



# FCC RF Test Report

APPLICANT : Thundercomm Technology Co., Ltd  
EQUIPMENT : Calculation Module  
BRAND NAME : TurboX  
MODEL NAME : C6125  
FCC ID : 2AOHHTURBOXC6125  
STANDARD : FCC Part 15 Subpart E §15.407  
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure  
TEST DATE(S) : Aug. 25, 2021 ~ Sep. 23, 2021

We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



**Sporton International (ShenZhen) Inc.**

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**People's Republic of China**



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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION                                 | ISSUED DATE   |
|------------|---------|---------------------------------------------|---------------|
| FR180601D  | Rev. 01 | Initial issue of report                     | Sep. 27, 2021 |
| FR180601D  | Rev. 02 | Add 26dB and 99% OBW graph in chapter 3.1.5 | Oct. 08, 2021 |
|            |         |                                             |               |
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|            |         |                                             |               |

## SUMMARY OF TEST RESULT

| Report Section | FCC Rule           | Description                    | Limit                 | Result      | Remark                             |
|----------------|--------------------|--------------------------------|-----------------------|-------------|------------------------------------|
| 3.1            | 2.1049 & 15.403(i) | 26dB & 99% Bandwidth           | -                     | Report only | -                                  |
| 3.2            | 15.407(a)          | Maximum Conducted Output Power | $\leq 24$ dBm         | Pass        | -                                  |
| 3.3            | 15.407(a)          | Power Spectral Density         | $\leq 11$ dBm         | Pass        | -                                  |
| 3.4            | 15.407(b)          | Unwanted Emissions             | 15.407(b) & 15.209(a) | Pass        | Under limit 0.21 dB at 5149.50 MHz |
| 3.5            | 15.207             | AC Conducted Emission          | 15.207(a)             | Pass        | Under limit 12.94 dB at 0.420 MHz  |
| 3.6            | 15.203 & 15.407(a) | Antenna Requirement            | 15.203 & 15.407(a)    | Pass        | -                                  |

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



# 1 General Description

## 1.1 Applicant

**Thundercomm Technology Co., Ltd**

Building 4, No. 99, Data Valley Middle Road, Xiantao District, Yubei District Chongqing, China

## 1.2 Manufacturer

**Thundercomm Technology Co., Ltd**

Building 4, No. 99, Data Valley Middle Road, Xiantao District, Yubei District Chongqing, China

## 1.3 Product Feature of Equipment Under Test

| Product Feature |                            |
|-----------------|----------------------------|
| Equipment       | Calculation Module         |
| Brand Name      | TurboX                     |
| Model Name      | C6125                      |
| FCC ID          | 2AOHHTURBOXC6125           |
| HW Version      | DVT V03                    |
| SW Version      | Turbox_C6125_LA1.0.FC.r001 |
| EUT Stage       | Identical Prototype        |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx/Rx Frequency Range</b>            | 5180 MHz ~ 5240 MHz<br>5260 MHz ~ 5320 MHz<br>5500 MHz ~ 5720 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Maximum Output Power to Antenna</b>  | <b>&lt;5180 MHz ~ 5240 MHz&gt;</b><br>802.11a : 15.44 dBm / 0.0350 W<br>802.11n HT20 : 15.31 dBm / 0.0340 W<br>802.11n HT40 : 14.41 dBm / 0.0276 W<br>802.11ac VHT20 : 13.47 dBm / 0.0222 W<br>802.11ac VHT40 : 15.31 dBm / 0.0340 W<br>802.11ac VHT80 : 11.91 dBm / 0.0155 W<br><b>&lt;5260 MHz ~ 5320 MHz&gt;</b><br>802.11a : 15.08 dBm / 0.0322 W<br>802.11n HT20 : 15.51 dBm / 0.0356 W<br>802.11n HT40 : 14.25 dBm / 0.0266 W<br>802.11ac VHT20 : 13.49 dBm / 0.0223 W<br>802.11ac VHT40 : 15.01 dBm / 0.0317 W<br>802.11ac VHT80 : 12.35 dBm / 0.0172 W<br><b>&lt;5500 MHz ~ 5720 MHz&gt;</b><br>802.11a : 15.58 dBm / 0.0361 W<br>802.11n HT20 : 15.46 dBm / 0.0352 W<br>802.11n HT40 : 14.49 dBm / 0.0281 W<br>802.11ac VHT20 : 13.50 dBm / 0.0224 W<br>802.11ac VHT40 : 15.43 dBm / 0.0349 W<br>802.11ac VHT80 : 15.43 dBm / 0.0349 W |
| <b>99% Occupied Bandwidth</b>           | <b>&lt;5180 MHz ~ 5240 MHz&gt;</b><br>802.11a : 16.88 MHz<br>802.11n HT20 : 17.98 MHz<br>802.11ac VHT40 : 36.56 MHz<br>802.11ac VHT80 : 75.52 MHz<br><b>&lt;5260 MHz ~ 5320 MHz&gt;</b><br>802.11a : 16.83 MHz<br>802.11n HT20 : 17.98 MHz<br>802.11ac VHT40 : 36.66 MHz<br>802.11ac VHT80 : 75.64 MHz<br><b>&lt;5500 MHz ~ 5720 MHz &gt;</b><br>802.11a : 16.83 MHz<br>802.11n HT20 : 17.93 MHz<br>802.11ac VHT40 : 36.66 MHz<br>802.11ac VHT80 : 75.76 MHz                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Antenna Type / Gain</b>              | <b>&lt;5150 MHz ~ 5250 MHz&gt;</b><br>Dipole Antenna with gain 4.20 dBi<br><b>&lt;5250 MHz ~ 5350 MHz&gt;</b><br>Dipole Antenna with gain 4.25 dBi<br><b>&lt;5470 MHz ~ 5725 MHz&gt;</b><br>Dipole Antenna with gain 4.00 dBi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Type of Modulation</b>               | 802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Note:** For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing have assessed 802.11n HT20 / ac VHT40 by referring to the maximum output power.

## 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

|                           |                                                                                                                                                                         |                            |                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sporton International (Shenzhen) Inc.                                                                                                                                   |                            |                                       |
| <b>Test Site Location</b> | 1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China<br>TEL: +86-755-86379589<br>FAX: +86-755-86379595 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                 | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | CO01-SZ<br>TH01-SZ                                                                                                                                                      | CN1256                     | 421272                                |

|                           |                                                                                                                                                                                           |                            |                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sporton International (Shenzhen) Inc.                                                                                                                                                     |                            |                                       |
| <b>Test Site Location</b> | 101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103<br>TEL: +86-755-33202398 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                                   | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | 03CH01-SZ                                                                                                                                                                                 | CN1256                     | 421272                                |

## 1.7 Test Software

| Item | Site      | Manufacturer | Name | Version     |
|------|-----------|--------------|------|-------------|
| 1.   | 03CH01-SZ | AUDIX        | E3   | 6.2009-8-24 |
| 2.   | CO01-SZ   | AUDIX        | E3   | 6.120613b   |



## **1.8 Applicable Standards**

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ ANSI C63.10-2013

### **Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

### 2.1 Carrier Frequency and Channel

| Frequency Band            | Channel          | Freq. (MHz) | Channel | Freq. (MHz) |
|---------------------------|------------------|-------------|---------|-------------|
| 5150-5250 MHz<br>U-NII-1  | 36               | 5180        | 44      | 5220        |
|                           | 38*              | 5190        | 46*     | 5230        |
|                           | 40               | 5200        | 48      | 5240        |
|                           | 42 <sup>#</sup>  | 5210        |         |             |
| Frequency Band            | Channel          | Freq. (MHz) | Channel | Freq. (MHz) |
| 5250-5350 MHz<br>U-NII-2A | 52               | 5260        | 60      | 5300        |
|                           | 54*              | 5270        | 62*     | 5310        |
|                           | 56               | 5280        | 64      | 5320        |
|                           | 58 <sup>#</sup>  | 5290        |         |             |
| Frequency Band            | Channel          | Freq. (MHz) | Channel | Freq. (MHz) |
| 5470-5725 MHz<br>U-NII-2C | 100              | 5500        | 112     | 5560        |
|                           | 102*             | 5510        | 116     | 5580        |
|                           | 104              | 5520        | 132     | 5660        |
|                           | 106 <sup>#</sup> | 5530        | 134*    | 5670        |
|                           | 108              | 5540        | 136     | 5680        |
|                           | 110*             | 5550        | 140     | 5700        |



| Frequency Band | Channel          | Freq.<br>(MHz) | Channel | Freq.<br>(MHz) |
|----------------|------------------|----------------|---------|----------------|
| TDWR Channel   | 118*             | 5590           | 124     | 5620           |
|                | 120              | 5600           | 126*    | 5630           |
|                | 122 <sup>#</sup> | 5610           | 128     | 5640           |

| Frequency Band   | Channel          | Freq.<br>(MHz) | Channel | Freq.<br>(MHz) |
|------------------|------------------|----------------|---------|----------------|
| Straddle Channel | 138 <sup>#</sup> | 5690           | 144     | 5720           |
|                  | 142*             | 5710           |         |                |

**Note:**

1. The above Frequency and Channel in "\*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "<sup>#</sup>" were 802.11ac VHT80.

## 2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

| Modulation     | Data Rate |
|----------------|-----------|
| 802.11a        | 6 Mbps    |
| 802.11n HT20   | MCS0      |
| 802.11ac VHT40 | MCS0      |
| 802.11ac VHT80 | MCS0      |

| Test Cases                                                                      |                                                              |
|---------------------------------------------------------------------------------|--------------------------------------------------------------|
| AC<br>Conducted<br>Emission                                                     | Mode 1 : Bluetooth Link + WLAN(5G) Link + Powered by Adapter |
| <b>Remark:</b> For Radiated Test Cases, The tests were performance with Adapter |                                                              |



| Ch. #    |        | U-NII-1 : 5150-5250 MHz | U-NII-2A : 5250-5350 MHz | U-NII-2C : 5470-5725MHz |
|----------|--------|-------------------------|--------------------------|-------------------------|
|          |        | 802.11a                 | 802.11a                  | 802.11a                 |
| L        | Low    | 36                      | 52                       | 100                     |
| M        | Middle | 44                      | 60                       | 116                     |
| H        | High   | 48                      | 64                       | 140                     |
| Straddle |        | -                       | -                        | 144                     |

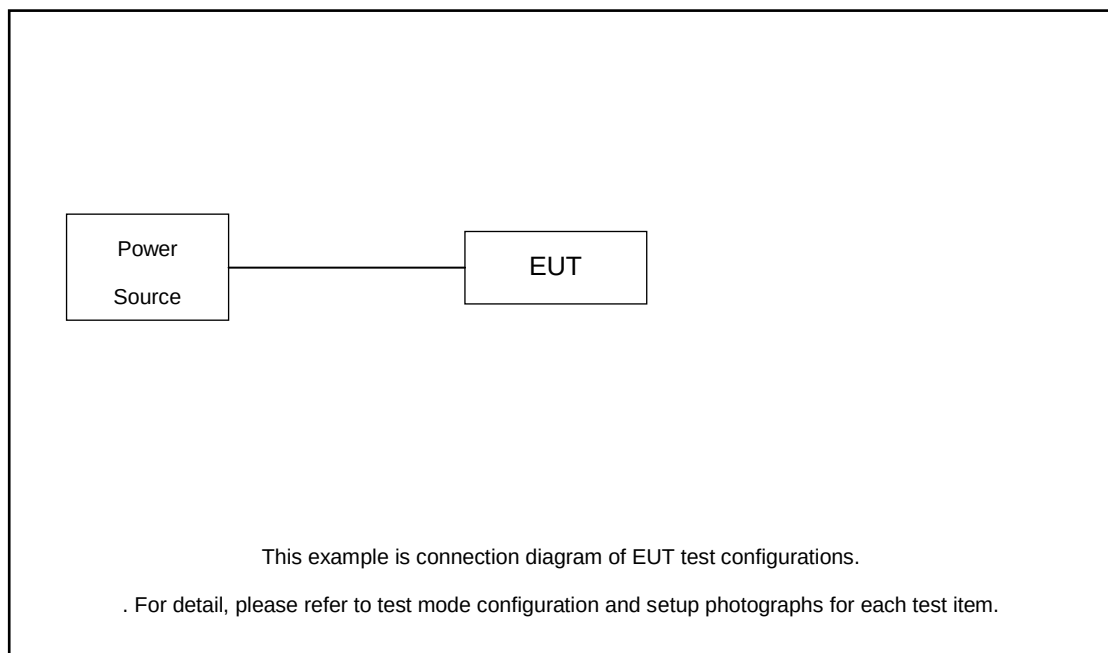
| Ch. #    |        | U-NII-1 : 5150-5250 MHz | U-NII-2A : 5250-5350 MHz | U-NII-2C : 5470-5725MHz |
|----------|--------|-------------------------|--------------------------|-------------------------|
|          |        | 802.11n HT20            | 802.11n HT20             | 802.11n HT20            |
| L        | Low    | 36                      | 52                       | 100                     |
| M        | Middle | 44                      | 60                       | 116                     |
| H        | High   | 48                      | 64                       | 140                     |
| Straddle |        | -                       | -                        | 144                     |

| Ch. #    |        | U-NII-1 : 5150-5250 MHz | U-NII-2A : 5250-5350 MHz | U-NII-2C : 5470-5725MHz |
|----------|--------|-------------------------|--------------------------|-------------------------|
|          |        | 802.11ac VHT40          | 802.11ac VHT40           | 802.11ac VHT40          |
| L        | Low    | 38                      | 54                       | 102                     |
| M        | Middle | -                       | -                        | 110                     |
| H        | High   | 46                      | 62                       | 134                     |
| Straddle |        | -                       | -                        | 142                     |

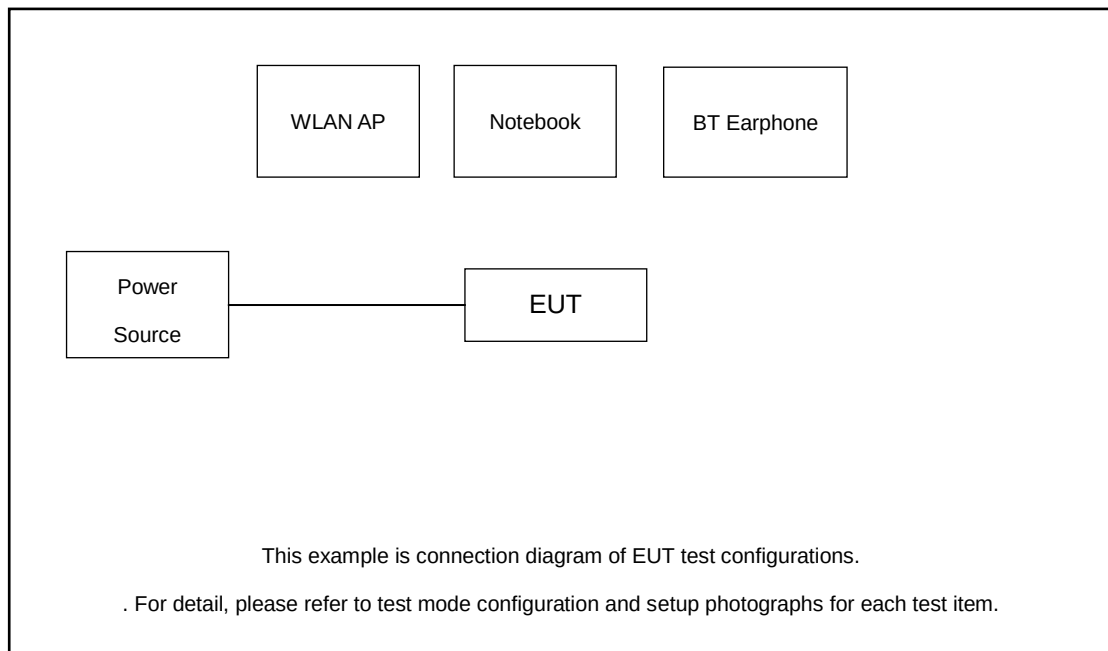
| Ch. #    |        | U-NII-1 : 5150-5250 MHz | U-NII-2A : 5250-5350 MHz | U-NII-2C : 5470-5725MHz |
|----------|--------|-------------------------|--------------------------|-------------------------|
|          |        | 802.11ac VHT80          | 802.11ac VHT80           | 802.11ac VHT80          |
| L        | Low    | -                       | -                        | 106                     |
| M        | Middle | 42                      | 58                       | -                       |
| H        | High   | -                       | -                        | 122                     |
| Straddle |        | -                       | -                        | 138                     |

## 2.3 Connection Diagram of Test System

<For Radiated Emission >



<For Conducted Emission >



## 2.4 Support Unit used in test configuration and system

| Item | Equipment          | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|------|--------------------|------------|------------|--------|------------|------------|
| 1.   | Bluetooth Earphone | Samsung    | MG900      | N/A    | N/A        | N/A        |

## 2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

## 2.6 Measurement Results Explanation Example

**For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 2.8 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 2.8 + 10 = 12.8 \text{ (dB)}\end{aligned}$$

### 3 Test Result

#### 3.1 26dB & 99% Occupied Bandwidth Measurement

##### 3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

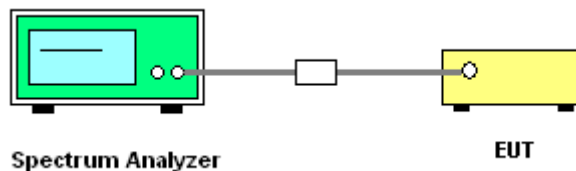
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW)  $\geq 3 * \text{RBW}$ .
8. Measure and record the results in the test report.

