42.4           | 16.1      | 26.3         | H        |

Channel 36( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 19025.1        | 41.83          | -4.4      | 46.23        | H        |
| 20409.75       | 43.07          | -3.4      | 46.47        | H        |
| 21667.75       | 46.48          | -2.5      | 48.98        | V        |
| 22963.15       | 48.05          | -1.2      | 49.25        | V        |
| 24230.5        | 49.22          | 0         | 49.22        | H        |
| 25678.05       | 48.89          | 0.4       | 48.49        | V        |

Channel 36( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 28005.25       | 35.78          | 0.1       | 35.68        | H        |
| 30288.1        | 37.44          | 1         | 36.44        | H        |
| 32768.05       | 38.63          | 3.9       | 34.73        | H        |
| 34702.6        | 39.59          | 4.3       | 35.29        | V        |
| 36926.05       | 44.68          | 8.3       | 36.38        | H        |
| 39100.9        | 49.09          | 12.1      | 36.99        | H        |

**802.11n-HT20**

Channel 36( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 50.27          | 30.61          | -15.3     | 45.91        | V        |
| 229.60         | 34.7           | -14.2     | 48.9         | H        |
| 306.20         | 37.36          | -12.4     | 49.76        | V        |
| 459.07         | 27.22          | -8.2      | 35.42        | V        |
| 750.01         | 31.57          | -2.8      | 34.37        | H        |
| 829.78         | 33.79          | -1.7      | 35.49        | V        |

Channel 36( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2997.8         | 37.48          | 3.2       | 34.28        | H        |
| 3418.2         | 37.79          | 1.6       | 36.19        | H        |
| 4279.6         | 45.6           | 1.6       | 44           | H        |
| 5400           | 51.14          | 3         | 48.14        | V        |
| 6480           | 44.94          | 3.6       | 41.34        | H        |
| 7334           | 39.3           | 4.6       | 34.7         | V        |

Channel 36( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2997.8         | 27.02          | 3.2       | 23.82        | H        |
| 3418.2         | 26.67          | 1.6       | 25.07        | H        |
| 4279.6         | 37.65          | 1.6       | 36.05        | H        |
| 5400           | 47.97          | 3         | 44.97        | V        |
| 6480           | 38.39          | 3.6       | 34.79        | H        |
| 7334           | 29.22          | 4.6       | 24.62        | V        |

Channel 36( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 47.79          | 5.2       | 42.59        | H        |
| 9916           | 41.66          | 6.2       | 35.46        | V        |
| 11477.2        | 42.38          | 9.6       | 32.78        | V        |
| 13078.2        | 44.07          | 11.5      | 32.57        | V        |
| 14581.8        | 45.35          | 13.2      | 32.15        | H        |
| 16239.2        | 47.1           | 17        | 30.1         | V        |

Channel 36( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 37.35          | 5.2       | 32.15        | H        |
| 9916           | 30.77          | 6.2       | 24.57        | V        |
| 11477.2        | 32.85          | 9.6       | 23.25        | V        |
| 13078.2        | 33.53          | 11.5      | 22.03        | V        |
| 14581.8        | 34.17          | 13.2      | 20.97        | H        |
| 16239.2        | 37.16          | 17        | 20.16        | V        |

Channel 36( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 18158.95       | 41.13          | -6        | 47.13        | V        |
| 19239.3        | 42.59          | -4.7      | 47.29        | H        |
| 20779.5        | 43.16          | -3.5      | 46.66        | H        |
| 22220.25       | 46.17          | -1.9      | 48.07        | H        |
| 24009.5        | 48.68          | -0.2      | 48.88        | H        |
| 25366.1        | 47.74          | -0.4      | 48.14        | H        |

Channel 36( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 28129.45       | 36.81          | 1.2       | 35.61        | V        |
| 30325.9        | 36.5           | 1.1       | 35.4         | V        |
| 32587.15       | 37.78          | 3.6       | 34.18        | H        |
| 34435.3        | 40.53          | 4.5       | 36.03        | V        |
| 36917.95       | 44.99          | 8.4       | 36.59        | V        |
| 38983.45       | 47.67          | 11.9      | 35.77        | V        |

**802.11n-HT40**

Channel 38( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 50.45          | 31.13          | -15.3     | 46.43        | V        |
| 226.36         | 33.78          | -14.3     | 48.08        | H        |
| 302.99         | 37.4           | -12.5     | 49.9         | V        |
| 378.01         | 24.87          | -10.1     | 34.97        | H        |
| 459.10         | 27.29          | -8.2      | 35.49        | V        |
| 830.65         | 33.49          | -1.7      | 35.19        | V        |

Channel 38( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2999.8         | 36.75          | 3.1       | 33.65        | H        |
| 3400.8         | 42.85          | 1.9       | 40.95        | H        |
| 4279.8         | 46.36          | 1.6       | 44.76        | H        |
| 5399.8         | 51.05          | 3         | 48.05        | V        |
| 6480.6         | 43.03          | 3.6       | 39.43        | H        |
| 7457.8         | 40.46          | 4.2       | 36.26        | V        |

Channel 38( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2999.8         | 26.55          | 3.1       | 23.45        | H        |
| 3400.8         | 27.01          | 1.9       | 25.11        | H        |
| 4279.8         | 41.38          | 1.6       | 39.78        | H        |
| 5399.8         | 48.05          | 3         | 45.05        | V        |
| 6480.6         | 32.71          | 3.6       | 29.11        | H        |
| 7457.8         | 30.4           | 4.2       | 26.2         | V        |