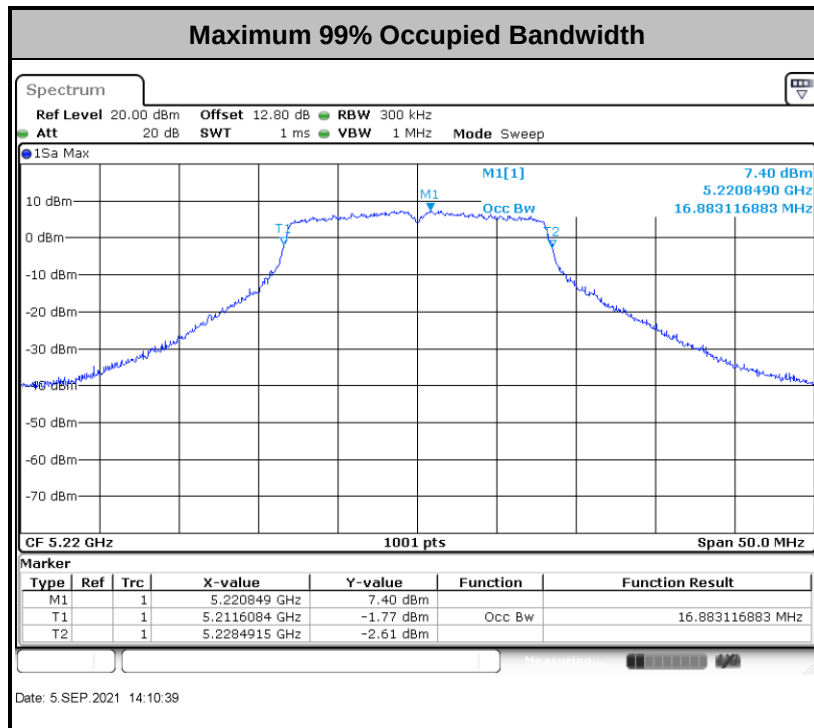
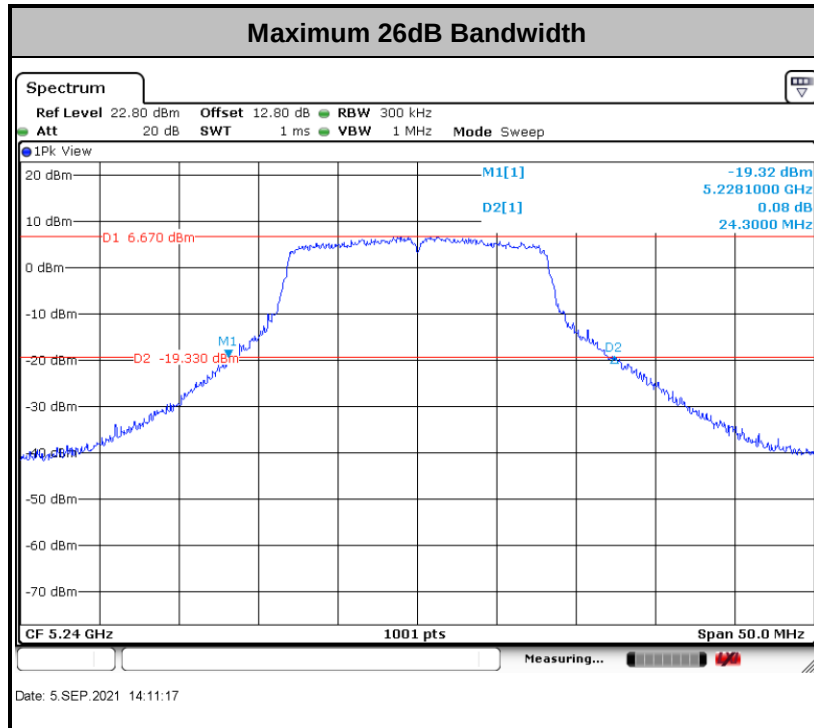
##### 3.1.4 Test Setup



##### 3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

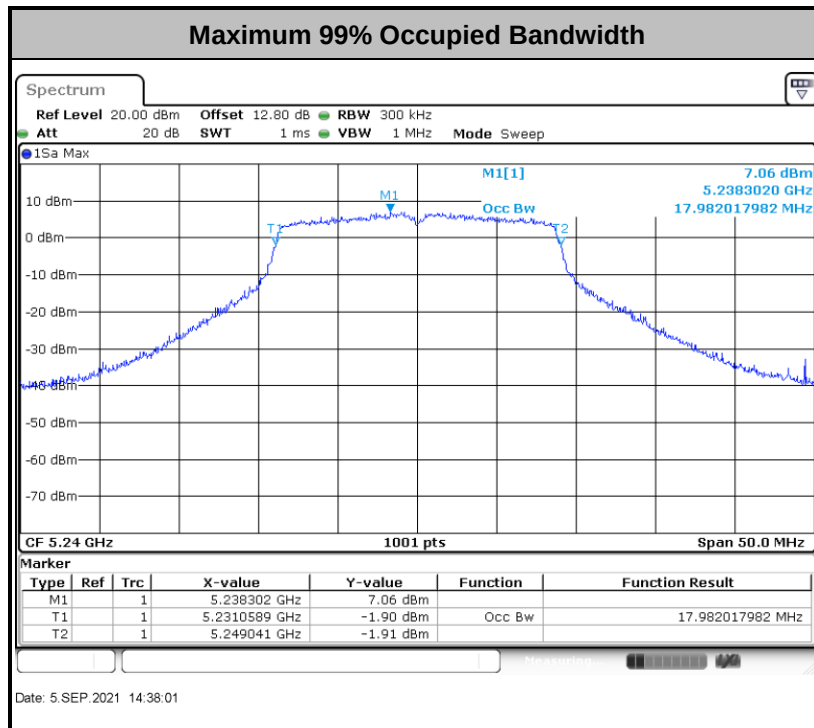
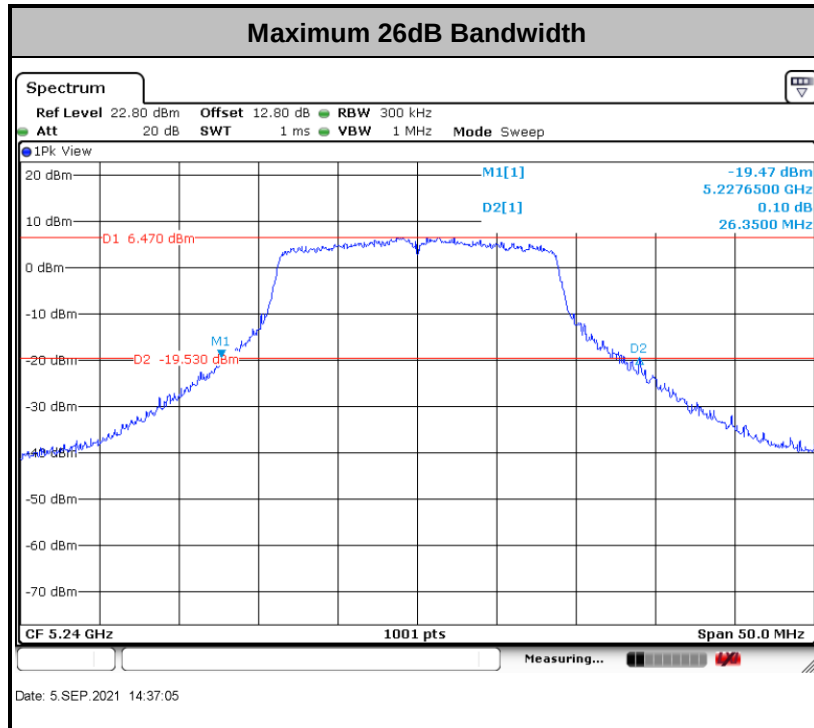
26dB and 99% OBW graph of 11a mode



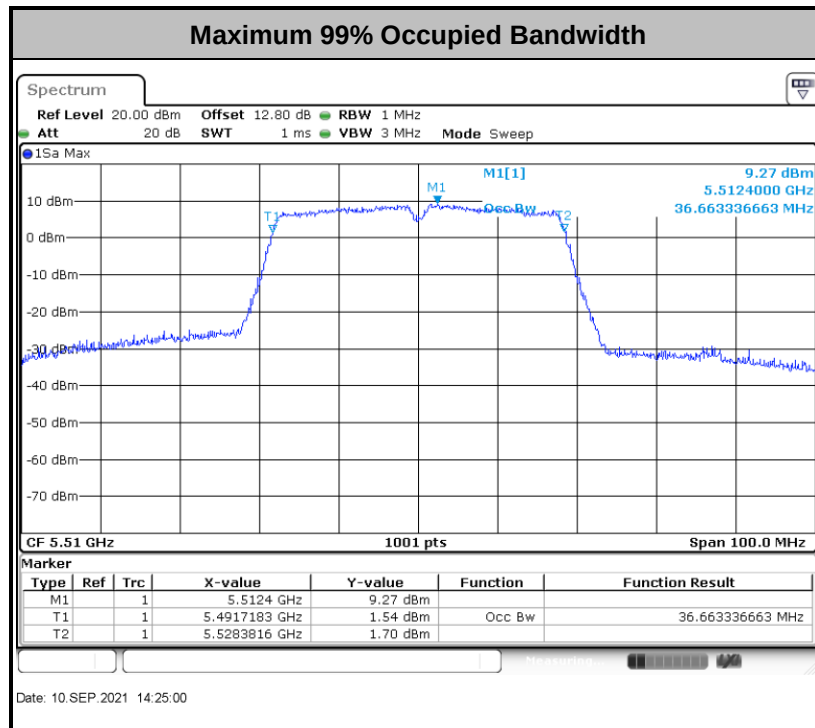
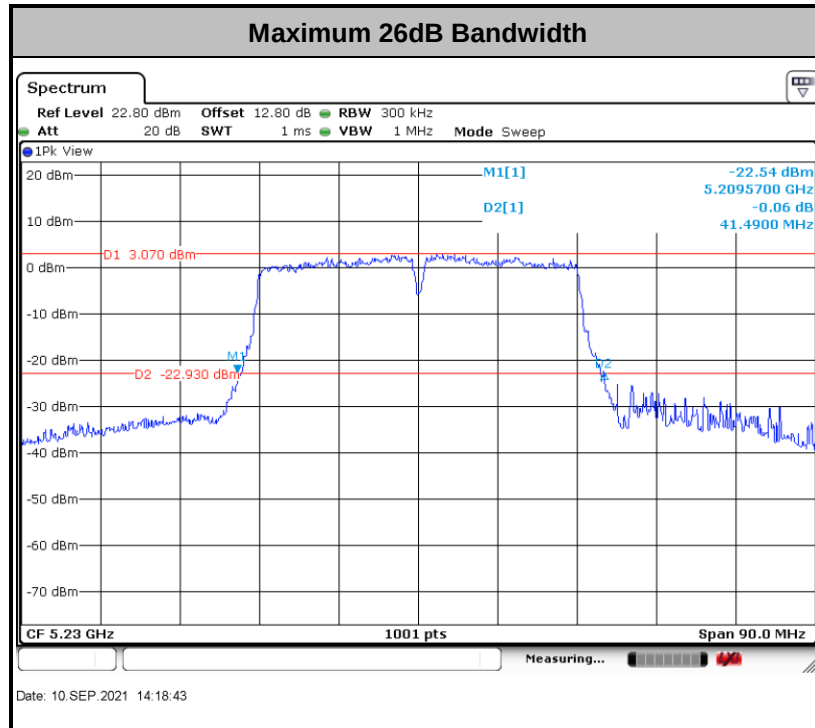
**Note:** The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



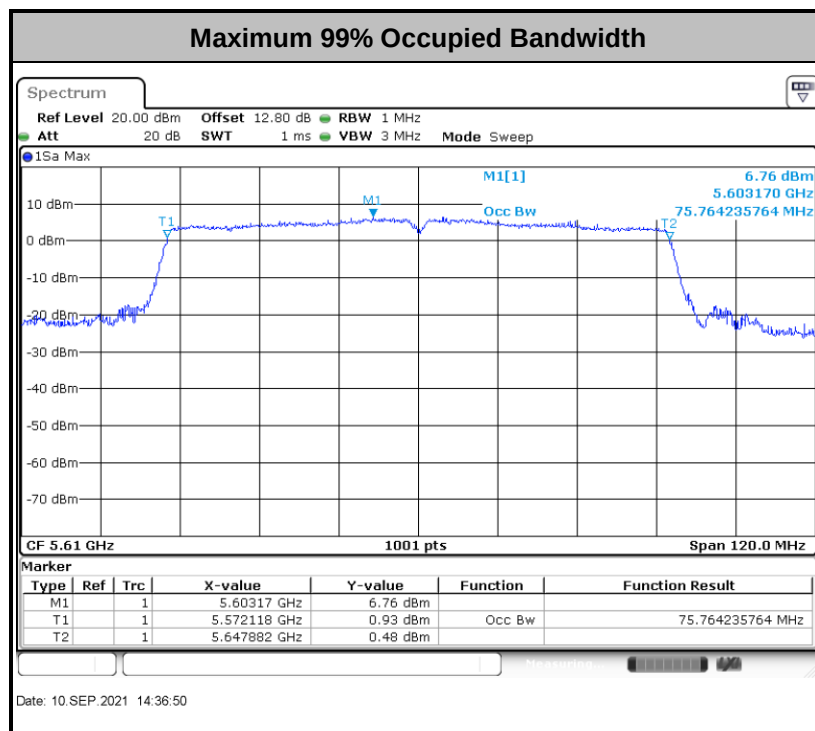
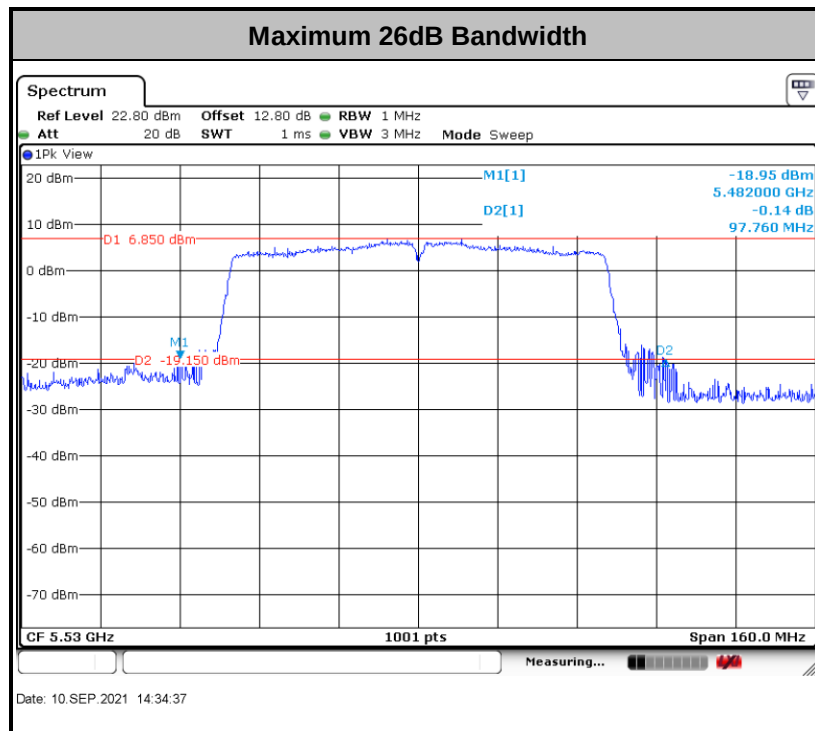
### 26dB and 99% OBW graph of HT20 mode



**Note:** The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

**26dB and 99% OBW graph of VHT40 mode**


**Note:** The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

**26dB and 99% OBW graph of VHT80 mode**


**Note:** The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

#### <FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm  $10 \log B$ , where B is the 26 dB emission bandwidth in megahertz.

For the 5.47–5.6 GHz and 5.65–5.725 GHz band, the maximum conducted output power shall not exceed 250 mW or  $11 + 10 \log_{10} B$ , dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or  $17 + 10 \log_{10} B$ , dBm, whichever is less. B is the 99% emission bandwidth in megahertz.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.2.3 Test Procedures

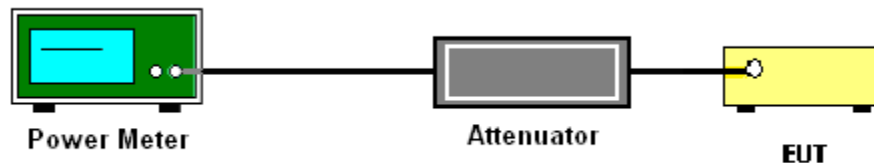
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor,  $10 \log(1/x)$ , where  $x$  is the duty cycle.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



### **3.3 Power Spectral Density Measurement**

#### **3.3.1 Limit of Power Spectral Density**

**<FCC 14-30 CFR 15.407>**

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **3.3.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.

### 3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

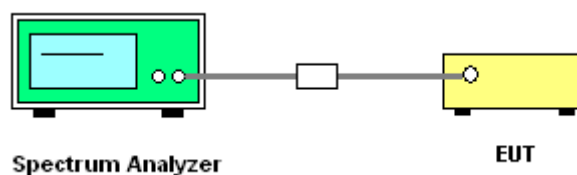
Section F) Maximum power spectral density.

#### # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

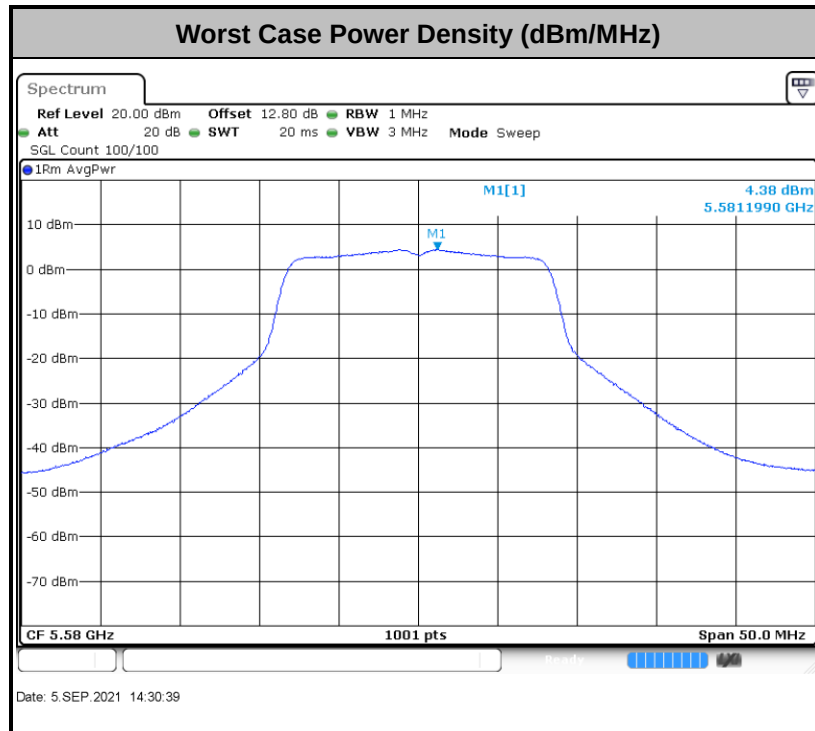
- Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 1 MHz.
  - Set VBW  $\geq$  3 MHz.
  - Number of points in sweep  $\geq$  2 Span / RBW.
  - Sweep time = auto.
  - Detector = RMS
  - Trace average at least 100 traces in power averaging mode.
  - Add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add  $10 \log(1/0.25) = 6$  dB if the duty cycle is 25 percent.
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
  2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

### 3.3.4 Test Setup



### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



**Note:** Average Power Density (dB) = Measured value+ Duty Factor



### 3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

#### 3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5725 MHz band: all emissions outside of the 5470-5725 MHz band shall not exceed an EIRP of -27 dBm/MHz.

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 0.009 – 0.490      | 2400/F(kHz)                          | 300                              |
| 0.490 – 1.705      | 24000/F(kHz)                         | 30                               |
| 1.705 – 30.0       | 30                                   | 30                               |
| 30 – 88            | 100                                  | 3                                |
| 88 – 216           | 150                                  | 3                                |
| 216 - 960          | 200                                  | 3                                |
| Above 960          | 500                                  | 3                                |

| EIRP (dBm) | Field Strength at 3m (dBμV/m) |
|------------|-------------------------------|
| - 27       | 68.2                          |

**Note:** The following formula is used to convert the EIRP to field strength.

$$\text{EIRP} = E_{\text{Meas}} + 20\log(d_{\text{Meas}}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

$E_{\text{Meas}}$  is the field strength of the emission at the measurement distance, in dBμV/m

$d_{\text{Meas}}$  is the measurement distance, in m

(3) ANSI C63.10-2013 clause 12.7.3 note 97

As specified by regulatory requirements, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit. However, an out-of-band emission that complies with both the average and peak general regulatory limits is not required to satisfy the peak emission limit.

### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

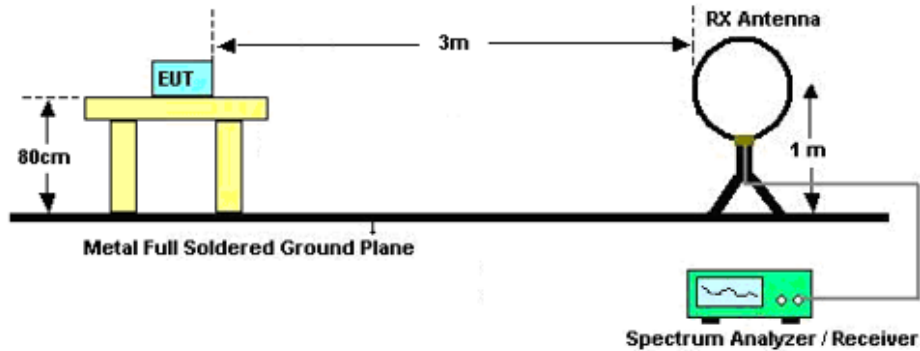


### 3.4.3 Test Procedures

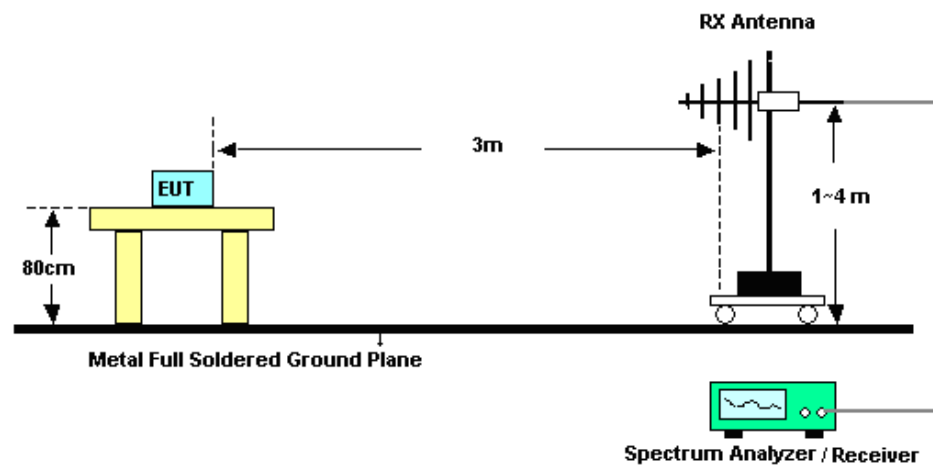
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.  
Section G) Unwanted emissions measurement.  
  - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
    - RBW = 120 kHz
    - VBW = 300 kHz
    - Detector = Peak
    - Trace mode = max hold
  - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
    - RBW = 1 MHz
    - VBW  $\geq$  3 MHz
    - Detector = Peak
    - Sweep time = auto
    - Trace mode = max hold
  - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
    - RBW = 1 MHz
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq$  1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.4.4 Test Setup

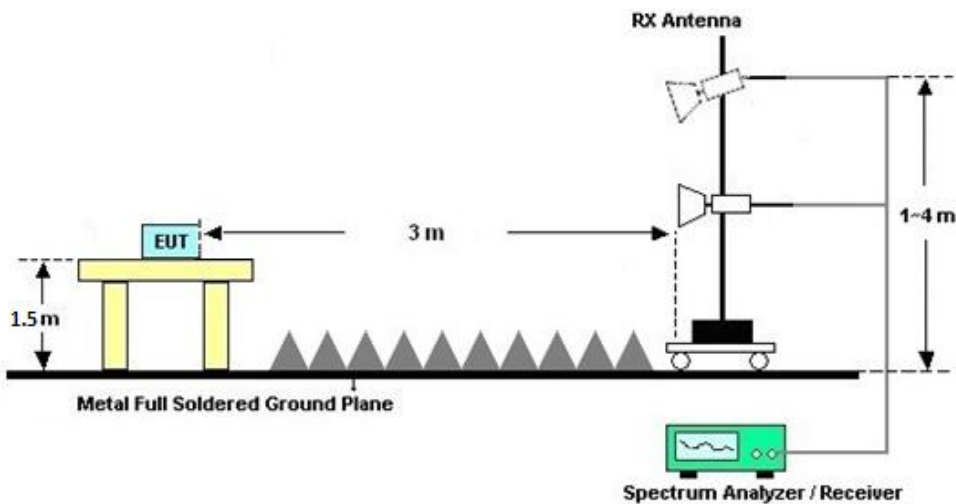
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)**

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

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

**3.4.6 Test Result of Radiated Spurious at Band Edges**

Please refer to Appendix C.

**3.4.7 Duty Cycle**

Please refer to Appendix D.

**3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)**

Please refer to Appendix C.

### 3.5 AC Conducted Emission Measurement

#### 3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

| Frequency of emission (MHz) | Conducted limit (dB $\mu$ V) |           |
|-----------------------------|------------------------------|-----------|
|                             | Quasi-peak                   | Average   |
| 0.15-0.5                    | 66 to 56*                    | 56 to 46* |
| 0.5-5                       | 56                           | 46        |
| 5-30                        | 60                           | 50        |

\*Decreases with the logarithm of the frequency.

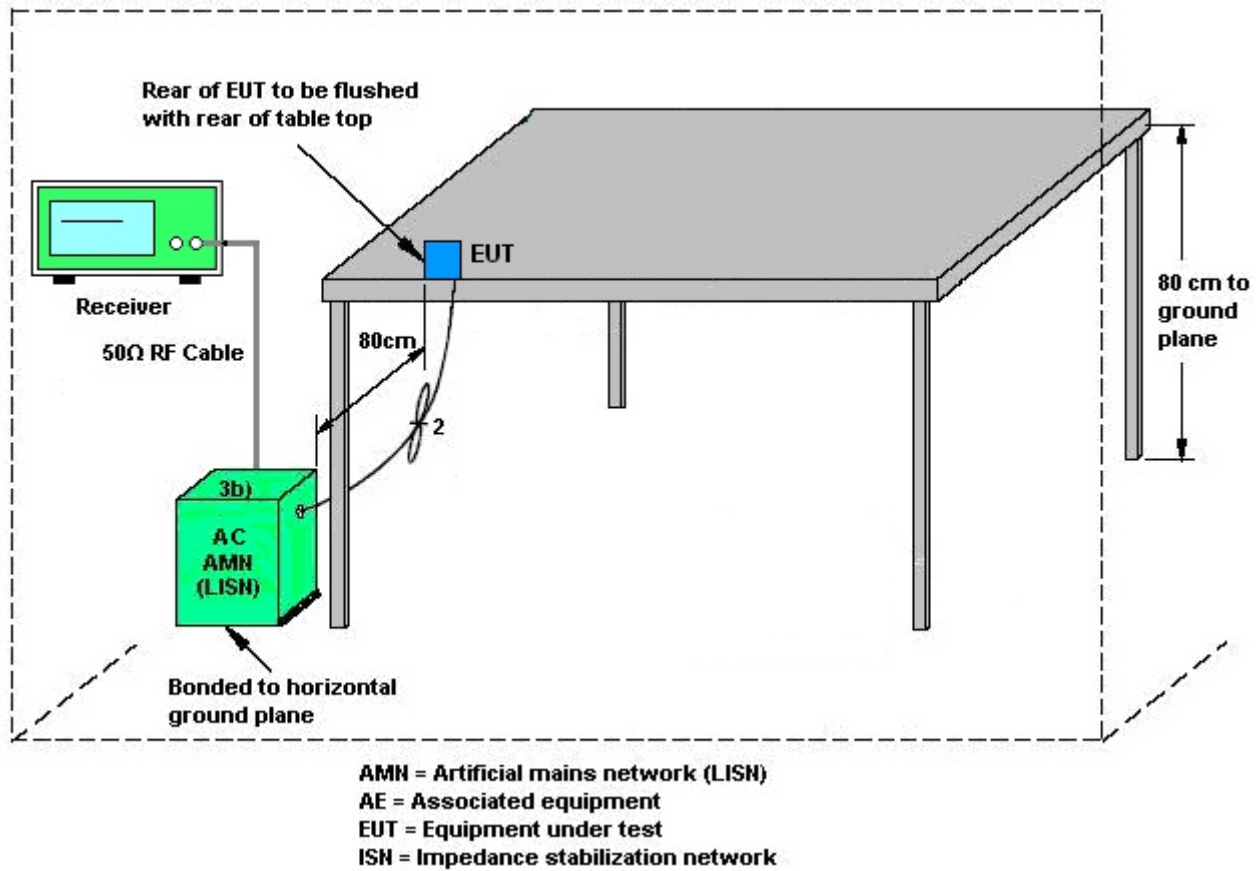
#### 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

### 3.5.4 Test Setup



### 3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.6 Antenna Requirements**

### **3.6.1 Standard Applicable**

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **3.6.2 Antenna Anti-Replacement Construction**

Non-standard antenna connector is used.

### **3.6.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.





## 4 List of Measuring Equipment

| Instrument                        | Manufacturer | Model No.                    | Serial No.   | Characteristics | Calibration Date | Test Date                       | Due Date      | Remark                |
|-----------------------------------|--------------|------------------------------|--------------|-----------------|------------------|---------------------------------|---------------|-----------------------|
| Spectrum Analyzer                 | R&S          | FSV40                        | 101078       | 10Hz~40GHz      | Apr. 08, 2021    | Aug. 25, 2021~<br>Sep. 10, 2021 | Apr. 07, 2022 | Conducted (TH01-SZ)   |
| Pulse Power Sensor                | Anritsu      | MA2411B                      | 1207253      | 30MHz~40GHz     | Dec. 25, 2020    | Aug. 25, 2021~<br>Sep. 10, 2021 | Dec. 24, 2021 | Conducted (TH01-SZ)   |
| Power Meter                       | Anritsu      | ML2495A                      | 1218010      | 50MHz Bandwidth | Dec. 25, 2020    | Aug. 25, 2021~<br>Sep. 10, 2021 | Dec. 24, 2021 | Conducted (TH01-SZ)   |
| EMI Test Receiver&SA              | Agilent      | N9038A                       | MY52260185   | 20Hz~26.5GHz    | Dec. 03, 2020    | Sep. 23, 2021                   | Dec. 02, 2021 | Radiation (03CH01-SZ) |
| EXA Spectrum Analyzer             | KEYSIGHT     | N9010A                       | MY55150213   | 10Hz~44GHz      | Jul. 21, 2021    | Sep. 23, 2021                   | Jul. 20, 2022 | Radiation (03CH01-SZ) |
| Loop Antenna                      | R&S          | HFH2-Z2                      | 100354       | 9kHz~30MHz      | Jun. 22, 2020    | Sep. 23, 2021                   | Jun. 21, 2022 | Radiation (03CH01-SZ) |
| Bilog Antenna                     | TeseQ        | CBL6112D                     | 35407        | 30MHz~2GHz      | Jul. 15, 2021    | Sep. 23, 2021                   | Jul. 14, 2022 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna         | ETS-Lindgren | 3117                         | 00119436     | 1GHz~18GHz      | Jul. 25, 2021    | Sep. 23, 2021                   | Jul. 24, 2022 | Radiation (03CH01-SZ) |
| SHF-EHF Horn                      | com-power    | AH-840                       | 101071       | 18GHz~40GHz     | Apr. 11, 2021    | Sep. 23, 2021                   | Apr. 10, 2022 | Radiation (03CH01-SZ) |
| LF Amplifier                      | Burgeon      | BPA-530                      | 102209       | 0.01~3000Mhz    | Apr. 07, 2021    | Sep. 23, 2021                   | Apr. 06, 2022 | Radiation (03CH01-SZ) |
| HF Amplifier                      | MITEQ        | AMF-7D-0010<br>1800-30-10P-R | 1943528      | 1GHz~18GHz      | Oct. 16, 2020    | Sep. 23, 2021                   | Oct. 15, 2021 | Radiation (03CH01-SZ) |
| HF Amplifier                      | KEYSIGHT     | 83017A                       | MY53270105   | 0.5GHz~26.5GHz  | Oct. 16, 2020    | Sep. 23, 2021                   | Oct. 15, 2021 | Radiation (03CH01-SZ) |
| HF Amplifier                      | MITEQ        | TTA1840-35-HG                | 1871923      | 18GHz~40GHz     | Jul. 21, 2021    | Sep. 23, 2021                   | Jul. 20, 2022 | Radiation (03CH01-SZ) |
| AC Power Source                   | Chroma       | 61601                        | 616010001985 | N/A             | NCR              | Sep. 23, 2021                   | NCR           | Radiation (03CH01-SZ) |
| Turn Table                        | EM           | EM1000                       | N/A          | 0~360 degree    | NCR              | Sep. 23, 2021                   | NCR           | Radiation (03CH01-SZ) |
| Antenna Mast                      | EM           | EM1000                       | N/A          | 1 m~4 m         | NCR              | Sep. 23, 2021                   | NCR           | Radiation (03CH01-SZ) |
| EMI Receiver                      | R&S          | ESR7                         | 101630       | 9kHz~7GHz;      | Mar. 08, 2021    | Sep. 06, 2021                   | Mar. 07, 2022 | Conduction (CO01-SZ)  |
| AC LISN                           | EMCO         | 3816/2 LISN                  | 00103912     | 9kHz~30MHz      | Dec. 25, 2020    | Sep. 06, 2021                   | Dec. 24, 2021 | Conduction (CO01-SZ)  |
| AC LISN (for auxiliary equipment) | EMCO         | 3816/2SH                     | 00103892     | 9kHz~30MHz      | Oct. 15, 2020    | Sep. 06, 2021                   | Oct. 14, 2021 | Conduction (CO01-SZ)  |
| AC Power Source                   | Chroma       | 61602                        | 616020000891 | 100Vac~250Vac   | Jul. 14, 2021    | Sep. 06, 2021                   | Jul. 13, 2022 | Conduction (CO01-SZ)  |

NCR: No Calibration Required

## 5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage  $K=2$  to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 2.2dB |
|-------------------------------------------------------------------------|-------|

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.2dB |
|-------------------------------------------------------------------------|-------|

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.0dB |
|-------------------------------------------------------------------------|-------|

### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.3dB |
|-------------------------------------------------------------------------|-------|

----- THE END -----



## **Appendix A. Conducted Test Results**

Appendix A. Test Result of Conducted Test Items

|                |                     |                    |       |    |
|----------------|---------------------|--------------------|-------|----|
| Test Engineer: | Chen Hong           | Temperature:       | 21~25 | °C |
| Test Date:     | 2021/8/25~2021/9/10 | Relative Humidity: | 51~54 | %  |

**TEST RESULTS DATA**  
**26dB and 99% OBW**

| U-NII-1 |           |     |     |             |                     |                       |                                    |                                   |  |  |
|---------|-----------|-----|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--|--|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 26 dB Bandwidth (MHz) | IC 99% Bandwidth Power Limit (dBm) | IC 99% Bandwidth EIRP Limit (dBm) |  |  |
| 11a     | 6Mbps     | 1   | 36  | 5180        | 16.78               | 24.15                 | -                                  | 22.25                             |  |  |
| 11a     | 6Mbps     | 1   | 44  | 5220        | 16.88               | 23.85                 | -                                  | 22.27                             |  |  |
| 11a     | 6Mbps     | 1   | 48  | 5240        | 16.78               | 24.30                 | -                                  | 22.25                             |  |  |
| HT20    | MCS0      | 1   | 36  | 5180        | 17.93               | 24.20                 | -                                  | 22.54                             |  |  |
| HT20    | MCS0      | 1   | 44  | 5220        | 17.93               | 24.05                 | -                                  | 22.54                             |  |  |
| HT20    | MCS0      | 1   | 48  | 5240        | 17.98               | 26.35                 | -                                  | 22.55                             |  |  |
| VHT40   | MCS0      | 1   | 38  | 5190        | 36.56               | 41.13                 | -                                  | 23.01                             |  |  |
| VHT40   | MCS0      | 1   | 46  | 5230        | 36.46               | 41.49                 | -                                  | 23.01                             |  |  |
| VHT80   | MCS0      | 1   | 42  | 5210        | 75.52               | 93.76                 | -                                  | 23.01                             |  |  |

**TEST RESULTS DATA**  
**Average Power Table**

| U-NII-1 |           |     |     |             |                  |                               |                                 |          |  |           |
|---------|-----------|-----|-----|-------------|------------------|-------------------------------|---------------------------------|----------|--|-----------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) |  | Pass/Fail |
| 11a     | 6Mbps     | 1   | 36  | 5180        | 0.08             | 15.30                         | 24.00                           | 4.20     |  | Pass      |
| 11a     | 6Mbps     | 1   | 44  | 5220        | 0.08             | 15.39                         | 24.00                           | 4.20     |  | Pass      |
| 11a     | 6Mbps     | 1   | 48  | 5240        | 0.08             | 15.44                         | 24.00                           | 4.20     |  | Pass      |
| HT20    | MCS0      | 1   | 36  | 5180        | 0.10             | 15.16                         | 24.00                           | 4.20     |  | Pass      |
| HT20    | MCS0      | 1   | 44  | 5220        | 0.10             | 15.26                         | 24.00                           | 4.20     |  | Pass      |
| HT20    | MCS0      | 1   | 48  | 5240        | 0.10             | 15.31                         | 24.00                           | 4.20     |  | Pass      |
| HT40    | MCS0      | 1   | 38  | 5190        | 0.17             | 12.85                         | 24.00                           | 4.20     |  | Pass      |
| HT40    | MCS0      | 1   | 46  | 5230        | 0.17             | 14.41                         | 24.00                           | 4.20     |  | Pass      |
| VHT20   | MCS0      | 1   | 36  | 5180        | 0.10             | 13.47                         | 24.00                           | 4.20     |  | Pass      |
| VHT20   | MCS0      | 1   | 44  | 5220        | 0.10             | 13.11                         | 24.00                           | 4.20     |  | Pass      |
| VHT20   | MCS0      | 1   | 48  | 5240        | 0.10             | 13.29                         | 24.00                           | 4.20     |  | Pass      |
| VHT40   | MCS0      | 1   | 38  | 5190        | 0.17             | 12.91                         | 24.00                           | 4.20     |  | Pass      |
| VHT40   | MCS0      | 1   | 46  | 5230        | 0.17             | 15.31                         | 24.00                           | 4.20     |  | Pass      |
| VHT80   | MCS0      | 1   | 42  | 5210        | 0.32             | 11.91                         | 24.00                           | 4.20     |  | Pass      |