Channel 38( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 45.41          | 5.2       | 40.21        | H        |
| 10204.4        | 41.32          | 7.4       | 33.92        | V        |
| 12230.2        | 43.25          | 11.4      | 31.85        | V        |
| 13679.4        | 43.92          | 12.1      | 31.82        | V        |
| 15550.2        | 45.46          | 15.4      | 30.06        | H        |
| 17203.8        | 48.36          | 18.3      | 30.06        | V        |

Channel 38( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 35.77          | 5.2       | 30.57        | H        |
| 10204.4        | 31.24          | 7.4       | 23.84        | V        |
| 12230.2        | 33.18          | 11.4      | 21.78        | V        |
| 13679.4        | 33.83          | 12.1      | 21.73        | V        |
| 15550.2        | 35.28          | 15.4      | 19.88        | H        |
| 17203.8        | 38.51          | 18.3      | 20.21        | V        |

Channel 38( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 18998.75       | 41.93          | -4.5      | 46.43        | H        |
| 20503.25       | 43.37          | -2.9      | 46.27        | H        |
| 21949.1        | 45.45          | -2.1      | 47.55        | H        |
| 23196.9        | 46.68          | -1.3      | 47.98        | V        |
| 24539.05       | 47.08          | -0.3      | 47.38        | V        |
| 25823.4        | 49.5           | 0.5       | 49           | H        |



Channel 38( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 27952.6        | 36.22          | -0.4      | 36.62        | V        |
| 30196.3        | 37.13          | 0.9       | 36.23        | H        |
| 32569.6        | 37.91          | 3.6       | 34.31        | V        |
| 34655.35       | 39.7           | 4.5       | 35.2         | V        |
| 36908.5        | 45.75          | 8.4       | 37.35        | V        |
| 38890.3        | 48.11          | 11.6      | 36.51        | V        |

### 802.11ac-HT20

Channel 36( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 50.30          | 31.84          | -15.3     | 47.14        | V        |
| 226.40         | 33.9           | -14.3     | 48.2         | H        |
| 302.39         | 37.68          | -12.5     | 50.18        | V        |
| 458.56         | 31.9           | -8.3      | 40.2         | V        |
| 663.56         | 29.23          | -3.8      | 33.03        | V        |
| 830.36         | 33.88          | -1.7      | 35.58        | V        |

Channel 36( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2993.6         | 52.07          | 3.3       | 48.77        | H        |
| 3188.8         | 37.36          | 1.7       | 35.66        | H        |
| 3328.6         | 41.68          | 2.3       | 39.38        | H        |
| 4186           | 41.48          | 1.4       | 40.08        | H        |
| 4279.8         | 45.96          | 1.6       | 44.36        | H        |
| 5400.2         | 49.07          | 3         | 46.07        | V        |

Channel 36( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2993.6         | 26.76          | 3.3       | 23.46        | H        |
| 3188.8         | 26.81          | 1.7       | 25.11        | H        |
| 3328.6         | 29.62          | 2.3       | 27.32        | H        |
| 4186           | 27.73          | 1.4       | 26.33        | H        |
| 4279.8         | 40.81          | 1.6       | 39.21        | H        |
| 5400.2         | 43.77          | 3         | 40.77        | V        |

Channel 36( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 46.23          | 5.2       | 41.03        | V        |
| 10003.2        | 42.01          | 6.5       | 35.51        | H        |
| 11677.4        | 43.69          | 10.4      | 33.29        | H        |
| 13351.6        | 43.9           | 12        | 31.9         | V        |
| 15049          | 45.35          | 14.5      | 30.85        | V        |
| 16366.6        | 47.52          | 17.5      | 30.02        | H        |

Channel 36( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 35.25          | 5.2       | 30.05        | V        |
| 10003.2        | 31.12          | 6.5       | 24.62        | H        |
| 11677.4        | 33.14          | 10.4      | 22.74        | H        |
| 13351.6        | 34.53          | 12        | 22.53        | V        |
| 15049          | 35.24          | 14.5      | 20.74        | V        |
| 16366.6        | 36.64          | 17.5      | 19.14        | H        |

Channel 36( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 18663.85       | 42.11          | -4.9      | 47.01        | H        |
| 19931.2        | 42.58          | -4.5      | 47.08        | H        |
| 20899.35       | 44.96          | -2.4      | 47.36        | H        |
| 22222.8        | 46.76          | -1.9      | 48.66        | H        |
| 23541.15       | 47.66          | -1.5      | 49.16        | H        |
| 25242.85       | 49.56          | 0.5       | 49.06        | H        |

Channel 36( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 28203.7        | 36.08          | 0.5       | 35.58        | H        |
| 30420.4        | 36.23          | 1.2       | 35.03        | V        |
| 32720.8        | 39.07          | 3.9       | 35.17        | H        |
| 34516.3        | 40.59          | 4.5       | 36.09        | V        |
| 36896.35       | 44.41          | 8.4       | 36.01        | V        |
| 38755.3        | 48.6           | 11.1      | 37.5         | V        |

**802.11ac-HT40**

Channel 38( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 46.37          | 31.02          | -15.6     | 46.62        | V        |
| 229.57         | 34.97          | -14.2     | 49.17        | H        |
| 303.25         | 36.27          | -12.4     | 48.67        | V        |
| 377.29         | 29.93          | -10.2     | 40.13        | V        |
| 749.99         | 31.87          | -2.8      | 34.67        | H        |
| 829.77         | 33.83          | -1.7      | 35.53        | V        |

Channel 38( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2994.2         | 37.45          | 3.3       | 34.15        | H        |
| 3413.8         | 43.94          | 1.6       | 42.34        | H        |
| 4279.4         | 44.46          | 1.6       | 42.86        | H        |
| 4995           | 39.39          | 5.2       | 34.19        | H        |
| 5399.8         | 51.17          | 3         | 48.17        | V        |
| 6480.2         | 44.52          | 3.6       | 40.92        | H        |