**TEST RESULTS DATA**  
**Power Spectral Density**

| U-NII-1 |           |     |     |             |                  |                                 |                             |          |   |           |
|---------|-----------|-----|-----|-------------|------------------|---------------------------------|-----------------------------|----------|---|-----------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) | - | Pass/Fail |
| 11a     | 6Mbps     | 1   | 36  | 5180        | 0.08             | 4.27                            | 11.00                       | 4.20     |   | Pass      |
| 11a     | 6Mbps     | 1   | 44  | 5220        | 0.08             | 4.26                            | 11.00                       | 4.20     |   | Pass      |
| 11a     | 6Mbps     | 1   | 48  | 5240        | 0.08             | 4.13                            | 11.00                       | 4.20     |   | Pass      |
| HT20    | MCS0      | 1   | 36  | 5180        | 0.10             | 3.92                            | 11.00                       | 4.20     |   | Pass      |
| HT20    | MCS0      | 1   | 44  | 5220        | 0.10             | 3.84                            | 11.00                       | 4.20     |   | Pass      |
| HT20    | MCS0      | 1   | 48  | 5240        | 0.10             | 3.77                            | 11.00                       | 4.20     |   | Pass      |
| VHT40   | MCS0      | 1   | 38  | 5190        | 0.17             | 0.50                            | 11.00                       | 4.20     |   | Pass      |
| VHT40   | MCS0      | 1   | 46  | 5230        | 0.17             | 0.46                            | 11.00                       | 4.20     |   | Pass      |
| VHT80   | MCS0      | 1   | 42  | 5210        | 0.32             | -2.41                           | 11.00                       | 4.20     |   | Pass      |

**TEST RESULTS DATA**  
**26dB and 99% OBW**

| U-NII-2A |           |     |     |             |                     |                       |                                    |                                   |                                      |      |
|----------|-----------|-----|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--------------------------------------|------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 26 dB Bandwidth (MHz) | IC 99% Bandwidth Power Limit (dBm) | IC 99% Bandwidth EIRP Limit (dBm) | FCC 26dB Bandwidth Power Limit (dBm) | Note |
| 11a      | 6M bps    | 1   | 52  | 5260        | 16.83               | 23.70                 | 23.26                              | 29.26                             | 23.98                                |      |
| 11a      | 6M bps    | 1   | 60  | 5300        | 16.83               | 23.65                 | 23.26                              | 29.26                             | 23.98                                |      |
| 11a      | 6M bps    | 1   | 64  | 5320        | 16.78               | 23.50                 | 23.25                              | 29.25                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 52  | 5260        | 17.98               | 25.00                 | 23.55                              | 29.55                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 60  | 5300        | 17.93               | 24.45                 | 23.54                              | 29.54                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 64  | 5320        | 17.93               | 24.25                 | 23.54                              | 29.54                             | 23.98                                |      |
| VHT40    | MCS 0     | 1   | 54  | 5270        | 36.56               | 41.40                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT40    | MCS 0     | 1   | 62  | 5310        | 36.66               | 41.13                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1   | 58  | 5290        | 75.64               | 95.20                 | 23.98                              | 30.00                             | 23.98                                |      |



**TEST RESULTS DATA**  
**Average Power Table**

| U-NII-2A |           |     |     |             |                  |                               |                                 |          |                        |           |
|----------|-----------|-----|-----|-------------|------------------|-------------------------------|---------------------------------|----------|------------------------|-----------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) | EIRP Power Limit (dBm) | Pass/Fail |
| 11a      | 6M bps    | 1   | 52  | 5260        | 0.08             | 15.06                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| 11a      | 6M bps    | 1   | 60  | 5300        | 0.08             | 15.08                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| 11a      | 6M bps    | 1   | 64  | 5320        | 0.08             | 15.05                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1   | 52  | 5260        | 0.10             | 15.46                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1   | 60  | 5300        | 0.10             | 15.51                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1   | 64  | 5320        | 0.10             | 15.29                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| HT40     | MCS 0     | 1   | 54  | 5270        | 0.17             | 14.22                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| HT40     | MCS 0     | 1   | 62  | 5310        | 0.17             | 14.25                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1   | 52  | 5260        | 0.10             | 13.45                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1   | 60  | 5300        | 0.10             | 13.49                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1   | 64  | 5320        | 0.10             | 13.45                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| VHT40    | MCS 0     | 1   | 54  | 5270        | 0.17             | 15.01                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| VHT40    | MCS 0     | 1   | 62  | 5310        | 0.17             | 14.28                         | 23.98                           | 4.25     | 30.00                  | Pass      |
| VHT80    | MCS 0     | 1   | 58  | 5290        | 0.32             | 12.35                         | 23.98                           | 4.25     | 30.00                  | Pass      |

**TEST RESULTS DATA**  
**Power Spectral Density**

| U-NII-2A |           |     |     |             |                  |                                 |                             |          |  |           |
|----------|-----------|-----|-----|-------------|------------------|---------------------------------|-----------------------------|----------|--|-----------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) |  | Pass/Fail |
| 11a      | 6M bps    | 1   | 52  | 5260        | 0.08             | 3.68                            | 11.00                       | 4.25     |  | Pass      |
| 11a      | 6M bps    | 1   | 60  | 5300        | 0.08             | 3.75                            | 11.00                       | 4.25     |  | Pass      |
| 11a      | 6M bps    | 1   | 64  | 5320        | 0.08             | 3.65                            | 11.00                       | 4.25     |  | Pass      |
| HT20     | MCS 0     | 1   | 52  | 5260        | 0.10             | 3.76                            | 11.00                       | 4.25     |  | Pass      |
| HT20     | MCS 0     | 1   | 60  | 5300        | 0.10             | 3.78                            | 11.00                       | 4.25     |  | Pass      |
| HT20     | MCS 0     | 1   | 64  | 5320        | 0.10             | 3.66                            | 11.00                       | 4.25     |  | Pass      |
| VHT40    | MCS 0     | 1   | 54  | 5270        | 0.17             | 0.21                            | 11.00                       | 4.25     |  | Pass      |
| VHT40    | MCS 0     | 1   | 62  | 5310        | 0.17             | 0.12                            | 11.00                       | 4.25     |  | Pass      |
| VHT80    | MCS 0     | 1   | 58  | 5290        | 0.32             | -2.78                           | 11.00                       | 4.25     |  | Pass      |

**TEST RESULTS DATA**  
**26dB and 99% OBW**

| U-NII-2C |           |     |     |             |                     |                       |                                    |                                   |                                      |      |
|----------|-----------|-----|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--------------------------------------|------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 26 dB Bandwidth (MHz) | IC 99% Bandwidth Power Limit (dBm) | IC 99% Bandwidth EIRP Limit (dBm) | FCC 26dB Bandwidth Power Limit (dBm) | Note |
| 11a      | 6M bps    | 1   | 100 | 5500        | 16.83               | 24.15                 | 23.26                              | 29.26                             | 23.98                                |      |
| 11a      | 6M bps    | 1   | 116 | 5580        | 16.78               | 23.20                 | 23.25                              | 29.25                             | 23.98                                |      |
| 11a      | 6M bps    | 1   | 140 | 5700        | 16.78               | 23.40                 | 23.25                              | 29.25                             | 23.98                                |      |
| 11a      | 6Mbps     | 1   | 144 | 5720        | 16.78               | 23.55                 | 23.25                              | 29.25                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 100 | 5500        | 17.93               | 25.15                 | 23.54                              | 29.54                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 116 | 5580        | 17.88               | 25.00                 | 23.52                              | 29.52                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 140 | 5700        | 17.88               | 25.15                 | 23.52                              | 29.52                             | 23.98                                |      |
| HT20     | MCS0      | 1   | 144 | 5720        | 17.93               | 24.50                 | 23.54                              | 29.54                             | 23.98                                |      |
| VHT40    | MCS 0     | 1   | 102 | 5510        | 36.66               | 40.86                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT40    | MCS 0     | 1   | 110 | 5550        | 36.56               | 41.22                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT40    | MCS 0     | 1   | 134 | 5670        | 36.56               | 40.68                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT40    | MCS0      | 1   | 142 | 5710        | 36.56               | 41.40                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1   | 106 | 5530        | 75.64               | 97.76                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1   | 122 | 5610        | 75.76               | 93.92                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS0      | 1   | 138 | 5690        | 75.64               | 91.52                 | 23.98                              | 30.00                             | 23.98                                |      |

**TEST RESULTS DATA**  
**Average Power Table**

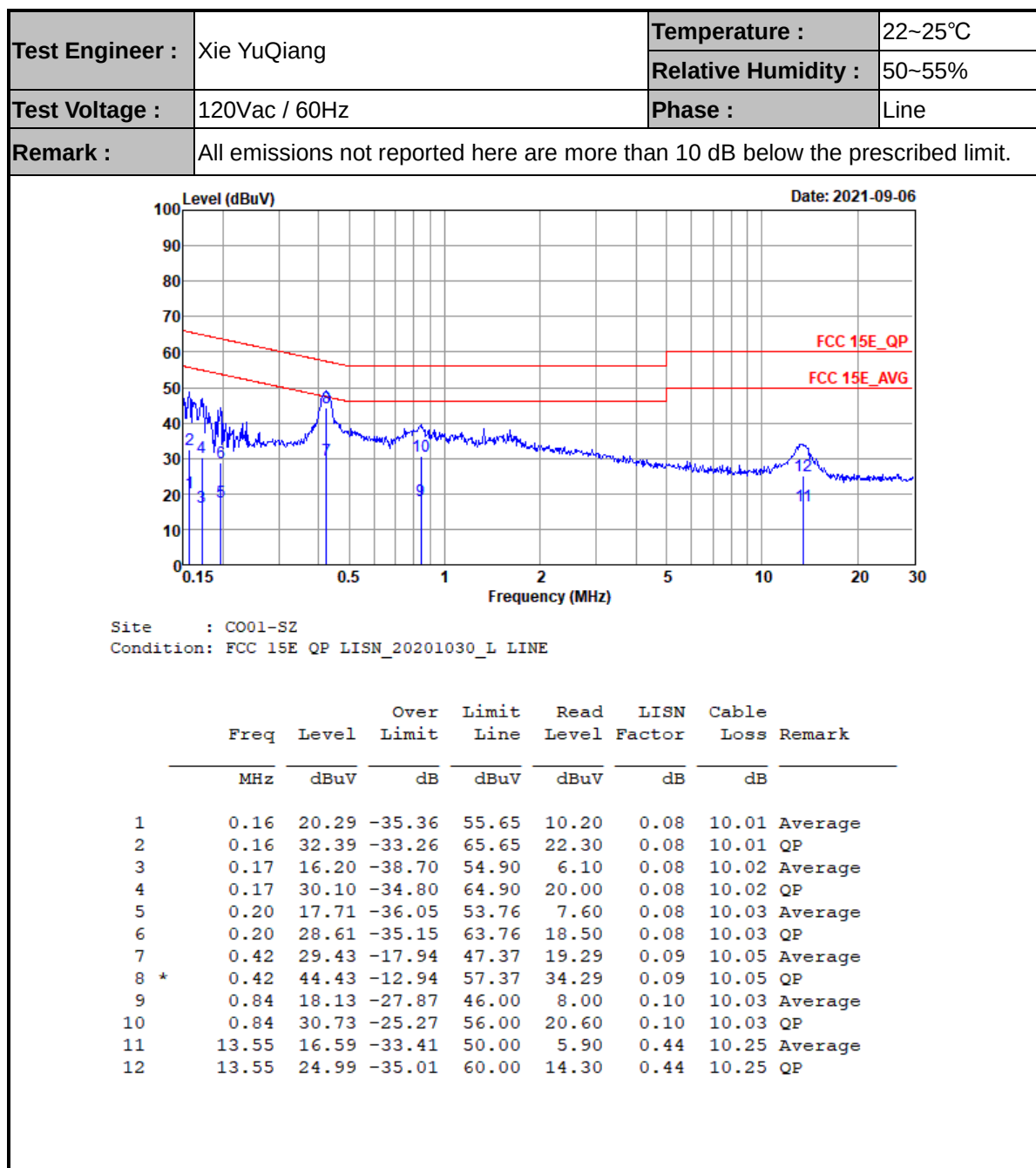
| U-NII-2C |           |                 |     |             |                  |                               |                                 |          |                        |           |
|----------|-----------|-----------------|-----|-------------|------------------|-------------------------------|---------------------------------|----------|------------------------|-----------|
| Mod.     | Data Rate | N <sub>TX</sub> | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) | EIRP Power Limit (dBm) | Pass/Fail |
| 11a      | 6M bps    | 1               | 100 | 5500        | 0.08             | 15.00                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| 11a      | 6M bps    | 1               | 116 | 5580        | 0.08             | 15.54                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| 11a      | 6M bps    | 1               | 140 | 5700        | 0.08             | 15.46                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| 11a      | 6M bps    | 1               | 144 | 5720        | 0.08             | 15.58                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1               | 100 | 5500        | 0.10             | 15.30                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1               | 116 | 5580        | 0.10             | 15.42                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1               | 140 | 5700        | 0.10             | 15.33                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT20     | MCS 0     | 1               | 144 | 5720        | 0.10             | 15.46                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT40     | MCS 0     | 1               | 102 | 5510        | 0.17             | 14.11                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT40     | MCS 0     | 1               | 110 | 5550        | 0.17             | 14.49                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT40     | MCS 0     | 1               | 134 | 5670        | 0.17             | 14.17                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| HT40     | MCS 0     | 1               | 142 | 5710        | 0.17             | 14.25                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1               | 100 | 5500        | 0.10             | 13.34                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1               | 116 | 5580        | 0.10             | 13.48                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1               | 140 | 5700        | 0.10             | 13.50                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT20    | MCS 0     | 1               | 144 | 5720        | 0.10             | 13.08                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT40    | MCS 0     | 1               | 102 | 5510        | 0.17             | 14.16                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT40    | MCS 0     | 1               | 110 | 5550        | 0.17             | 15.38                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT40    | MCS 0     | 1               | 134 | 5670        | 0.17             | 15.43                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT40    | MCS 0     | 1               | 142 | 5710        | 0.17             | 15.32                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT80    | MCS 0     | 1               | 106 | 5530        | 0.32             | 12.44                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT80    | MCS 0     | 1               | 122 | 5610        | 0.32             | 15.43                         | 23.98                           | 4.00     | 30.00                  | Pass      |
| VHT80    | MCS 0     | 1               | 138 | 5690        | 0.32             | 15.09                         | 23.98                           | 4.00     | 30.00                  | Pass      |

**TEST RESULTS DATA**  
**Power Spectral Density**

| U-NII-2C |           |     |     |             |                  |                                 |                             |          |  |           |
|----------|-----------|-----|-----|-------------|------------------|---------------------------------|-----------------------------|----------|--|-----------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) |  | Pass/Fail |
| 11a      | 6M bps    | 1   | 100 | 5500        | 0.08             | 4.09                            | 11.00                       | 4.00     |  | Pass      |
| 11a      | 6M bps    | 1   | 116 | 5580        | 0.08             | 4.46                            | 11.00                       | 4.00     |  | Pass      |
| 11a      | 6M bps    | 1   | 140 | 5700        | 0.08             | 4.08                            | 11.00                       | 4.00     |  | Pass      |
| 11a      | 6Mbps     | 1   | 144 | 5720        | 0.08             | 4.16                            | 11.00                       | 4.00     |  | Pass      |
| HT20     | MCS 0     | 1   | 100 | 5500        | 0.10             | 4.05                            | 11.00                       | 4.00     |  | Pass      |
| HT20     | MCS 0     | 1   | 116 | 5580        | 0.10             | 4.05                            | 11.00                       | 4.00     |  | Pass      |
| HT20     | MCS 0     | 1   | 140 | 5700        | 0.10             | 3.84                            | 11.00                       | 4.00     |  | Pass      |
| HT20     | MCS0      | 1   | 144 | 5720        | 0.10             | 3.85                            | 11.00                       | 4.00     |  | Pass      |
| VHT40    | MCS 0     | 1   | 102 | 5510        | 0.17             | 0.57                            | 11.00                       | 4.00     |  | Pass      |
| VHT40    | MCS 0     | 1   | 110 | 5550        | 0.17             | 0.87                            | 11.00                       | 4.00     |  | Pass      |
| VHT40    | MCS 0     | 1   | 134 | 5670        | 0.17             | 0.76                            | 11.00                       | 4.00     |  | Pass      |
| VHT40    | MCS0      | 1   | 142 | 5710        | 0.17             | 0.57                            | 11.00                       | 4.00     |  | Pass      |
| VHT80    | MCS 0     | 1   | 106 | 5530        | 0.32             | -2.17                           | 11.00                       | 4.00     |  | Pass      |
| VHT80    | MCS 0     | 1   | 122 | 5610        | 0.32             | -2.30                           | 11.00                       | 4.00     |  | Pass      |
| VHT80    | MCS0      | 1   | 138 | 5690        | 0.32             | -2.67                           | 11.00                       | 4.00     |  | Pass      |

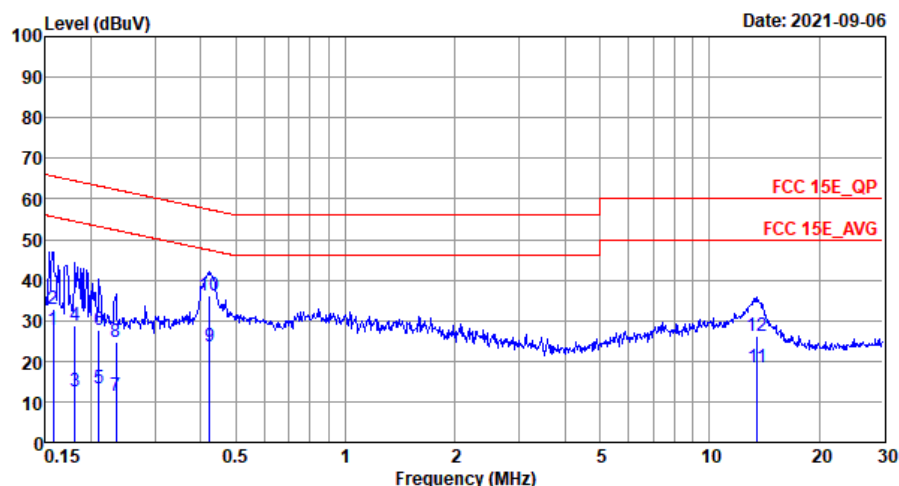


## Appendix B. AC Conducted Emission Test Results





|                 |                                                                                 |                     |         |
|-----------------|---------------------------------------------------------------------------------|---------------------|---------|
| Test Engineer : | Xie YuQiang                                                                     | Temperature :       | 22~25°C |
|                 |                                                                                 | Relative Humidity : | 50~55%  |
| Test Voltage :  | 120Vac / 60Hz                                                                   | Phase :             | Neutral |
| Remark :        | All emissions not reported here are more than 10 dB below the prescribed limit. |                     |         |



Site : CO01-SZ  
Condition: FCC 15E\_QP LISN\_20201030\_N NEUTRAL

|      | Freq  | Level | Over   | Limit | Read  | LISN   | Cable |         |
|------|-------|-------|--------|-------|-------|--------|-------|---------|
|      | MHz   | dBuV  | Limit  | Line  | Level | Factor | Loss  | Remark  |
|      |       |       | dB     | dBuV  | dBuV  | dB     | dB    |         |
| 1    | 0.16  | 27.49 | -28.11 | 55.60 | 17.40 | 0.08   | 10.01 | Average |
| 2    | 0.16  | 32.99 | -32.61 | 65.60 | 22.90 | 0.08   | 10.01 | QP      |
| 3    | 0.18  | 12.50 | -41.96 | 54.46 | 2.40  | 0.08   | 10.02 | Average |
| 4    | 0.18  | 28.70 | -35.76 | 64.46 | 18.60 | 0.08   | 10.02 | QP      |
| 5    | 0.21  | 13.10 | -40.08 | 53.18 | 3.00  | 0.07   | 10.03 | Average |
| 6    | 0.21  | 27.60 | -35.58 | 63.18 | 17.50 | 0.07   | 10.03 | QP      |
| 7    | 0.23  | 11.29 | -41.01 | 52.30 | 1.21  | 0.05   | 10.03 | Average |
| 8    | 0.23  | 24.69 | -37.61 | 62.30 | 14.61 | 0.05   | 10.03 | QP      |
| 9    | 0.42  | 23.63 | -23.74 | 47.37 | 13.49 | 0.09   | 10.05 | Average |
| 10 * | 0.42  | 36.33 | -21.04 | 57.37 | 26.19 | 0.09   | 10.05 | QP      |
| 11   | 13.55 | 18.39 | -31.61 | 50.00 | 7.70  | 0.44   | 10.25 | Average |
| 12   | 13.55 | 26.29 | -33.71 | 60.00 | 15.60 | 0.44   | 10.25 | QP      |

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



## Appendix C. Radiated Spurious Emission

|                 |                |                     |          |
|-----------------|----------------|---------------------|----------|
| Test Engineer : | Zhao hui Liang | Temperature :       | 24~25 °C |
|                 |                | Relative Humidity : | 48~49%   |

## U-NII-1 - 5150~5250MHz

## WIFI 802.11a (Band Edge @ 3m)

| WIFI Ant.                   | Note | Frequency | Level      | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Peak Avg. | Pol.    |
|-----------------------------|------|-----------|------------|------------|------------|------------|----------------|------------|---------------|---------|-----------|-----------|---------|
| 1                           |      | ( MHz )   | ( dBμV/m ) | ( dB )     | ( dBμV/m ) | ( dBμV )   | ( dB/m )       | ( dB )     | ( dB )        | ( cm )  | ( deg )   | ( P/A )   | ( H/V ) |
| 802.11a<br>CH 36<br>5180MHz |      | 5148.72   | 57.81      | -16.19     | 74         | 44.19      | 34             | 12.15      | 32.53         | 388     | 88        | P         | H       |
|                             |      | 5150      | 48.66      | -5.34      | 54         | 35.04      | 34             | 12.15      | 32.53         | 388     | 88        | A         | H       |
|                             |      | 5180      | 110.5      | -          | -          | 96.75      | 34.13          | 12.16      | 32.54         | 388     | 88        | P         | H       |
|                             |      | 5180      | 104.35     | -          | -          | 90.6       | 34.13          | 12.16      | 32.54         | 388     | 88        | A         | H       |
|                             |      | 5041.86   | 53.06      | -20.94     | 74         | 39.65      | 33.8           | 12.12      | 32.51         | 388     | 351       | P         | V       |
|                             |      | 5150      | 44.71      | -9.29      | 54         | 31.09      | 34             | 12.15      | 32.53         | 388     | 351       | A         | V       |
|                             |      | 5180      | 105.47     | -          | -          | 91.72      | 34.13          | 12.16      | 32.54         | 388     | 351       | P         | V       |
|                             |      | 5180      | 99.45      | -          | -          | 85.7       | 34.13          | 12.16      | 32.54         | 388     | 351       | A         | V       |
| 802.11a<br>CH 44<br>5220MHz |      | 5083.2    | 53.25      | -20.75     | 74         | 39.77      | 33.87          | 12.13      | 32.52         | 386     | 85        | P         | H       |
|                             |      | 5150      | 43.89      | -10.11     | 54         | 30.27      | 34             | 12.15      | 32.53         | 386     | 85        | A         | H       |
|                             |      | 5220      | 112.19     | -          | -          | 98.34      | 34.23          | 12.17      | 32.55         | 386     | 85        | P         | H       |
|                             |      | 5220      | 106.1      | -          | -          | 92.25      | 34.23          | 12.17      | 32.55         | 386     | 85        | A         | H       |
|                             |      | 5419.2    | 51.97      | -22.03     | 74         | 37.92      | 34.4           | 12.23      | 32.58         | 386     | 85        | P         | H       |
|                             |      | 5459.28   | 42.34      | -11.66     | 54         | 28.29      | 34.4           | 12.24      | 32.59         | 386     | 85        | A         | H       |
|                             |      | 5096.2    | 53.93      | -20.07     | 74         | 40.41      | 33.9           | 12.14      | 32.52         | 385     | 344       | P         | V       |
|                             |      | 5125.32   | 43.36      | -10.64     | 54         | 29.77      | 33.97          | 12.15      | 32.53         | 385     | 344       | A         | V       |
|                             |      | 5220      | 105.34     | -          | -          | 91.49      | 34.23          | 12.17      | 32.55         | 385     | 344       | P         | V       |
|                             |      | 5220      | 99.25      | -          | -          | 85.4       | 34.23          | 12.17      | 32.55         | 385     | 344       | A         | V       |
|                             |      | 5370.72   | 51.76      | -22.24     | 74         | 37.72      | 34.4           | 12.21      | 32.57         | 385     | 344       | P         | V       |
|                             |      | 5456.88   | 42.31      | -11.69     | 54         | 28.26      | 34.4           | 12.24      | 32.59         | 385     | 344       | A         | V       |





|                             |                                                                                             |         |        |        |    |       |       |       |       |     |     |   |   |
|-----------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| 802.11a<br>CH 48<br>5240MHz |                                                                                             | 5069.16 | 52.74  | -21.26 | 74 | 39.3  | 33.83 | 12.13 | 32.52 | 382 | 67  | P | H |
|                             |                                                                                             | 5150    | 43.46  | -10.54 | 54 | 29.84 | 34    | 12.15 | 32.53 | 382 | 67  | A | H |
|                             |                                                                                             | 5240    | 112.3  | -      | -  | 98.4  | 34.27 | 12.18 | 32.55 | 382 | 67  | P | H |
|                             |                                                                                             | 5240    | 106.15 | -      | -  | 92.25 | 34.27 | 12.18 | 32.55 | 382 | 67  | A | H |
|                             |                                                                                             | 5403.6  | 52.58  | -21.42 | 74 | 38.54 | 34.4  | 12.22 | 32.58 | 382 | 67  | P | H |
|                             |                                                                                             | 5351.04 | 42.53  | -11.47 | 54 | 28.49 | 34.4  | 12.21 | 32.57 | 382 | 67  | A | H |
|                             |                                                                                             | 5009.88 | 52.46  | -21.54 | 74 | 39.05 | 33.8  | 12.11 | 32.5  | 383 | 343 | P | V |
|                             |                                                                                             | 5125.58 | 43.3   | -10.7  | 54 | 29.71 | 33.97 | 12.15 | 32.53 | 383 | 343 | A | V |
|                             |                                                                                             | 5240    | 105.31 | -      | -  | 91.41 | 34.27 | 12.18 | 32.55 | 383 | 343 | P | V |
|                             |                                                                                             | 5240    | 99.31  | -      | -  | 85.41 | 34.27 | 12.18 | 32.55 | 383 | 343 | A | V |
|                             |                                                                                             | 5384.16 | 51.79  | -22.21 | 74 | 37.75 | 34.4  | 12.22 | 32.58 | 383 | 343 | P | V |
|                             |                                                                                             | 5458.56 | 42.31  | -11.69 | 54 | 28.26 | 34.4  | 12.24 | 32.59 | 383 | 343 | A | V |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |       |     |     |   |   |



## U-NII-1 5150~5250MHz

## WIFI 802.11a (Harmonic @ 3m)

| WIFI<br>Ant.<br>1           | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11a<br>CH 36<br>5180MHz |                                                                                             | 10360                | 51.27               | -17.03                  | 68.3                        | 30.73                   | 37.39                         | 15.31                   | 32.16                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 15540                | 50.3                | -23.7                   | 74                          | 26.28                   | 40.08                         | 17.76                   | 33.82                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 10360                | 50.98               | -17.32                  | 68.3                        | 30.44                   | 37.39                         | 15.31                   | 32.16                      | -                    | -                       | P                     | V             |
|                             |                                                                                             | 15540                | 50.1                | -23.9                   | 74                          | 26.08                   | 40.08                         | 17.76                   | 33.82                      | -                    | -                       | P                     | V             |
| 802.11a<br>CH 44<br>5220MHz |                                                                                             | 10440                | 51.92               | -16.38                  | 68.3                        | 31.28                   | 37.45                         | 15.32                   | 32.13                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 15660                | 50.45               | -23.55                  | 74                          | 26.36                   | 40.19                         | 17.83                   | 33.93                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 10440                | 50.21               | -18.09                  | 68.3                        | 29.57                   | 37.45                         | 15.32                   | 32.13                      | -                    | -                       | P                     | V             |
|                             |                                                                                             | 15660                | 50.16               | -23.84                  | 74                          | 26.07                   | 40.19                         | 17.83                   | 33.93                      | -                    | -                       | P                     | V             |
| 802.11a<br>CH 48<br>5240MHz |                                                                                             | 10480                | 50.29               | -18.01                  | 68.3                        | 29.59                   | 37.49                         | 15.32                   | 32.11                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 15720                | 50.58               | -23.42                  | 74                          | 26.43                   | 40.25                         | 17.87                   | 33.97                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 10480                | 49.7                | -18.6                   | 68.3                        | 29                      | 37.49                         | 15.32                   | 32.11                      | -                    | -                       | P                     | V             |
|                             |                                                                                             | 15720                | 50.58               | -23.42                  | 74                          | 26.43                   | 40.25                         | 17.87                   | 33.97                      | -                    | -                       | P                     | V             |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## U-NII-1 5150~5250MHz

## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                   | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 36<br>5180MHz |      | 5148.46              | 57.11               | -16.89                  | 74                          | 43.49                     | 34                            | 12.15                   | 32.53                      | 392                  | 70                      | P                       | H               |
|                                     |      | 5149.76              | 49.78               | -4.22                   | 54                          | 36.16                     | 34                            | 12.15                   | 32.53                      | 392                  | 70                      | A                       | H               |
|                                     |      | 5180                 | 111.06              | -                       | -                           | 97.31                     | 34.13                         | 12.16                   | 32.54                      | 392                  | 70                      | P                       | H               |
|                                     |      | 5180                 | 104.97              | -                       | -                           | 91.22                     | 34.13                         | 12.16                   | 32.54                      | 392                  | 70                      | A                       | H               |
|                                     |      | 5146.9               | 54.14               | -19.86                  | 74                          | 40.52                     | 34                            | 12.15                   | 32.53                      | 397                  | 297                     | P                       | V               |
|                                     |      | 5148.46              | 45.65               | -8.35                   | 54                          | 32.03                     | 34                            | 12.15                   | 32.53                      | 397                  | 297                     | A                       | V               |
|                                     |      | 5180                 | 103.94              | -                       | -                           | 90.19                     | 34.13                         | 12.16                   | 32.54                      | 397                  | 297                     | P                       | V               |
|                                     |      | 5180                 | 97.88               | -                       | -                           | 84.13                     | 34.13                         | 12.16                   | 32.54                      | 397                  | 297                     | A                       | V               |
| 802.11n<br>HT20<br>CH 44<br>5220MHz |      | 5145.86              | 52.85               | -21.15                  | 74                          | 39.23                     | 34                            | 12.15                   | 32.53                      | 388                  | 86                      | P                       | H               |
|                                     |      | 5150                 | 44.69               | -9.31                   | 54                          | 31.07                     | 34                            | 12.15                   | 32.53                      | 388                  | 86                      | A                       | H               |
|                                     |      | 5220                 | 112.14              | -                       | -                           | 98.29                     | 34.23                         | 12.17                   | 32.55                      | 388                  | 86                      | P                       | H               |
|                                     |      | 5220                 | 110.07              | -                       | -                           | 96.22                     | 34.23                         | 12.17                   | 32.55                      | 388                  | 86                      | A                       | H               |
|                                     |      | 5351.28              | 51.95               | -22.05                  | 74                          | 37.91                     | 34.4                          | 12.21                   | 32.57                      | 388                  | 86                      | P                       | H               |
|                                     |      | 5454.96              | 43.01               | -10.99                  | 54                          | 28.96                     | 34.4                          | 12.24                   | 32.59                      | 388                  | 86                      | A                       | H               |
|                                     |      | 5128.7               | 52.47               | -21.53                  | 74                          | 38.88                     | 33.97                         | 12.15                   | 32.53                      | 400                  | 343                     | P                       | V               |
|                                     |      | 5099.58              | 44.25               | -9.75                   | 54                          | 30.73                     | 33.9                          | 12.14                   | 32.52                      | 400                  | 343                     | A                       | V               |
|                                     |      | 5220                 | 103.22              | -                       | -                           | 89.37                     | 34.23                         | 12.17                   | 32.55                      | 400                  | 343                     | P                       | V               |
|                                     |      | 5220                 | 97.14               | -                       | -                           | 83.29                     | 34.23                         | 12.17                   | 32.55                      | 400                  | 343                     | A                       | V               |
|                                     |      | 5352.48              | 51.3                | -22.7                   | 74                          | 37.26                     | 34.4                          | 12.21                   | 32.57                      | 400                  | 343                     | P                       | V               |
|                                     |      | 5358.48              | 43.35               | -10.65                  | 54                          | 29.31                     | 34.4                          | 12.21                   | 32.57                      | 400                  | 343                     | A                       | V               |



|                                     |                                                                                             |         |        |        |    |       |       |       |       |     |     |   |   |
|-------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| 802.11n<br>HT20<br>CH 48<br>5240MHz |                                                                                             | 5119.6  | 53.13  | -20.87 | 74 | 39.59 | 33.93 | 12.14 | 32.53 | 387 | 86  | P | H |
|                                     |                                                                                             | 5147.42 | 44.32  | -9.68  | 54 | 30.7  | 34    | 12.15 | 32.53 | 387 | 86  | A | H |
|                                     |                                                                                             | 5240    | 110.29 | -      | -  | 96.39 | 34.27 | 12.18 | 32.55 | 387 | 86  | P | H |
|                                     |                                                                                             | 5240    | 104.18 | -      | -  | 90.28 | 34.27 | 12.18 | 32.55 | 387 | 86  | A | H |
|                                     |                                                                                             | 5434.08 | 52.98  | -21.02 | 74 | 38.94 | 34.4  | 12.23 | 32.59 | 387 | 86  | P | H |
|                                     |                                                                                             | 5352.72 | 43.19  | -10.81 | 54 | 29.15 | 34.4  | 12.21 | 32.57 | 387 | 86  | A | H |
|                                     |                                                                                             | 5147.68 | 53.08  | -20.92 | 74 | 39.46 | 34    | 12.15 | 32.53 | 399 | 350 | P | V |
|                                     |                                                                                             | 5130.26 | 44.32  | -9.68  | 54 | 30.73 | 33.97 | 12.15 | 32.53 | 399 | 350 | A | V |
|                                     |                                                                                             | 5240    | 103.98 | -      | -  | 90.08 | 34.27 | 12.18 | 32.55 | 399 | 350 | P | V |
|                                     |                                                                                             | 5240    | 97.56  | -      | -  | 83.66 | 34.27 | 12.18 | 32.55 | 399 | 350 | A | V |
|                                     |                                                                                             | 5448.96 | 51.95  | -22.05 | 74 | 37.9  | 34.4  | 12.24 | 32.59 | 399 | 350 | P | V |
|                                     |                                                                                             | 5368.8  | 43.11  | -10.89 | 54 | 29.07 | 34.4  | 12.21 | 32.57 | 399 | 350 | A | V |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |       |     |     |   |   |



**U-NII-1 5150~5250MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1                   | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11n<br>HT20<br>CH 36<br>5180MHz |                                                                                             | 10360                | 50.12               | -18.18                  | 68.3                        | 48.47                   | 37.39                         | 15.31                   | 51.05                      | -                    | -                       | P                     | H             |
|                                     |                                                                                             | 15540                | 49.13               | -24.87                  | 74                          | 43.95                   | 40.08                         | 17.76                   | 52.66                      | -                    | -                       | P                     | H             |
|                                     |                                                                                             | 10360                | 49.63               | -18.67                  | 68.3                        | 47.98                   | 37.39                         | 15.31                   | 51.05                      | -                    | -                       | P                     | V             |
|                                     |                                                                                             | 15540                | 48.23               | -25.77                  | 74                          | 43.05                   | 40.08                         | 17.76                   | 52.66                      | -                    | -                       | P                     | V             |
| 802.11n<br>HT20<br>CH 44<br>5220MHz |                                                                                             | 10440                | 51.21               | -17.09                  | 68.3                        | 49.51                   | 37.45                         | 15.32                   | 51.07                      | -                    | -                       | P                     | H             |
|                                     |                                                                                             | 15660                | 49.71               | -24.29                  | 74                          | 44.57                   | 40.19                         | 17.83                   | 52.88                      | -                    | -                       | P                     | H             |
|                                     |                                                                                             | 10440                | 49.71               | -18.59                  | 68.3                        | 48.01                   | 37.45                         | 15.32                   | 51.07                      | -                    | -                       | P                     | V             |
|                                     |                                                                                             | 15660                | 48.26               | -25.74                  | 74                          | 43.12                   | 40.19                         | 17.83                   | 52.88                      | -                    | -                       | P                     | V             |
| 802.11n<br>HT20<br>CH 48<br>5240MHz |                                                                                             | 10480                | 51.09               | -17.21                  | 68.3                        | 49.37                   | 37.49                         | 15.32                   | 51.09                      | -                    | -                       | P                     | H             |
|                                     |                                                                                             | 15720                | 47.93               | -26.07                  | 74                          | 42.81                   | 40.25                         | 17.87                   | 53                         | -                    | -                       | P                     | H             |
|                                     |                                                                                             | 10480                | 49.94               | -18.36                  | 68.3                        | 48.22                   | 37.49                         | 15.32                   | 51.09                      | -                    | -                       | P                     | V             |
|                                     |                                                                                             | 15720                | 47.67               | -26.33                  | 74                          | 42.55                   | 40.25                         | 17.87                   | 53                         | -                    | -                       | P                     | V             |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## U-NII-1 5150~5250MHz