Channel 38( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2994.2         | 27.23          | 3.3       | 23.93        | H        |
| 3413.8         | 26.67          | 1.6       | 25.07        | H        |
| 4279.4         | 35.77          | 1.6       | 34.17        | H        |
| 4995           | 27.85          | 5.2       | 22.65        | H        |
| 5399.8         | 48.15          | 3         | 45.15        | V        |
| 6480.2         | 37.11          | 3.6       | 33.51        | H        |

Channel 38( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 47.67          | 5.2       | 42.47        | H        |
| 9664.8         | 40.55          | 6         | 34.55        | V        |
| 11669.2        | 43.44          | 10.4      | 33.04        | V        |
| 13748.2        | 43.93          | 12.1      | 31.83        | V        |
| 15211          | 45.36          | 14.9      | 30.46        | V        |
| 16155          | 47.67          | 16.7      | 30.97        | V        |

Channel 38( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 36.82          | 5.2       | 31.62        | H        |
| 9664.8         | 30.11          | 6         | 24.11        | V        |
| 11669.2        | 33.18          | 10.4      | 22.78        | V        |
| 13748.2        | 34.46          | 12.1      | 22.36        | V        |
| 15211          | 35.67          | 14.9      | 20.77        | V        |
| 16155          | 37.25          | 16.7      | 20.55        | V        |

Channel 38( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 19052.3        | 41.61          | -4.4      | 46.01        | H        |
| 20473.5        | 42.99          | -2.9      | 45.89        | V        |
| 21930.4        | 46.12          | -2.2      | 48.32        | V        |
| 23003.95       | 47.81          | -1.4      | 49.21        | H        |
| 24152.3        | 48.58          | -0.1      | 48.68        | H        |
| 25343.15       | 48.85          | -0.2      | 49.05        | H        |

Channel 38( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 27683.95       | 36.19          | -0.3      | 36.49        | V        |
| 29602.3        | 35.6           | 0.1       | 35.5         | H        |
| 32469.7        | 38.48          | 3.3       | 35.18        | H        |
| 35798.8        | 44.37          | 6.5       | 37.87        | V        |
| 37498.45       | 43.48          | 7.6       | 35.88        | H        |
| 39069.85       | 49.03          | 12.1      | 36.93        | H        |

**802.11ac-HT80**

Channel 42( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 42.21          | 31.87          | -16.1     | 47.97        | V        |
| 50.14          | 28.55          | -15.2     | 43.75        | V        |
| 226.72         | 32.8           | -14.3     | 47.1         | H        |
| 305.17         | 36.73          | -12.4     | 49.13        | V        |
| 459.30         | 31.25          | -8.2      | 39.45        | V        |
| 829.75         | 34.38          | -1.7      | 36.08        | V        |

Channel 42( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2994           | 39.35          | 3.3       | 36.05        | H        |
| 3148.4         | 36.43          | 2.6       | 33.83        | V        |
| 3397.2         | 45.68          | 1.8       | 43.88        | H        |
| 4279.8         | 46.27          | 1.6       | 44.67        | H        |
| 6479.6         | 45.29          | 3.6       | 41.69        | V        |
| 7140.8         | 40.37          | 4.8       | 35.57        | V        |

Channel 42( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2994           | 26.95          | 3.3       | 23.65        | H        |
| 3148.4         | 26.31          | 2.6       | 23.71        | V        |
| 3397.2         | 26.89          | 1.8       | 25.09        | H        |
| 4279.8         | 40.96          | 1.6       | 39.36        | H        |
| 6479.6         | 39.58          | 3.6       | 35.98        | V        |
| 7140.8         | 30.17          | 4.8       | 25.37        | V        |

Channel 42 ( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 46.82          | 5.2       | 41.62        | H        |
| 10255          | 42.15          | 7.8       | 34.35        | V        |
| 11842.2        | 42.4           | 10.2      | 32.2         | V        |
| 13339.2        | 44.46          | 12        | 32.46        | V        |
| 15149          | 45.73          | 14.6      | 31.13        | V        |
| 16331.6        | 46.72          | 17.3      | 29.42        | V        |

Channel 42 ( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 36.86          | 5.2       | 31.66        | H        |
| 10255          | 31.56          | 7.8       | 23.76        | V        |
| 11842.2        | 32.47          | 10.2      | 22.27        | V        |
| 13339.2        | 34.56          | 12        | 22.56        | V        |
| 15149          | 35.28          | 14.6      | 20.68        | V        |
| 16331.6        | 37.03          | 17.3      | 19.73        | V        |

Channel 42 ( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 19275          | 42.51          | -4.8      | 47.31        | H        |
| 20496.45       | 43.85          | -2.9      | 46.75        | V        |
| 21827.55       | 45.84          | -2.5      | 48.34        | V        |
| 22998.85       | 47.32          | -1.4      | 48.72        | V        |
| 24259.4        | 48.91          | 0.1       | 48.81        | V        |
| 25417.1        | 48.65          | -0.7      | 49.35        | H        |

Channel 42( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 27991.75       | 35.87          | 0         | 35.87        | H        |
| 30371.8        | 36.26          | 1.2       | 35.06        | H        |
| 32561.5        | 38.39          | 3.5       | 34.89        | V        |
| 34431.25       | 40.08          | 4.6       | 35.48        | V        |
| 36927.4        | 46.21          | 8.3       | 37.91        | V        |
| 38979.4        | 47.71          | 11.9      | 35.81        | H        |