## WIFI 802.11ac VHT40 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 38<br>5190MHz |                                                                                             | 5149.76              | 59.03               | -14.97                  | 74                          | 45.41                     | 34                            | 12.15                   | 32.53                      | 391                  | 71                      | P                       | H               |
|                                       |                                                                                             | 5149.5               | 53.79               | -0.21                   | 54                          | 40.17                     | 34                            | 12.15                   | 32.53                      | 391                  | 71                      | A                       | H               |
|                                       |                                                                                             | 5190                 | 106.51              | -                       | -                           | 92.76                     | 34.13                         | 12.16                   | 32.54                      | 391                  | 71                      | P                       | H               |
|                                       |                                                                                             | 5190                 | 100.44              | -                       | -                           | 86.69                     | 34.13                         | 12.16                   | 32.54                      | 391                  | 71                      | A                       | H               |
|                                       |                                                                                             | 5436.76              | 51.79               | -22.21                  | 74                          | 37.75                     | 34.4                          | 12.23                   | 32.59                      | 391                  | 71                      | P                       | H               |
|                                       |                                                                                             | 5432                 | 43.84               | -10.16                  | 54                          | 29.8                      | 34.4                          | 12.23                   | 32.59                      | 391                  | 71                      | A                       | H               |
|                                       |                                                                                             | 5127.14              | 53.87               | -20.13                  | 74                          | 40.28                     | 33.97                         | 12.15                   | 32.53                      | 387                  | 295                     | P                       | V               |
|                                       |                                                                                             | 5149.24              | 47.21               | -6.79                   | 54                          | 33.59                     | 34                            | 12.15                   | 32.53                      | 387                  | 295                     | A                       | V               |
|                                       |                                                                                             | 5190                 | 98.5                | -                       | -                           | 84.75                     | 34.13                         | 12.16                   | 32.54                      | 387                  | 295                     | P                       | V               |
|                                       |                                                                                             | 5190                 | 92.45               | -                       | -                           | 78.7                      | 34.13                         | 12.16                   | 32.54                      | 387                  | 295                     | A                       | V               |
|                                       |                                                                                             | 5367.6               | 51.07               | -22.93                  | 74                          | 37.03                     | 34.4                          | 12.21                   | 32.57                      | 387                  | 295                     | P                       | V               |
|                                       |                                                                                             | 5437.32              | 43.71               | -10.29                  | 54                          | 29.67                     | 34.4                          | 12.23                   | 32.59                      | 387                  | 295                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 46<br>5230MHz |                                                                                             | 5089.7               | 53.04               | -20.96                  | 74                          | 39.52                     | 33.9                          | 12.14                   | 32.52                      | 380                  | 84                      | P                       | H               |
|                                       |                                                                                             | 5150                 | 46.19               | -7.81                   | 54                          | 32.57                     | 34                            | 12.15                   | 32.53                      | 380                  | 84                      | A                       | H               |
|                                       |                                                                                             | 5230                 | 108.39              | -                       | -                           | 94.5                      | 34.27                         | 12.17                   | 32.55                      | 380                  | 84                      | P                       | H               |
|                                       |                                                                                             | 5230                 | 102.26              | -                       | -                           | 88.37                     | 34.27                         | 12.17                   | 32.55                      | 380                  | 84                      | A                       | H               |
|                                       |                                                                                             | 5437.68              | 51.69               | -22.31                  | 74                          | 37.65                     | 34.4                          | 12.23                   | 32.59                      | 380                  | 84                      | P                       | H               |
|                                       |                                                                                             | 5352.96              | 43.79               | -10.21                  | 54                          | 29.75                     | 34.4                          | 12.21                   | 32.57                      | 380                  | 84                      | A                       | H               |
|                                       |                                                                                             | 5126.1               | 53.84               | -20.16                  | 74                          | 40.25                     | 33.97                         | 12.15                   | 32.53                      | 386                  | 342                     | P                       | V               |
|                                       |                                                                                             | 5128.96              | 45.06               | -8.94                   | 54                          | 31.47                     | 33.97                         | 12.15                   | 32.53                      | 386                  | 342                     | A                       | V               |
|                                       |                                                                                             | 5230                 | 101.2               | -                       | -                           | 87.31                     | 34.27                         | 12.17                   | 32.55                      | 386                  | 342                     | P                       | V               |
|                                       |                                                                                             | 5230                 | 95.03               | -                       | -                           | 81.14                     | 34.27                         | 12.17                   | 32.55                      | 386                  | 342                     | A                       | V               |
|                                       |                                                                                             | 5404.56              | 51.93               | -22.07                  | 74                          | 37.89                     | 34.4                          | 12.22                   | 32.58                      | 386                  | 342                     | P                       | V               |
|                                       |                                                                                             | 5444.64              | 43.73               | -10.27                  | 54                          | 29.69                     | 34.4                          | 12.23                   | 32.59                      | 386                  | 342                     | A                       | V               |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## U-NII-1 5150~5250MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

| WIFI Ant. 1 | Note                                                                                        | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|-------------|---------------------------------------------------------------------------------------------|-------------------|------------------|-------------------|-----------------------|-------------------|-------------------------|-------------------|----------------------|----------------|-------------------|-----------------|------------|
| 802.11ac    |                                                                                             | 10380             | 49.2             | -19.1             | 68.3                  | 47.52             | 37.41                   | 15.32             | 51.05                | -              | -                 | P               | H          |
| VHT40       |                                                                                             | 15570             | 49.13            | -24.87            | 74                    | 43.96             | 40.11                   | 17.78             | 52.72                | -              | -                 | P               | H          |
| CH 38       |                                                                                             | 10380             | 49.81            | -18.49            | 68.3                  | 48.13             | 37.41                   | 15.32             | 51.05                | -              | -                 | P               | V          |
| 5190MHz     |                                                                                             | 15570             | 48.94            | -25.06            | 74                    | 43.77             | 40.11                   | 17.78             | 52.72                | -              | -                 | P               | V          |
| 802.11ac    |                                                                                             | 10460             | 50.07            | -18.23            | 68.3                  | 48.37             | 37.46                   | 15.32             | 51.08                | -              | -                 | P               | H          |
| VHT40       |                                                                                             | 15690             | 48.94            | -25.06            | 74                    | 43.81             | 40.22                   | 17.85             | 52.94                | -              | -                 | P               | H          |
| CH 46       |                                                                                             | 10460             | 49.87            | -18.43            | 68.3                  | 48.17             | 37.46                   | 15.32             | 51.08                | -              | -                 | P               | V          |
| 5230MHz     |                                                                                             | 15690             | 49.19            | -24.81            | 74                    | 44.06             | 40.22                   | 17.85             | 52.94                | -              | -                 | P               | V          |
| Remark      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                   |                  |                   |                       |                   |                         |                   |                      |                |                   |                 |            |



## U-NII-1 5150~5250MHz

## WIFI 802.11ac VHT80 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 42<br>5210MHz |                                                                                             | 5144.82              | 59.04               | -14.96                  | 74                          | 45.42                   | 34                            | 12.15                   | 32.53                      | 212                  | 73                      | P                     | H             |
|                                       |                                                                                             | 5147.68              | 53.37               | -0.63                   | 54                          | 39.75                   | 34                            | 12.15                   | 32.53                      | 212                  | 73                      | A                     | H             |
|                                       |                                                                                             | 5210                 | 103.4               | -                       | -                           | 89.54                   | 34.23                         | 12.17                   | 32.54                      | 212                  | 73                      | P                     | H             |
|                                       |                                                                                             | 5210                 | 96.3                | -                       | -                           | 82.44                   | 34.23                         | 12.17                   | 32.54                      | 212                  | 73                      | A                     | H             |
|                                       |                                                                                             | 5446.8               | 51.58               | -22.42                  | 74                          | 37.53                   | 34.4                          | 12.24                   | 32.59                      | 212                  | 73                      | P                     | H             |
|                                       |                                                                                             | 5454.72              | 43.83               | -10.17                  | 54                          | 29.78                   | 34.4                          | 12.24                   | 32.59                      | 212                  | 73                      | A                     | H             |
|                                       |                                                                                             | 5144.56              | 56.79               | -17.21                  | 74                          | 43.17                   | 34                            | 12.15                   | 32.53                      | 288                  | 328                     | P                     | V             |
|                                       |                                                                                             | 5146.38              | 49.39               | -4.61                   | 54                          | 35.77                   | 34                            | 12.15                   | 32.53                      | 288                  | 328                     | A                     | V             |
|                                       |                                                                                             | 5210                 | 95.09               | -                       | -                           | 81.23                   | 34.23                         | 12.17                   | 32.54                      | 288                  | 328                     | P                     | V             |
|                                       |                                                                                             | 5210                 | 88.41               | -                       | -                           | 74.55                   | 34.23                         | 12.17                   | 32.54                      | 288                  | 328                     | A                     | V             |
|                                       |                                                                                             | 5361.6               | 51.73               | -22.27                  | 74                          | 37.69                   | 34.4                          | 12.21                   | 32.57                      | 288                  | 328                     | P                     | V             |
|                                       |                                                                                             | 5453.28              | 43.84               | -10.16                  | 54                          | 29.79                   | 34.4                          | 12.24                   | 32.59                      | 288                  | 328                     | A                     | V             |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**U-NII-1 5150~5250MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac          |                                                                                             | 10420                | 50.31               | -17.99                  | 68.3                        | 48.63                   | 37.43                         | 15.32                   | 51.07                      | -                    | -                       | P                     | H             |
| VHT80             |                                                                                             | 15630                | 49.61               | -24.39                  | 74                          | 44.47                   | 40.17                         | 17.82                   | 52.85                      | -                    | -                       | P                     | H             |
| CH 42             |                                                                                             | 10420                | 47.99               | -20.31                  | 68.3                        | 46.31                   | 37.43                         | 15.32                   | 51.07                      | -                    | -                       | P                     | V             |
| 5210MHz           |                                                                                             | 15630                | 49.23               | -24.77                  | 74                          | 44.09                   | 40.17                         | 17.82                   | 52.85                      | -                    | -                       | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## U-NII-2A - 5250~5350MHz

## WIFI 802.11a (Band Edge @ 3m)

| WIFI                        | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|-----------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                        |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                           |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 52<br>5260MHz |      | 5094.38   | 53.83      | -20.17 | 74         | 40.31    | 33.9     | 12.14  | 32.52  | 383    | 82      | P       | H       |
|                             |      | 5147.68   | 43.36      | -10.64 | 54         | 29.74    | 34       | 12.15  | 32.53  | 383    | 82      | A       | H       |
|                             |      | 5260      | 110.49     | -      | -          | 96.53    | 34.33    | 12.18  | 32.55  | 383    | 82      | P       | H       |
|                             |      | 5260      | 104.45     | -      | -          | 90.49    | 34.33    | 12.18  | 32.55  | 383    | 82      | A       | H       |
|                             |      | 5429.28   | 52.25      | -21.75 | 74         | 38.21    | 34.4     | 12.23  | 32.59  | 383    | 82      | P       | H       |
|                             |      | 5351.04   | 42.93      | -11.07 | 54         | 28.89    | 34.4     | 12.21  | 32.57  | 383    | 82      | A       | H       |
|                             |      | 5128.7    | 52.23      | -21.77 | 74         | 38.64    | 33.97    | 12.15  | 32.53  | 385    | 343     | P       | V       |
|                             |      | 5125.32   | 43.32      | -10.68 | 54         | 29.73    | 33.97    | 12.15  | 32.53  | 385    | 343     | A       | V       |
|                             |      | 5260      | 104.47     | -      | -          | 90.51    | 34.33    | 12.18  | 32.55  | 385    | 343     | P       | V       |
|                             |      | 5260      | 98.42      | -      | -          | 84.46    | 34.33    | 12.18  | 32.55  | 385    | 343     | A       | V       |
|                             |      | 5393.76   | 51.54      | -22.46 | 74         | 37.5     | 34.4     | 12.22  | 32.58  | 385    | 343     | P       | V       |
|                             |      | 5356.08   | 42.35      | -11.65 | 54         | 28.31    | 34.4     | 12.21  | 32.57  | 385    | 343     | A       | V       |
| 802.11a<br>CH 60<br>5300MHz |      | 5100.8    | 52.84      | -21.16 | 74         | 39.32    | 33.9     | 12.14  | 32.52  | 395    | 66      | P       | H       |
|                             |      | 5125.65   | 43.26      | -10.74 | 54         | 29.67    | 33.97    | 12.15  | 32.53  | 395    | 66      | A       | H       |
|                             |      | 5300      | 111.91     | -      | -          | 97.88    | 34.4     | 12.19  | 32.56  | 395    | 66      | P       | H       |
|                             |      | 5300      | 105.88     | -      | -          | 91.85    | 34.4     | 12.19  | 32.56  | 395    | 66      | A       | H       |
|                             |      | 5369.04   | 54.63      | -19.37 | 74         | 40.59    | 34.4     | 12.21  | 32.57  | 395    | 66      | P       | H       |
|                             |      | 5357.52   | 46.29      | -7.71  | 54         | 32.25    | 34.4     | 12.21  | 32.57  | 395    | 66      | A       | H       |
|                             |      | 5019.25   | 53.09      | -20.91 | 74         | 39.68    | 33.8     | 12.12  | 32.51  | 393    | 342     | P       | V       |
|                             |      | 5128.1    | 43.27      | -10.73 | 54         | 29.68    | 33.97    | 12.15  | 32.53  | 393    | 342     | A       | V       |
|                             |      | 5300      | 103        | -      | -          | 88.97    | 34.4     | 12.19  | 32.56  | 393    | 342     | P       | V       |
|                             |      | 5300      | 96.92      | -      | -          | 82.89    | 34.4     | 12.19  | 32.56  | 393    | 342     | A       | V       |
|                             |      | 5441.04   | 52.92      | -21.08 | 74         | 38.88    | 34.4     | 12.23  | 32.59  | 393    | 342     | P       | V       |
|                             |      | 5357.52   | 43.02      | -10.98 | 54         | 28.98    | 34.4     | 12.21  | 32.57  | 393    | 342     | A       | V       |



|                             |                                                                                             |         |        |        |    |       |      |       |       |     |     |   |   |
|-----------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|------|-------|-------|-----|-----|---|---|
| 802.11a<br>CH 64<br>5320MHz |                                                                                             | 5320    | 112.72 | -      | -  | 98.68 | 34.4 | 12.2  | 32.56 | 397 | 82  | P | H |
|                             |                                                                                             | 5320    | 106.71 | -      | -  | 92.67 | 34.4 | 12.2  | 32.56 | 397 | 82  | A | H |
|                             |                                                                                             | 5353.12 | 56.9   | -17.1  | 74 | 42.86 | 34.4 | 12.21 | 32.57 | 397 | 82  | P | H |
|                             |                                                                                             | 5350.08 | 46.55  | -7.45  | 54 | 32.51 | 34.4 | 12.21 | 32.57 | 397 | 82  | A | H |
|                             |                                                                                             | 5320    | 104.95 | -      | -  | 90.91 | 34.4 | 12.2  | 32.56 | 397 | 341 | P | V |
|                             |                                                                                             | 5320    | 98.83  | -      | -  | 84.79 | 34.4 | 12.2  | 32.56 | 397 | 341 | A | V |
|                             |                                                                                             | 5366.08 | 53.94  | -20.06 | 74 | 39.9  | 34.4 | 12.21 | 32.57 | 397 | 341 | P | V |
|                             |                                                                                             | 5350.08 | 43.31  | -10.69 | 54 | 29.27 | 34.4 | 12.21 | 32.57 | 397 | 341 | A | V |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |      |       |       |     |     |   |   |