## Secondary Supply

### 802.11ac-HT80

Channel 42( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 32.84          | 31.98          | -14.2     | 46.18        | V        |
| 39.77          | 29.2           | -12.9     | 42.1         | V        |
| 55.57          | 25.45          | -12.1     | 37.55        | V        |
| 125.01         | 30.57          | -15.6     | 46.17        | V        |
| 499.99         | 27.52          | -6.4      | 33.92        | H        |
| 750.00         | 31.49          | -2.1      | 33.59        | H        |

Channel 42( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2908.8         | 44.45          | 1.6       | 42.85        | V        |
| 3423.8         | 50.87          | 0.5       | 50.37        | V        |
| 4280.4         | 44.05          | 1.1       | 42.95        | H        |
| 5399.8         | 53.81          | 2         | 51.81        | V        |
| 6183.8         | 44.56          | 2.9       | 41.66        | H        |
| 7020.4         | 45.68          | 4.3       | 41.38        | V        |

Channel 42( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2908.8         | 35.27          | 1.6       | 33.67        | V        |
| 3423.8         | 45.4           | 0.5       | 44.9         | V        |
| 4280.4         | 34.35          | 1.1       | 33.25        | H        |
| 5399.8         | 50.69          | 2         | 48.69        | V        |
| 6183.8         | 34.32          | 2.9       | 31.42        | H        |
| 7020.4         | 36.53          | 4.3       | 32.23        | V        |

Channel 42 ( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 57.74          | 4.3       | 53.44        | V        |
| 9570.4         | 45.4           | 5.9       | 39.5         | H        |
| 11628.2        | 49.47          | 9.8       | 39.67        | V        |
| 13698          | 50.33          | 11.6      | 38.73        | V        |
| 15647          | 52.19          | 14.5      | 37.69        | H        |
| 17156          | 53.56          | 17.5      | 36.06        | V        |

Channel 42 ( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 46.85          | 4.3       | 42.55        | V        |
| 9570.4         | 35.28          | 5.9       | 29.38        | H        |
| 11628.2        | 39.37          | 9.8       | 29.57        | V        |
| 13698          | 40.69          | 11.6      | 29.09        | V        |
| 15647          | 41.74          | 14.5      | 27.24        | H        |
| 17156          | 43.91          | 17.5      | 26.41        | V        |

Channel 42 ( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 18964.75       | 41.8           | -4.5      | 46.3         | V        |
| 20480.3        | 43.29          | -2.9      | 46.19        | V        |
| 21654.15       | 45.97          | -2.4      | 48.37        | V        |
| 23009.05       | 47.28          | -1.4      | 48.68        | V        |
| 24242.4        | 48.83          | 0         | 48.83        | V        |
| 25752          | 49.97          | 1         | 48.97        | H        |

Channel 42( 26.5GHz ~ 40GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 28070.05       | 35.8           | 0.7       | 35.1         | V        |
| 30253          | 36.45          | 1         | 35.45        | V        |
| 32507.5        | 37.62          | 3.4       | 34.22        | H        |
| 34567.6        | 40.2           | 4.5       | 35.7         | V        |
| 36787          | 43.96          | 8.5       | 35.46        | V        |
| 38745.85       | 48.26          | 11.1      | 37.16        | H        |

### Thirdly Supply

#### 802.11ac-HT80

Channel 42( 30MHz ~1GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 32.68          | 31.06          | -14.2     | 45.26        | V        |
| 59.49          | 36.53          | -12.3     | 48.83        | V        |
| 63.21          | 35.85          | -13.4     | 49.25        | V        |
| 125.01         | 31.39          | -15.6     | 46.99        | H        |
| 269.99         | 21.18          | -11.1     | 32.28        | V        |
| 372.38         | 19.53          | -8.8      | 28.33        | V        |

Channel 42( 1GHz ~ 8GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2904.6         | 45.22          | 1.5       | 43.72        | H        |
| 3144           | 45.16          | 1.5       | 43.66        | V        |
| 4530.8         | 43.72          | 1.3       | 42.42        | H        |
| 5399.8         | 54.31          | 2         | 52.31        | V        |
| 6722.6         | 46.36          | 3.8       | 42.56        | H        |
| 6946.4         | 49.03          | 3.8       | 45.23        | V        |

Channel 42( 1GHz ~ 8GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 2904.6         | 35.3           | 1.5       | 33.8         | H        |
| 3144           | 35.03          | 1.5       | 33.53        | V        |
| 4530.8         | 34.12          | 1.3       | 32.82        | H        |
| 5399.8         | 51.46          | 2         | 49.46        | V        |
| 6722.6         | 35.69          | 3.8       | 31.89        | H        |
| 6946.4         | 42.71          | 3.8       | 38.91        | V        |



Channel 42 ( 8GHz ~ 18GHz )(peak)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 50.95          | 4.3       | 46.65        | V        |
| 9655           | 45.28          | 5.7       | 39.58        | H        |
| 11226.2        | 48.08          | 8         | 40.08        | H        |
| 12880.6        | 49.89          | 11.2      | 38.69        | H        |
| 14710.2        | 50.01          | 12.9      | 37.11        | V        |
| 16345.6        | 51.75          | 16.3      | 35.45        | H        |

Channel 42 ( 8GHz ~ 18GHz )(average)

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 8099           | 40.94          | 4.3       | 36.64        | V        |
| 9655           | 35.25          | 5.7       | 29.55        | H        |
| 11226.2        | 38.03          | 8         | 30.03        | H        |
| 12880.6        | 39.97          | 11.2      | 28.77        | H        |
| 14710.2        | 40.75          | 12.9      | 27.85        | V        |
| 16345.6        | 42.52          | 16.3      | 26.22        | H        |

Channel 42 ( 18GHz ~ 26.5GHz )

| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 18646          | 41.83          | -4.9      | 46.73        | H        |
| 20136.9        | 43.05          | -4.7      | 47.75        | V        |
| 21632.05       | 45.48          | -2.4      | 47.88        | V        |
| 22833.95       | 46.56          | -0.7      | 47.26        | H        |
| 24268.75       | 49.7           | 0         | 49.7         | V        |
| 25888          | 49.7           | 0         | 49.7         | H        |

Channel 42( 26.5GHz ~ 40GHz )

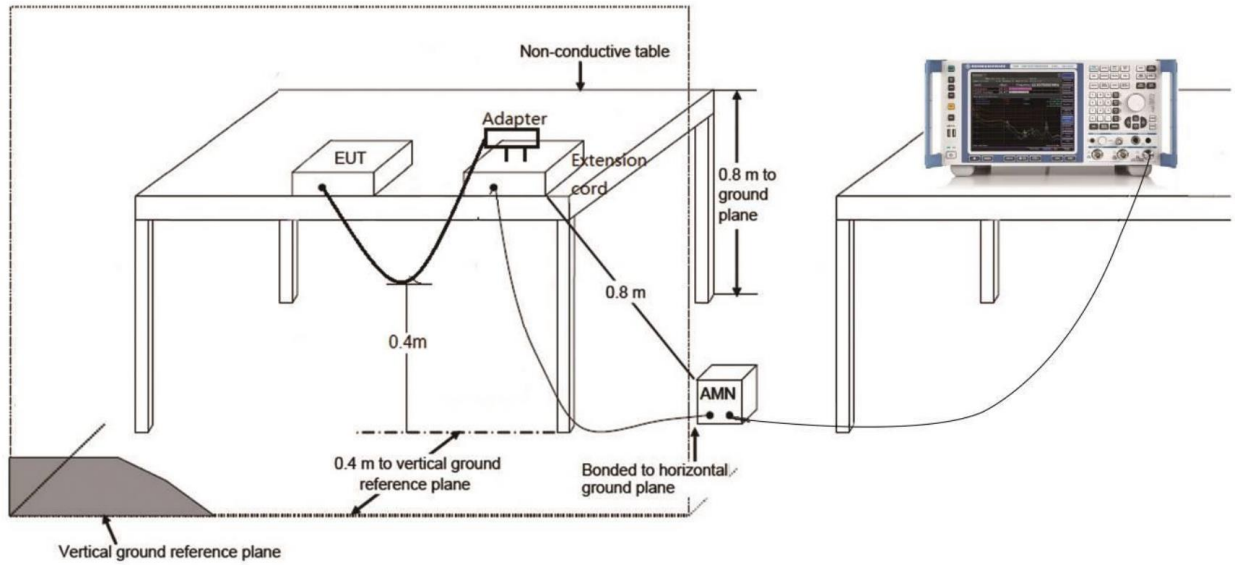
| Frequency(MHz) | Result(dBuV/m) | ARpl (dB) | PMea(dBuV/m) | Polarity |
|----------------|----------------|-----------|--------------|----------|
| 28138.9        | 36.25          | 1.1       | 35.15        | H        |
| 30244.9        | 36.07          | 1         | 35.07        | H        |
| 32758.6        | 38.75          | 3.9       | 34.85        | V        |
| 35077.9        | 39.76          | 3.3       | 36.46        | H        |
| 36882.85       | 45.51          | 8.4       | 37.11        | H        |
| 38893          | 48.32          | 11.6      | 36.72        | H        |

## 6.7. Conducted Emission (150kHz- 30MHz)

### 6.7.1. Method of Measurement: ANSI C63.10-2013-clause 6.2

- 1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
- 2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
- 3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
- 4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.

If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.<sup>36</sup> Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.



6.7.3. Test Condition

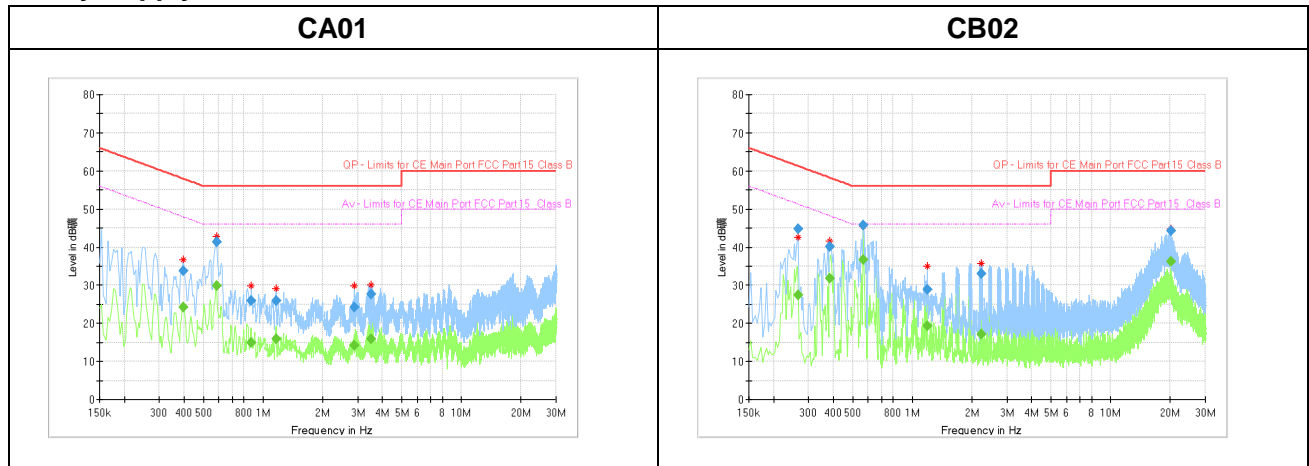
| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 120         | 60             |

6.7.4. Measurement Result and limit

| Frequency range (MHz) | Quasi-peak Limit (dB $\mu$ V) | Average Limit (dB $\mu$ V) | Conclusion |
|-----------------------|-------------------------------|----------------------------|------------|
| 0.15 to 0.5           | 66 to 56                      | 56 to 46                   | 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.