## U-NII-2A 5250~5350MHz

## WIFI 802.11a (Harmonic @ 3m)

| WIFI<br>Ant.<br>1           | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11a<br>CH 52<br>5260MHz |                                                                                             | 10520                | 50.97               | -17.33                  | 68.3                        | 30.19                   | 37.51                         | 15.37                   | 32.1                       | -                    | -                       | P                     | H             |
|                             |                                                                                             | 15780                | 50.86               | -23.14                  | 74                          | 26.69                   | 40.3                          | 17.9                    | 34.03                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 10520                | 50.25               | -18.05                  | 68.3                        | 29.47                   | 37.51                         | 15.37                   | 32.1                       | -                    | -                       | P                     | V             |
|                             |                                                                                             | 15780                | 50                  | -24                     | 74                          | 25.83                   | 40.3                          | 17.9                    | 34.03                      | -                    | -                       | P                     | V             |
| 802.11a<br>CH 60<br>5300MHz |                                                                                             | 10600                | 50.72               | -23.28                  | 74                          | 29.69                   | 37.56                         | 15.55                   | 32.08                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 15900                | 50.05               | -23.95                  | 74                          | 25.79                   | 40.41                         | 17.97                   | 34.12                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 10600                | 50.06               | -23.94                  | 74                          | 29.03                   | 37.56                         | 15.55                   | 32.08                      | -                    | -                       | P                     | V             |
|                             |                                                                                             | 15900                | 49.99               | -24.01                  | 74                          | 25.73                   | 40.41                         | 17.97                   | 34.12                      | -                    | -                       | P                     | V             |
| 802.11a<br>CH 64<br>5320MHz |                                                                                             | 10640                | 50.8                | -23.2                   | 74                          | 29.64                   | 37.58                         | 15.65                   | 32.07                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 15960                | 50.92               | -23.08                  | 74                          | 26.62                   | 40.47                         | 18.01                   | 34.18                      | -                    | -                       | P                     | H             |
|                             |                                                                                             | 10640                | 50.44               | -23.56                  | 74                          | 29.28                   | 37.58                         | 15.65                   | 32.07                      | -                    | -                       | P                     | V             |
|                             |                                                                                             | 15960                | 50.04               | -23.96                  | 74                          | 25.74                   | 40.47                         | 18.01                   | 34.18                      | -                    | -                       | P                     | V             |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**U-NII-2A 5250~5350MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                             | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11n<br/>HT20<br/>CH 52<br/>5260MHz</b> |      | 5147.42              | 53.01               | -20.99                  | 74                          | 39.39                     | 34                            | 12.15                   | 32.53                      | 383                  | 82                      | P                       | H               |
|                                               |      | 5121.94              | 44.28               | -9.72                   | 54                          | 30.74                     | 33.93                         | 12.14                   | 32.53                      | 383                  | 82                      | A                       | H               |
|                                               |      | 5260                 | 111.46              | -                       | -                           | 97.5                      | 34.33                         | 12.18                   | 32.55                      | 383                  | 82                      | P                       | H               |
|                                               |      | 5260                 | 105.42              | -                       | -                           | 91.46                     | 34.33                         | 12.18                   | 32.55                      | 383                  | 82                      | A                       | H               |
|                                               |      | 5360.88              | 52.07               | -21.93                  | 74                          | 38.03                     | 34.4                          | 12.21                   | 32.57                      | 383                  | 82                      | P                       | H               |
|                                               |      | 5351.04              | 43.52               | -10.48                  | 54                          | 29.48                     | 34.4                          | 12.21                   | 32.57                      | 383                  | 82                      | A                       | H               |
|                                               |      | 5148.2               | 53.77               | -20.23                  | 74                          | 40.15                     | 34                            | 12.15                   | 32.53                      | 385                  | 343                     | P                       | V               |
|                                               |      | 5122.46              | 44.28               | -9.72                   | 54                          | 30.74                     | 33.93                         | 12.14                   | 32.53                      | 385                  | 343                     | A                       | V               |
|                                               |      | 5260                 | 102.96              | -                       | -                           | 89                        | 34.33                         | 12.18                   | 32.55                      | 385                  | 343                     | P                       | V               |
|                                               |      | 5260                 | 96.85               | -                       | -                           | 82.89                     | 34.33                         | 12.18                   | 32.55                      | 385                  | 343                     | A                       | V               |
|                                               |      | 5358.72              | 51.49               | -22.51                  | 74                          | 37.45                     | 34.4                          | 12.21                   | 32.57                      | 385                  | 343                     | P                       | V               |
|                                               |      | 5354.88              | 43.13               | -10.87                  | 54                          | 29.09                     | 34.4                          | 12.21                   | 32.57                      | 385                  | 343                     | A                       | V               |
| <b>802.11n<br/>HT20<br/>CH 60<br/>5300MHz</b> |      | 5149.45              | 54.28               | -19.72                  | 74                          | 40.66                     | 34                            | 12.15                   | 32.53                      | 396                  | 68                      | P                       | H               |
|                                               |      | 5143.85              | 44.21               | -9.79                   | 54                          | 30.59                     | 34                            | 12.15                   | 32.53                      | 396                  | 68                      | A                       | H               |
|                                               |      | 5300                 | 112.74              | -                       | -                           | 98.71                     | 34.4                          | 12.19                   | 32.56                      | 396                  | 68                      | P                       | H               |
|                                               |      | 5300                 | 106.7               | -                       | -                           | 92.67                     | 34.4                          | 12.19                   | 32.56                      | 396                  | 68                      | A                       | H               |
|                                               |      | 5354.16              | 53.73               | -20.27                  | 74                          | 39.69                     | 34.4                          | 12.21                   | 32.57                      | 396                  | 68                      | P                       | H               |
|                                               |      | 5357.52              | 46.04               | -7.96                   | 54                          | 32                        | 34.4                          | 12.21                   | 32.57                      | 396                  | 68                      | A                       | H               |
|                                               |      | 5128.45              | 54.08               | -19.92                  | 74                          | 40.49                     | 33.97                         | 12.15                   | 32.53                      | 399                  | 297                     | P                       | V               |
|                                               |      | 5102.9               | 44.28               | -9.72                   | 54                          | 30.76                     | 33.9                          | 12.14                   | 32.52                      | 399                  | 297                     | A                       | V               |
|                                               |      | 5300                 | 105.17              | -                       | -                           | 91.14                     | 34.4                          | 12.19                   | 32.56                      | 399                  | 297                     | P                       | V               |
|                                               |      | 5300                 | 99.13               | -                       | -                           | 85.1                      | 34.4                          | 12.19                   | 32.56                      | 399                  | 297                     | A                       | V               |
|                                               |      | 5423.76              | 52.69               | -21.31                  | 74                          | 38.64                     | 34.4                          | 12.23                   | 32.58                      | 399                  | 297                     | P                       | V               |
|                                               |      | 5351.28              | 43.58               | -10.42                  | 54                          | 29.54                     | 34.4                          | 12.21                   | 32.57                      | 399                  | 297                     | A                       | V               |



|                                                                 |                                                                                             |         |        |        |    |       |      |       |       |     |     |   |   |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|------|-------|-------|-----|-----|---|---|
| <b>802.11n</b><br><b>HT20</b><br><b>CH 64</b><br><b>5320MHz</b> |                                                                                             | 5320    | 112.47 | -      | -  | 98.43 | 34.4 | 12.2  | 32.56 | 398 | 82  | P | H |
|                                                                 |                                                                                             | 5320    | 106.42 | -      | -  | 92.38 | 34.4 | 12.2  | 32.56 | 398 | 82  | A | H |
|                                                                 |                                                                                             | 5352.32 | 56.99  | -17.01 | 74 | 42.95 | 34.4 | 12.21 | 32.57 | 398 | 82  | P | H |
|                                                                 |                                                                                             | 5350.4  | 48.51  | -5.49  | 54 | 34.47 | 34.4 | 12.21 | 32.57 | 398 | 82  | A | H |
|                                                                 |                                                                                             | 5320    | 104.7  | -      | -  | 90.66 | 34.4 | 12.2  | 32.56 | 397 | 343 | P | V |
|                                                                 |                                                                                             | 5320    | 98.57  | -      | -  | 84.53 | 34.4 | 12.2  | 32.56 | 397 | 343 | A | V |
|                                                                 |                                                                                             | 5353.12 | 51.87  | -22.13 | 74 | 37.83 | 34.4 | 12.21 | 32.57 | 397 | 343 | P | V |
|                                                                 |                                                                                             | 5350.88 | 44.51  | -9.49  | 54 | 30.47 | 34.4 | 12.21 | 32.57 | 397 | 343 | A | V |
| <b>Remark</b>                                                   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |      |       |       |     |     |   |   |



**U-NII-2A 5250~5350MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11n           |                                                                                             | 10520                | 50.97               | -17.33                  | 68.3                        | 49.2                    | 37.51                         | 15.37                   | 51.11                      | -                    | -                       | P                     | H             |
| HT20              |                                                                                             | 15780                | 49.52               | -24.48                  | 74                          | 44.42                   | 40.3                          | 17.9                    | 53.1                       | -                    | -                       | P                     | H             |
| CH 52             |                                                                                             | 10520                | 49.26               | -19.04                  | 68.3                        | 47.49                   | 37.51                         | 15.37                   | 51.11                      | -                    | -                       | P                     | V             |
| 5260MHz           |                                                                                             | 15780                | 50.06               | -23.94                  | 74                          | 44.96                   | 40.3                          | 17.9                    | 53.1                       | -                    | -                       | P                     | V             |
| 802.11n           |                                                                                             | 10600                | 50.17               | -23.83                  | 74                          | 48.22                   | 37.56                         | 15.55                   | 51.16                      | -                    | -                       | P                     | H             |
| HT20              |                                                                                             | 15900                | 48.86               | -25.14                  | 74                          | 43.79                   | 40.41                         | 17.97                   | 53.31                      | -                    | -                       | P                     | H             |
| CH 60             |                                                                                             | 10600                | 49.96               | -24.04                  | 74                          | 48.01                   | 37.56                         | 15.55                   | 51.16                      | -                    | -                       | P                     | V             |
| 5300MHz           |                                                                                             | 15900                | 49.2                | -24.8                   | 74                          | 44.13                   | 40.41                         | 17.97                   | 53.31                      | -                    | -                       | P                     | V             |
| 802.11n           |                                                                                             | 10640                | 50.51               | -23.49                  | 74                          | 48.46                   | 37.58                         | 15.65                   | 51.18                      | -                    | -                       | P                     | H             |
| HT20              |                                                                                             | 15960                | 48.48               | -25.52                  | 74                          | 43.44                   | 40.47                         | 18.01                   | 53.44                      | -                    | -                       | P                     | H             |
| CH 64             |                                                                                             | 10640                | 50.23               | -23.77                  | 74                          | 48.18                   | 37.58                         | 15.65                   | 51.18                      | -                    | -                       | P                     | V             |
| 5320MHz           |                                                                                             | 15960                | 48.99               | -25.01                  | 74                          | 43.95                   | 40.47                         | 18.01                   | 53.44                      | -                    | -                       | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**U-NII-2A 5250~5350MHz**  
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 54<br>5270MHz |                                                                                             | 5024.15              | 53.12               | -20.88                  | 74                          | 39.71                     | 33.8                          | 12.12                   | 32.51                      | 382                  | 81                      | P                       | H               |
|                                       |                                                                                             | 5131.6               | 44.96               | -9.04                   | 54                          | 31.37                     | 33.97                         | 12.15                   | 32.53                      | 382                  | 81                      | A                       | H               |
|                                       |                                                                                             | 5270                 | 108.61              | -                       | -                           | 94.64                     | 34.33                         | 12.19                   | 32.55                      | 382                  | 81                      | P                       | H               |
|                                       |                                                                                             | 5270                 | 102.54              | -                       | -                           | 88.57                     | 34.33                         | 12.19                   | 32.55                      | 382                  | 81                      | A                       | H               |
|                                       |                                                                                             | 5353.92              | 52.71               | -21.29                  | 74                          | 38.67                     | 34.4                          | 12.21                   | 32.57                      | 382                  | 81                      | P                       | H               |
|                                       |                                                                                             | 5350.56              | 45.63               | -8.37                   | 54                          | 31.59                     | 34.4                          | 12.21                   | 32.57                      | 382                  | 81                      | A                       | H               |
|                                       |                                                                                             | 5077                 | 53.19               | -20.81                  | 74                          | 39.71                     | 33.87                         | 12.13                   | 32.52                      | 396                  | 343                     | P                       | V               |
|                                       |                                                                                             | 5122.85              | 44.87               | -9.13                   | 54                          | 31.29                     | 33.97                         | 12.14                   | 32.53                      | 396                  | 343                     | A                       | V               |
|                                       |                                                                                             | 5270                 | 100.39              | -                       | -                           | 86.42                     | 34.33                         | 12.19                   | 32.55                      | 396                  | 343                     | P                       | V               |
|                                       |                                                                                             | 5270                 | 94.35               | -                       | -                           | 80.38                     | 34.33                         | 12.19                   | 32.55                      | 396                  | 343                     | A                       | V               |
|                                       |                                                                                             | 5350.08              | 52.92               | -21.08                  | 74                          | 38.88                     | 34.4                          | 12.21                   | 32.57                      | 396                  | 343                     | P                       | V               |
|                                       |                                                                                             | 5352                 | 44.06               | -9.94                   | 54                          | 30.02                     | 34.4                          | 12.21                   | 32.57                      | 396                  | 343                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 62<br>5310MHz |                                                                                             | 5082.25              | 53.06               | -20.94                  | 74                          | 39.58                     | 33.87                         | 12.13                   | 32.52                      | 394                  | 81                      | P                       | H               |
|                                       |                                                                                             | 5121.45              | 44.93               | -9.07                   | 54                          | 31.39                     | 33.93                         | 12.14                   | 32.53                      | 394                  | 81                      | A                       | H               |
|                                       |                                                                                             | 5310                 | 107.12              | -                       | -                           | 93.08                     | 34.4                          | 12.2                    | 32.56                      | 394                  | 81                      | P                       | H               |
|                                       |                                                                                             | 5310                 | 103.47              | -                       | -                           | 89.43                     | 34.4                          | 12.2                    | 32.56                      | 394                  | 81                      | A                       | H               |
|                                       |                                                                                             | 5351.04              | 59.54               | -14.46                  | 74                          | 45.5                      | 34.4                          | 12.21                   | 32.57                      | 394                  | 81                      | P                       | H               |
|                                       |                                                                                             | 5350.56              | 53.26               | -0.74                   | 54                          | 39.22                     | 34.4                          | 12.21                   | 32.57                      | 394                  | 81                      | A                       | H               |
|                                       |                                                                                             | 5057.4               | 52.94               | -21.06                  | 74                          | 39.49                     | 33.83                         | 12.13                   | 32.51                      | 389                  | 351                     | P                       | V               |
|                                       |                                                                                             | 5109.55              | 44.98               | -9.02                   | 54                          | 31.43                     | 33.93                         | 12.14                   | 32.52                      | 389                  | 351                     | A                       | V               |
|                                       |                                                                                             | 5310                 | 98.81               | -                       | -                           | 84.77                     | 34.4                          | 12.2                    | 32.56                      | 389                  | 351                     | P                       | V               |
|                                       |                                                                                             | 5310                 | 92.68               | -                       | -                           | 78.64                     | 34.4                          | 12.2                    | 32.56                      | 389                  | 351                     | A                       | V               |
|                                       |                                                                                             | 5350.56              | 53.89               | -20.11                  | 74                          | 39.85                     | 34.4                          | 12.21                   | 32.57                      | 389                  | 351                     | P                       | V               |
|                                       |                                                                                             | 5350.56              | 45.1                | -8.9                    | 54                          | 31.06                     | 34.4                          | 12.21                   | 32.57                      | 389                  | 351                     | A                       | V               |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |





## U-NII-2A 5250~5350MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac          |                                                                                             | 10540                | 49.81               | -18.49                  | 68.3                        | 48                      | 37.52                         | 15.41                   | 51.12                      | -                    | -                       | P                     | H             |
| VHT40             |                                                                                             | 15810                | 49.67               | -24.33                  | 74                          | 44.58                   | 40.33                         | 17.92                   | 53.16                      | -                    | -                       | P                     | H             |
| CH 54             |                                                                                             | 10540                | 48.95               | -19.35                  | 68.3                        | 47.14                   | 37.52                         | 15.41                   | 51.12                      | -                    | -                       | P                     | V             |
| 5270MHz           |                                                                                             | 15810                | 49.22               | -24.78                  | 74                          | 44.13                   | 40.33                         | 17.92                   | 53.16                      | -                    | -                       | P                     | V             |
| 802.11ac          |                                                                                             | 10620                | 49.95               | -24.05                  | 74                          | 47.95                   | 37.57                         | 15.6                    | 51.17                      | -                    | -                       | P                     | H             |
| VHT40             |                                                                                             | 15930                | 49.71               | -24.29                  | 74                          | 44.66                   | 40.44                         | 17.99                   | 53.38                      | -                    | -                       | P                     | H             |
| CH 62             |                                                                                             | 10620                | 50.28               | -23.72                  | 74                          | 48.28                   | 37.57                         | 15.6                    | 51.17                      | -                    | -                       | P                     | V             |
| 5310MHz           |                                                                                             | 15930                | 48.77               | -25.23                  | 74                          | 43.72                   | 40.44                         | 17.99                   | 53.38                      | -                    | -                       | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**U-NII-2A 5250~5350MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                               | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11ac<br/>VHT80<br/>CH 58<br/>5290MHz</b> |                                                                                             | 5104.3               | 52.64               | -21.36                  | 74                          | 39.12                     | 33.9                          | 12.14                   | 32.52                      | 336                  | 360                     | P                       | H               |
|                                                 |                                                                                             | 5108.85              | 45.02               | -8.98                   | 54                          | 31.47                     | 33.93                         | 12.14                   | 32.52                      | 201                  | 73                      | A                       | H               |
|                                                 |                                                                                             | 5290                 | 102.67              | -                       | -                           | 88.67                     | 34.37                         | 12.19                   | 32.56                      | 201                  | 73                      | P                       | H               |
|                                                 |                                                                                             | 5290                 | 95.77               | -                       | -                           | 81.77                     | 34.37                         | 12.19                   | 32.56                      | 201                  | 73                      | A                       | H               |
|                                                 |                                                                                             | 5352.72              | 62.15               | -11.85                  | 74                          | 48.11                     | 34.4                          | 12.21                   | 32.57                      | 201                  | 73                      | P                       | H               |
|                                                 |                                                                                             | 5357.52              | 53.44               | -0.56                   | 54                          | 39.4                      | 34.4                          | 12.21                   | 32.57                      | 201                  | 73                      | A                       | H               |
|                                                 |                                                                                             | 5104.3               | 53.64               | -20.36                  | 74                          | 40.12                     | 33.9                          | 12.14                   | 32.52                      | 336                  | 360                     | P                       | V               |
|                                                 |                                                                                             | 5095.2               | 45.24               | -8.76                   | 54                          | 31.72                     | 33.9                          | 12.14                   | 32.52                      | 336                  | 360                     | A                       | V               |
|                                                 |                                                                                             | 5290                 | 99.66               | -                       | -                           | 85.66                     | 34.37                         | 12.19                   | 32.56                      | 336                  | 360                     | P                       | V               |
|                                                 |                                                                                             | 5290                 | 93.58               | -                       | -                           | 79.58                     | 34.37                         | 12.19                   | 32.56                      | 336                  | 360                     | A                       | V               |
|                                                 |                                                                                             | 5353.44              | 58.73               | -15.27                  | 74                          | 44.69                     | 34.4                          | 12.21                   | 32.57                      | 336                  | 360                     | P                       | V               |
|                                                 |                                                                                             | 5350.32              | 51.91               | -2.09                   | 54                          | 37.87                     | 34.4                          | 12.21                   | 32.57                      | 336                  | 360                     | A                       | V               |
| <b>Remark</b>                                   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |

**U-NII-2A 5250~5350MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac          |                                                                                             | 10580                | 49.88               | -18.42                  | 68.3                        | 47.97                   | 37.55                         | 15.51                   | 51.15                      | -                    | -                       | P                     | H             |
| VHT80             |                                                                                             | 15870                | 50.43               | -23.57                  | 74                          | 45.37                   | 40.39                         | 17.95                   | 53.28                      | -                    | -                       | P                     | H             |
| CH 58             |                                                                                             | 10580                | 49.42               | -18.88                  | 68.3                        | 47.51                   | 37.55                         | 15.51                   | 51.15                      | -                    | -                       | P                     | V             |
| 5290MHz           |                                                                                             | 15870                | 49.36               | -24.64                  | 74                          | 44.3                    | 40.39                         | 17.95                   | 53.28                      | -                    | -                       | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## U-NII-2C - 5470~5725MHz