Mainly Supply

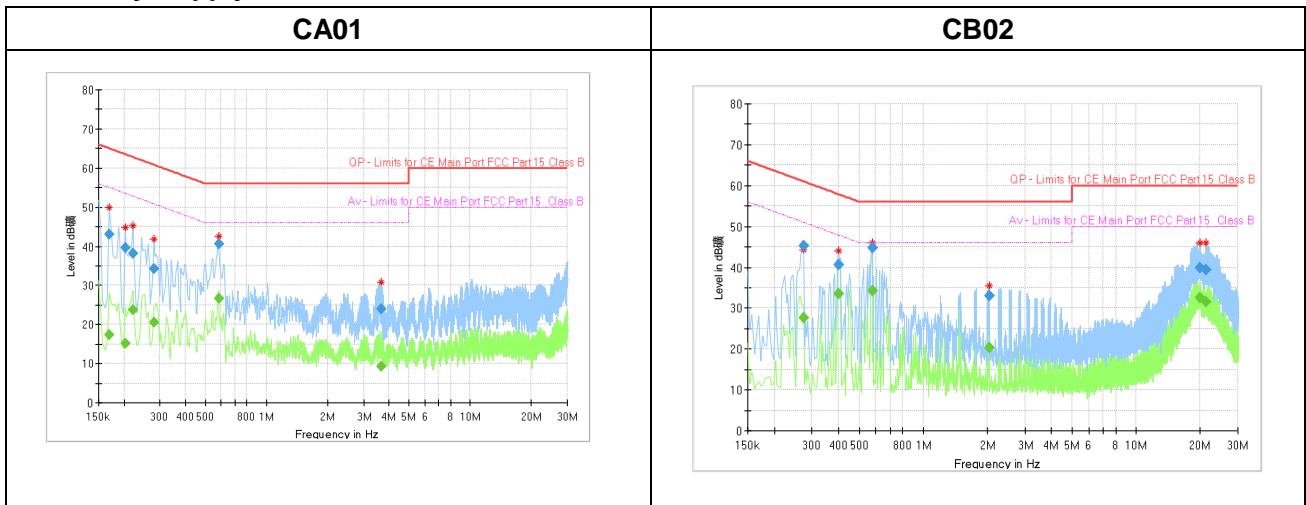


CA01

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|------------|-----------------|------|--------|------------|
| 0.396263        | 33.64            | ---            | 57.93        | 24.29       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.396263        | ---              | 24.15          | 47.93        | 23.78       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.582825        | ---              | 29.92          | 46.00        | 16.08       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.582825        | 41.43            | ---            | 56.00        | 14.57       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.873863        | ---              | 14.97          | 46.00        | 31.03       | 15000      | 9.000           | L1   | ON     | 10.0       |
| 0.873863        | 26.01            | ---            | 56.00        | 29.99       | 15000      | 9.000           | L1   | ON     | 10.0       |
| 1.164900        | 25.99            | ---            | 56.00        | 30.01       | 15000      | 9.000           | L1   | ON     | 10.1       |
| 1.164900        | ---              | 15.82          | 46.00        | 30.18       | 15000      | 9.000           | L1   | ON     | 10.1       |
| 2.885006        | ---              | 14.10          | 46.00        | 31.90       | 15000      | 9.000           | L1   | ON     | 10.4       |
| 2.885006        | 24.26            | ---            | 56.00        | 31.74       | 15000      | 9.000           | L1   | ON     | 10.4       |
| 3.500663        | ---              | 15.83          | 46.00        | 30.17       | 15000      | 9.000           | L1   | ON     | 10.4       |
| 3.500663        | 27.53            | ---            | 56.00        | 28.47       | 15000      | 9.000           | L1   | ON     | 10.4       |

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|------------|-----------------|------|--------|------------|
| 0.265669        | ---              | 27.41          | 51.25        | 23.85       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.265669        | 44.86            | ---            | 61.25        | 16.40       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.385069        | 40.24            | ---            | 58.17        | 17.93       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.385069        | ---              | 31.76          | 48.17        | 16.41       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.567900        | 45.72            | ---            | 56.00        | 10.28       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.567900        | ---              | 36.69          | 46.00        | 9.31        | 15000      | 9.000           | N    | ON     | 9.8        |
| 1.191019        | 28.95            | ---            | 56.00        | 27.05       | 15000      | 9.000           | L1   | ON     | 10.1       |
| 1.191019        | ---              | 19.44          | 46.00        | 26.56       | 15000      | 9.000           | L1   | ON     | 10.1       |
| 2.235769        | 33.08            | ---            | 56.00        | 22.92       | 15000      | 9.000           | L1   | ON     | 10.3       |
| 2.235769        | ---              | 17.04          | 46.00        | 28.96       | 15000      | 9.000           | L1   | ON     | 10.3       |
| 20.142038       | ---              | 36.30          | 50.00        | 13.70       | 15000      | 9.000           | N    | ON     | 10.5       |
| 20.142038       | 44.17            | ---            | 60.00        | 15.83       | 15000      | 9.000           | N    | ON     | 10.5       |

Secondary Supply

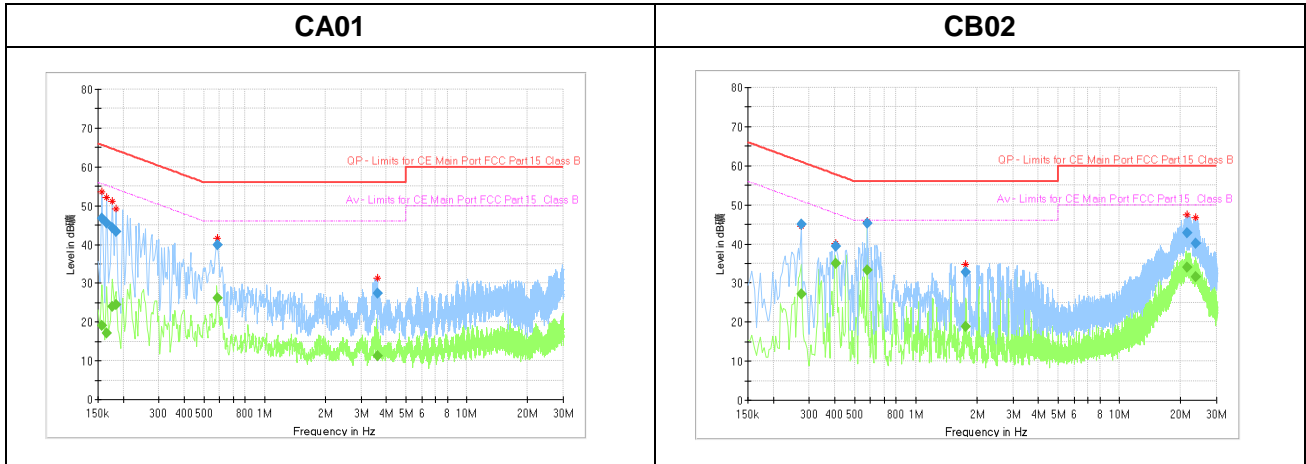


| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|------------|-----------------|------|--------|------------|
| 0.168656        | ---              | 17.30          | 55.03        | 37.73       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.168656        | 43.18            | ---            | 65.03        | 21.85       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.202238        | ---              | 15.20          | 53.52        | 38.32       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.202238        | 39.73            | ---            | 63.52        | 23.79       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.220894        | 38.28            | ---            | 62.79        | 24.51       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.220894        | ---              | 23.70          | 52.79        | 29.09       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.280594        | ---              | 20.55          | 50.80        | 30.25       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.280594        | 34.21            | ---            | 60.80        | 26.59       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.582825        | ---              | 26.67          | 46.00        | 19.33       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.582825        | 40.58            | ---            | 56.00        | 15.42       | 15000      | 9.000           | N    | ON     | 9.8        |
| 3.664838        | 24.00            | ---            | 56.00        | 32.00       | 15000      | 9.000           | L1   | ON     | 10.5       |
| 3.664838        | ---              | 9.19           | 46.00        | 36.81       | 15000      | 9.000           | L1   | ON     | 10.5       |

CB02

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|------------|-----------------|------|--------|------------|
| 0.273131        | ---              | 27.70          | 51.02        | 23.33       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.273131        | 45.36            | ---            | 61.02        | 15.66       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.399994        | ---              | 33.58          | 47.85        | 14.28       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.399994        | 40.63            | ---            | 57.85        | 17.23       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.575363        | 44.71            | ---            | 56.00        | 11.29       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.575363        | ---              | 34.21          | 46.00        | 11.79       | 15000      | 9.000           | N    | ON     | 9.8        |
| 2.034281        | 32.93            | ---            | 56.00        | 23.07       | 15000      | 9.000           | L1   | ON     | 10.3       |
| 2.034281        | ---              | 20.33          | 46.00        | 25.67       | 15000      | 9.000           | L1   | ON     | 10.3       |
| 19.877119       | ---              | 32.56          | 50.00        | 17.44       | 15000      | 9.000           | L1   | ON     | 11.1       |
| 19.877119       | 39.82            | ---            | 60.00        | 20.18       | 15000      | 9.000           | L1   | ON     | 11.1       |
| 21.186788       | ---              | 31.45          | 50.00        | 18.55       | 15000      | 9.000           | L1   | ON     | 11.1       |
| 21.186788       | 39.49            | ---            | 60.00        | 20.51       | 15000      | 9.000           | L1   | ON     | 11.1       |

Thirdly Supply



CA01

| Frequency (MHz) | QuasiPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|------------|-----------------|------|--------|------------|
| 0.157463        | ---              | 19.09          | 55.60        | 36.50       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.157463        | 46.64            | ---            | 65.60        | 18.96       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.164925        | ---              | 17.11          | 55.21        | 38.10       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.164925        | 45.53            | ---            | 65.21        | 19.68       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.176119        | ---              | 23.90          | 54.67        | 30.77       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.176119        | 44.23            | ---            | 64.67        | 20.44       | 15000      | 9.000           | L1   | ON     | 9.7        |
| 0.183581        | 43.33            | ---            | 64.32        | 20.99       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.183581        | ---              | 24.37          | 54.32        | 29.95       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.582825        | 39.98            | ---            | 56.00        | 16.02       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.582825        | ---              | 26.13          | 46.00        | 19.88       | 15000      | 9.000           | N    | ON     | 9.8        |
| 3.605138        | ---              | 11.14          | 46.00        | 34.86       | 15000      | 9.000           | L1   | ON     | 10.4       |
| 3.605138        | 27.44            | ---            | 56.00        | 28.56       | 15000      | 9.000           | L1   | ON     | 10.4       |

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|----------------|--------------|-------------|------------|-----------------|------|--------|------------|
| 0.273131        | ---              | 27.20          | 51.02        | 23.82       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.273131        | 45.08            | ---            | 61.02        | 15.95       | 15000      | 9.000           | L1   | ON     | 9.8        |
| 0.403725        | 39.39            | ---            | 57.78        | 18.39       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.403725        | ---              | 34.91          | 47.78        | 12.87       | 15000      | 9.000           | N    | ON     | 9.7        |
| 0.579094        | 45.27            | ---            | 56.00        | 10.73       | 15000      | 9.000           | N    | ON     | 9.8        |
| 0.579094        | ---              | 33.36          | 46.00        | 12.64       | 15000      | 9.000           | N    | ON     | 9.8        |
| 1.754438        | 32.79            | ---            | 56.00        | 23.21       | 15000      | 9.000           | L1   | ON     | 10.3       |
| 1.754438        | ---              | 18.95          | 46.00        | 27.05       | 15000      | 9.000           | L1   | ON     | 10.3       |
| 21.567375       | 42.93            | ---            | 60.00        | 17.07       | 15000      | 9.000           | L1   | ON     | 11.1       |
| 21.567375       | ---              | 34.12          | 50.00        | 15.88       | 15000      | 9.000           | L1   | ON     | 11.1       |
| 23.768813       | ---              | 31.45          | 50.00        | 18.55       | 15000      | 9.000           | N    | ON     | 10.4       |
| 23.768813       | 40.08            | ---            | 60.00        | 19.92       | 15000      | 9.000           | N    | ON     | 10.4       |

## 6.8. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.



## 7. Test Equipment List

### 7.1. Conducted Test System

| Item | Equipment Name         | Type                      | Serial Number    | Manufacturer | Cal. Date  | Cal. interval |
|------|------------------------|---------------------------|------------------|--------------|------------|---------------|
| 1    | Vector Signal Analyzer | FSQ26                     | 101091           | R&S          | 2021-05-10 | 1 year        |
| 2    | DC Power Supply        | ZUP60-14                  | LOC-220Z006-0007 | TDL-Lambda   | 2021-05-10 | 1 year        |
| 3    | Eagle Test Software    | Eagle V3.1<br>FCC BT/WIFI | N/A              | ECIT         | N/A        | N/A           |

### 7.2. Radiated Emission Test System

| Item | Equipment Name                       | Type               | Serial Number | Manufacturer | Cal. Date  | Cal. interval |
|------|--------------------------------------|--------------------|---------------|--------------|------------|---------------|
| 1    | Universal Radio Communication Tester | CMU200             | 123123        | R&S          | 2021-05-10 | 1 year        |
| 2    | EMI Test Receiver                    | ESU40              | 100307        | R&S          | 2021-03-03 | 1 year        |
| 3    | TRILOG Broadband Antenna             | VULB9163           | VULB9163-515  | Schwarzbeck  | 2020-02-03 | 2 years       |
| 4    | Double- ridged Waveguide Antenna     | ETS-3117           | 00135890      | ETS          | 2020-02-28 | 3 years       |
| 5    | Universal Radio Communication Tester | CMW500             | 104178        | R&S          | 2021-05-10 | 1 year        |
| 6    | EMI Test Software                    | EMC32<br>V 9.15.00 | N/A           | R&S          | N/A        | N/A           |

Anechoic chamber

Fully anechoic chamber by ETS.

## Annex A: Measurement Uncertainty

Measurement uncertainty for all the testing in this report are within the limit specified in 3IN documents .  
The detailed measurement uncertainty is defined in 3IN documents.

| Measurement Items                      | Range              | Confidence Level | Calculated Uncertainty |
|--|--------------------|------------------|------------------------|
| Peak Output Power-Conducted            | 5100MHz-5875MHz    | 95%              | 1.024dB                |
| Peak Power Spectral Density            | 5100MHz-5875MHz    | 95%              | 1.024dB/MHz            |
| Conducted Emission                     | 30MHz-2GHz         | 95%              | 0.90dB                 |
| Conducted Emission                     | 2GHz-3.6GHz        | 95%              | 0.88dB                 |
| Conducted Emission                     | 3.6GHz-8GHz        | 95%              | 0.96dB                 |
| Conducted Emission                     | 8GHz-20GHz         | 95%              | 0.94dB                 |
| Conducted Emission                     | 20GHz-22GHz        | 95%              | 0.88dB                 |
| Conducted Emission                     | 22GHz-26GHz        | 95%              | 0.86dB                 |
| Transmitter Spurious Emission-Radiated | 9KHz-30MHz         | 95%              | 5.66dB                 |
| Transmitter Spurious Emission-Radiated | 30MHz-1000MHz      | 95%              | 4.98dB                 |
| Transmitter Spurious Emission-Radiated | 1000MHz -18000MHz  | 95%              | 5.06dB                 |
| Transmitter Spurious Emission-Radiated | 18000MHz -40000MHz | 95%              | 5.20dB                 |
| AC Power line Conducted Emission       | 0.15MHz-30MHz      | 95%              | 3.66 dB                |

## Annex B: Accreditation Certificate



### Accredited Laboratory

A2LA has accredited

## INDUSTRIAL INTERNET INNOVATION CENTER (SHANGHAI) CO., LTD.

Shanghai, People's Republic of China

for technical competence in the field of

### Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 12<sup>th</sup> day of April 2021.



Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3682.01  
Valid to February 28, 2023

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

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