## WIFI 802.11a (Band Edge @ 3m)

| WIFI                         | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                         |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                            |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 100<br>5500MHz |      | 5458.8    | 57.26      | -16.74 | 74         | 43.21    | 34.4     | 12.24  | 32.59  | 365    | 82      | P       | H       |
|                              |      | 5463.6    | 56.81      | -11.49 | 68.3       | 42.76    | 34.4     | 12.24  | 32.59  | 365    | 82      | P       | H       |
|                              |      | 5460      | 44.88      | -9.12  | 54         | 30.83    | 34.4     | 12.24  | 32.59  | 365    | 82      | A       | H       |
|                              |      | 5500      | 109        | -      | -          | 94.95    | 34.4     | 12.25  | 32.6   | 365    | 82      | P       | H       |
|                              |      | 5500      | 102.94     | -      | -          | 88.89    | 34.4     | 12.25  | 32.6   | 365    | 82      | A       | H       |
|                              |      | 5451.28   | 53.44      | -20.56 | 74         | 39.39    | 34.4     | 12.24  | 32.59  | 368    | 334     | P       | V       |
|                              |      | 5462.8    | 50.88      | -17.42 | 68.3       | 36.83    | 34.4     | 12.24  | 32.59  | 368    | 334     | P       | V       |
|                              |      | 5458.64   | 43.25      | -10.75 | 54         | 29.2     | 34.4     | 12.24  | 32.59  | 368    | 334     | A       | V       |
|                              |      | 5500      | 105.08     | -      | -          | 91.03    | 34.4     | 12.25  | 32.6   | 368    | 334     | P       | V       |
|                              |      | 5500      | 99.02      | -      | -          | 84.97    | 34.4     | 12.25  | 32.6   | 368    | 334     | A       | V       |
| 802.11a<br>CH 116<br>5580MHz |      | 5388.88   | 52.27      | -21.73 | 74         | 38.23    | 34.4     | 12.22  | 32.58  | 375    | 68      | P       | H       |
|                              |      | 5461.12   | 50.42      | -17.88 | 68.3       | 36.37    | 34.4     | 12.24  | 32.59  | 375    | 68      | P       | H       |
|                              |      | 5458.24   | 42.36      | -11.64 | 54         | 28.31    | 34.4     | 12.24  | 32.59  | 375    | 68      | A       | H       |
|                              |      | 5580      | 111.68     | -      | -          | 97.71    | 34.3     | 12.27  | 32.6   | 375    | 68      | P       | H       |
|                              |      | 5580      | 105.65     | -      | -          | 91.68    | 34.3     | 12.27  | 32.6   | 375    | 68      | A       | H       |
|                              |      | 5757.125  | 51.5       | -16.8  | 68.3       | 37.23    | 34.57    | 12.3   | 32.6   | 375    | 68      | P       | H       |
|                              |      | 5422.24   | 51.35      | -22.65 | 74         | 37.3     | 34.4     | 12.23  | 32.58  | 390    | 306     | P       | V       |
|                              |      | 5464.24   | 50.77      | -17.53 | 68.3       | 36.72    | 34.4     | 12.24  | 32.59  | 390    | 306     | P       | V       |
|                              |      | 5459.68   | 42.24      | -11.76 | 54         | 28.19    | 34.4     | 12.24  | 32.59  | 390    | 306     | A       | V       |
|                              |      | 5580      | 105.95     | -      | -          | 91.98    | 34.3     | 12.27  | 32.6   | 390    | 306     | P       | V       |
|                              |      | 5580      | 99.76      | -      | -          | 85.79    | 34.3     | 12.27  | 32.6   | 390    | 306     | A       | V       |
|                              |      | 5762.48   | 52.03      | -16.27 | 68.3       | 37.76    | 34.57    | 12.3   | 32.6   | 390    | 306     | P       | V       |



|                                                   |                                                                                                                                                  |         |        |        |      |       |       |       |      |     |     |   |   |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11a</b><br><b>CH 140</b><br><b>5700MHz</b> |                                                                                                                                                  | 5700    | 111.27 | -      | -    | 97.18 | 34.4  | 12.29 | 32.6 | 376 | 63  | P | H |
|                                                   |                                                                                                                                                  | 5700    | 105.19 | -      | -    | 91.1  | 34.4  | 12.29 | 32.6 | 376 | 63  | A | H |
|                                                   |                                                                                                                                                  | 5725.72 | 64.2   | -4.1   | 68.3 | 50.03 | 34.47 | 12.3  | 32.6 | 376 | 63  | P | H |
|                                                   |                                                                                                                                                  | 5700    | 108.18 | -      | -    | 94.09 | 34.4  | 12.29 | 32.6 | 381 | 310 | P | V |
|                                                   |                                                                                                                                                  | 5700    | 101.78 | -      | -    | 87.69 | 34.4  | 12.29 | 32.6 | 381 | 310 | A | V |
|                                                   |                                                                                                                                                  | 5727.72 | 57.79  | -10.51 | 68.3 | 43.62 | 34.47 | 12.3  | 32.6 | 381 | 310 | P | V |
| <b>Remark</b>                                     | <ol style="list-style-type: none"><li>1. No other spurious found.</li><li>2. All results are PASS against Peak and Average limit line.</li></ol> |         |        |        |      |       |       |       |      |     |     |   |   |



## U-NII-2C - 5470~5725MHz

## WIFI 802.11a (Harmonic @ 3m)

| WIFI<br>Ant.<br>1            | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 100<br>5500MHz |                                                                                             | 11000                | 50.11               | -23.89                  | 74                          | 27.82                     | 37.8                          | 16.49                   | 32                         | -                    | -                       | P                       | H               |
|                              |                                                                                             | 16500                | 53.03               | -15.27                  | 68.3                        | 27.92                     | 41.31                         | 18.2                    | 34.4                       | -                    | -                       | P                       | H               |
|                              |                                                                                             | 11000                | 50.24               | -23.76                  | 74                          | 27.95                     | 37.8                          | 16.49                   | 32                         | -                    | -                       | P                       | V               |
|                              |                                                                                             | 16500                | 52.1                | -16.2                   | 68.3                        | 26.99                     | 41.31                         | 18.2                    | 34.4                       | -                    | -                       | P                       | V               |
| 802.11a<br>CH 116<br>5580MHz |                                                                                             | 11160                | 50.54               | -23.46                  | 74                          | 28.13                     | 37.94                         | 16.5                    | 32.03                      | -                    | -                       | P                       | H               |
|                              |                                                                                             | 16740                | 51.77               | -16.53                  | 68.3                        | 26.25                     | 41.69                         | 18.28                   | 34.45                      | -                    | -                       | P                       | H               |
|                              |                                                                                             | 11160                | 50                  | -24                     | 74                          | 27.59                     | 37.94                         | 16.5                    | 32.03                      | -                    | -                       | P                       | V               |
|                              |                                                                                             | 16740                | 50.74               | -17.56                  | 68.3                        | 25.22                     | 41.69                         | 18.28                   | 34.45                      | -                    | -                       | P                       | V               |
| 802.11a<br>CH 140<br>5700MHz |                                                                                             | 11400                | 50.45               | -23.55                  | 74                          | 27.88                     | 38.13                         | 16.52                   | 32.08                      | -                    | -                       | P                       | H               |
|                              |                                                                                             | 17100                | 51.51               | -16.79                  | 68.3                        | 25.58                     | 42                            | 18.41                   | 34.48                      | -                    | -                       | P                       | H               |
|                              |                                                                                             | 11400                | 50.3                | -23.7                   | 74                          | 27.73                     | 38.13                         | 16.52                   | 32.08                      | -                    | -                       | P                       | V               |
|                              |                                                                                             | 17100                | 51.33               | -16.97                  | 68.3                        | 25.4                      | 42                            | 18.41                   | 34.48                      | -                    | -                       | P                       | V               |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## U-NII-2C - 5470~5725MHz

## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                    | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 100<br>5500MHz |      | 5459.44              | 54.57               | -19.43                  | 74                          | 40.52                     | 34.4                          | 12.24                   | 32.59                      | 381                  | 69                      | P                       | H               |
|                                      |      | 5467.92              | 59.03               | -9.27                   | 68.3                        | 44.98                     | 34.4                          | 12.24                   | 32.59                      | 381                  | 69                      | P                       | H               |
|                                      |      | 5459.92              | 45.95               | -8.05                   | 54                          | 31.9                      | 34.4                          | 12.24                   | 32.59                      | 381                  | 69                      | A                       | H               |
|                                      |      | 5500                 | 112.23              | -                       | -                           | 98.18                     | 34.4                          | 12.25                   | 32.6                       | 381                  | 69                      | P                       | H               |
|                                      |      | 5500                 | 106.18              | -                       | -                           | 92.13                     | 34.4                          | 12.25                   | 32.6                       | 381                  | 69                      | A                       | H               |
|                                      |      | 5457.36              | 52.26               | -21.74                  | 74                          | 38.21                     | 34.4                          | 12.24                   | 32.59                      | 367                  | 334                     | P                       | V               |
|                                      |      | 5470                 | 53.63               | -14.67                  | 68.3                        | 39.58                     | 34.4                          | 12.24                   | 32.59                      | 367                  | 334                     | P                       | V               |
|                                      |      | 5459.44              | 44.3                | -9.7                    | 54                          | 30.25                     | 34.4                          | 12.24                   | 32.59                      | 367                  | 334                     | A                       | V               |
|                                      |      | 5500                 | 105.53              | -                       | -                           | 91.48                     | 34.4                          | 12.25                   | 32.6                       | 367                  | 334                     | P                       | V               |
|                                      |      | 5500                 | 99.42               | -                       | -                           | 85.37                     | 34.4                          | 12.25                   | 32.6                       | 367                  | 334                     | A                       | V               |
| 802.11n<br>HT20<br>CH 116<br>5580MHz |      | 5446.24              | 51.81               | -22.19                  | 74                          | 37.77                     | 34.4                          | 12.23                   | 32.59                      | 394                  | 67                      | P                       | H               |
|                                      |      | 5462.08              | 51.01               | -17.29                  | 68.3                        | 36.96                     | 34.4                          | 12.24                   | 32.59                      | 394                  | 67                      | P                       | H               |
|                                      |      | 5419.84              | 43.17               | -10.83                  | 54                          | 29.12                     | 34.4                          | 12.23                   | 32.58                      | 394                  | 67                      | A                       | H               |
|                                      |      | 5580                 | 112.32              | -                       | -                           | 98.35                     | 34.3                          | 12.27                   | 32.6                       | 394                  | 67                      | P                       | H               |
|                                      |      | 5580                 | 106.31              | -                       | -                           | 92.34                     | 34.3                          | 12.27                   | 32.6                       | 394                  | 67                      | A                       | H               |
|                                      |      | 5730.665             | 51.37               | -16.93                  | 68.3                        | 37.2                      | 34.47                         | 12.3                    | 32.6                       | 394                  | 67                      | P                       | H               |
|                                      |      | 5378.32              | 51.86               | -22.14                  | 74                          | 37.82                     | 34.4                          | 12.22                   | 32.58                      | 390                  | 308                     | P                       | V               |
|                                      |      | 5464                 | 49.72               | -18.58                  | 68.3                        | 35.67                     | 34.4                          | 12.24                   | 32.59                      | 390                  | 308                     | P                       | V               |
|                                      |      | 5396.56              | 43.01               | -10.99                  | 54                          | 28.97                     | 34.4                          | 12.22                   | 32.58                      | 390                  | 308                     | A                       | V               |
|                                      |      | 5580                 | 104.34              | -                       | -                           | 90.37                     | 34.3                          | 12.27                   | 32.6                       | 390                  | 308                     | P                       | V               |
|                                      |      | 5580                 | 98.28               | -                       | -                           | 84.31                     | 34.3                          | 12.27                   | 32.6                       | 390                  | 308                     | A                       | V               |
|                                      |      | 5750.195             | 52.57               | -15.73                  | 68.3                        | 38.37                     | 34.5                          | 12.3                    | 32.6                       | 390                  | 308                     | P                       | V               |



|                                                                  |                                                                                             |         |        |        |      |       |       |       |      |     |     |   |   |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n</b><br><b>HT20</b><br><b>CH 140</b><br><b>5700MHz</b> |                                                                                             | 5700    | 111.39 | -      | -    | 97.3  | 34.4  | 12.29 | 32.6 | 398 | 58  | P | H |
|                                                                  |                                                                                             | 5700    | 105.33 | -      | -    | 91.24 | 34.4  | 12.29 | 32.6 | 398 | 58  | A | H |
|                                                                  |                                                                                             | 5725.16 | 60.82  | -7.48  | 68.3 | 46.65 | 34.47 | 12.3  | 32.6 | 398 | 58  | P | H |
|                                                                  |                                                                                             | 5700    | 107.07 | -      | -    | 92.98 | 34.4  | 12.29 | 32.6 | 400 | 309 | P | V |
|                                                                  |                                                                                             | 5700    | 100.63 | -      | -    | 86.54 | 34.4  | 12.29 | 32.6 | 400 | 309 | A | V |
|                                                                  |                                                                                             | 5725.72 | 57.23  | -11.07 | 68.3 | 43.06 | 34.47 | 12.3  | 32.6 | 400 | 309 | P | V |
| <b>Remark</b>                                                    | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |      |       |       |       |      |     |     |   |   |





**U-NII-2C - 5470~5725MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n           |                                                                                             | 11000                | 50.41               | -23.59                  | 74                          | 47.52                     | 37.8                          | 16.49                   | 51.4                       | -                    | -                       | P                       | H               |
| HT20              |                                                                                             | 16500                | 50.02               | -18.28                  | 68.3                        | 43.21                     | 41.31                         | 18.2                    | 52.7                       | -                    | -                       | P                       | H               |
| CH 100            |                                                                                             | 11000                | 50.83               | -23.17                  | 74                          | 47.94                     | 37.8                          | 16.49                   | 51.4                       | -                    | -                       | P                       | V               |
| 5500MHz           |                                                                                             | 16500                | 52.06               | -16.24                  | 68.3                        | 45.25                     | 41.31                         | 18.2                    | 52.7                       | -                    | -                       | P                       | V               |
| 802.11n           |                                                                                             | 11160                | 50.16               | -23.84                  | 74                          | 46.99                     | 37.94                         | 16.5                    | 51.27                      | -                    | -                       | P                       | H               |
| HT20              |                                                                                             | 16740                | 51.05               | -17.25                  | 68.3                        | 44.21                     | 41.69                         | 18.28                   | 53.13                      | -                    | -                       | P                       | H               |
| CH 116            |                                                                                             | 11160                | 50.52               | -23.48                  | 74                          | 47.35                     | 37.94                         | 16.5                    | 51.27                      | -                    | -                       | P                       | V               |
| 5580MHz           |                                                                                             | 16740                | 49.57               | -18.73                  | 68.3                        | 42.73                     | 41.69                         | 18.28                   | 53.13                      | -                    | -                       | P                       | V               |
| 802.11n           |                                                                                             | 11400                | 50.28               | -23.72                  | 74                          | 46.71                     | 38.13                         | 16.52                   | 51.08                      | -                    | -                       | P                       | H               |
| HT20              |                                                                                             | 17100                | 51.68               | -16.62                  | 68.3                        | 44.79                     | 42                            | 18.41                   | 53.52                      | -                    | -                       | P                       | H               |
| CH 140            |                                                                                             | 11400                | 50.88               | -23.12                  | 74                          | 47.31                     | 38.13                         | 16.52                   | 51.08                      | -                    | -                       | P                       | V               |
| 5700MHz           |                                                                                             | 17100                | 51.54               | -16.76                  | 68.3                        | 44.65                     | 42                            | 18.41                   | 53.52                      | -                    | -                       | P                       | V               |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



**U-NII-2C - 5470~5725MHz**  
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                                | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11ac<br/>VHT40<br/>CH 102<br/>5510MHz</b> |      | 5456.56              | 57.45               | -16.55                  | 74                          | 43.4                      | 34.4                          | 12.24                   | 32.59                      | 384                  | 71                      | P                       | H               |
|                                                  |      | 5465.92              | 64.66               | -3.64                   | 68.3                        | 50.61                     | 34.4                          | 12.24                   | 32.59                      | 384                  | 71                      | P                       | H               |
|                                                  |      | 5459.92              | 53.14               | -0.86                   | 54                          | 39.09                     | 34.4                          | 12.24                   | 32.59                      | 384                  | 71                      | A                       | H               |
|                                                  |      | 5510                 | 106.77              | -                       | -                           | 92.72                     | 34.4                          | 12.25                   | 32.6                       | 384                  | 71                      | P                       | H               |
|                                                  |      | 5510                 | 100.64              | -                       | -                           | 86.59                     | 34.4                          | 12.25                   | 32.6                       | 384                  | 71                      | A                       | H               |
|                                                  |      | 5752.085             | 52.05               | -16.25                  | 68.3                        | 37.78                     | 34.57                         | 12.3                    | 32.6                       | 384                  | 71                      | P                       | H               |
|                                                  |      | 5358.88              | 52.4                | -21.6                   | 74                          | 38.36                     | 34.4                          | 12.21                   | 32.57                      | 382                  | 330                     | P                       | V               |
|                                                  |      | 5464.72              | 52.73               | -15.57                  | 68.3                        | 38.68                     | 34.4                          | 12.24                   | 32.59                      | 382                  | 330                     | P                       | V               |
|                                                  |      | 5459.92              | 44.8                | -9.2                    | 54                          | 30.75                     | 34.4                          | 12.24                   | 32.59                      | 382                  | 330                     | A                       | V               |
|                                                  |      | 5510                 | 98.91               | -                       | -                           | 84.86                     | 34.4                          | 12.25                   | 32.6                       | 382                  | 330                     | P                       | V               |
|                                                  |      | 5510                 | 92.8                | -                       | -                           | 78.75                     | 34.4                          | 12.25                   | 32.6                       | 382                  | 330                     | A                       | V               |
|                                                  |      | 5760.275             | 52.13               | -16.17                  | 68.3                        | 37.86                     | 34.57                         | 12.3                    | 32.6                       | 382                  | 330                     | P                       | V               |
| <b>802.11ac<br/>VHT40<br/>CH 110<br/>5550MHz</b> |      | 5454.88              | 53.85               | -20.15                  | 74                          | 39.8                      | 34.4                          | 12.24                   | 32.59                      | 396                  | 57                      | P                       | H               |
|                                                  |      | 5466.4               | 54.2                | -14.1                   | 68.3                        | 40.15                     | 34.4                          | 12.24                   | 32.59                      | 396                  | 57                      | P                       | H               |
|                                                  |      | 5457.76              | 45.39               | -8.61                   | 54                          | 31.34                     | 34.4                          | 12.24                   | 32.59                      | 396                  | 57                      | A                       | H               |
|                                                  |      | 5550                 | 107.69              | -                       | -                           | 93.73                     | 34.3                          | 12.26                   | 32.6                       | 396                  | 57                      | P                       | H               |
|                                                  |      | 5550                 | 100.75              | -                       | -                           | 86.79                     | 34.3                          | 12.26                   | 32.6                       | 396                  | 57                      | A                       | H               |
|                                                  |      | 5747.675             | 52.41               | -15.89                  | 68.3                        | 38.21                     | 34.5                          | 12.3                    | 32.6                       | 396                  | 57                      | P                       | H               |
|                                                  |      | 5455.36              | 51.83               | -22.17                  | 74                          | 37.78                     | 34.4                          | 12.24                   | 32.59                      | 396                  | 333                     | P                       | V               |
|                                                  |      | 5461.12              | 50.87               | -17.43                  | 68.3                        | 36.82                     | 34.4                          | 12.24                   | 32.59                      | 396                  | 333                     | P                       | V               |
|                                                  |      | 5458.96              | 44.24               | -9.76                   | 54                          | 30.19                     | 34.4                          | 12.24                   | 32.59                      | 396                  | 333                     | A                       | V               |
|                                                  |      | 5550                 | 104.21              | -                       | -                           | 90.25                     | 34.3                          | 12.26                   | 32.6                       | 396                  | 333                     | P                       | V               |
|                                                  |      | 5550                 | 97.46               | -                       | -                           | 83.5                      | 34.3                          | 12.26                   | 32.6                       | 396                  | 333                     | A                       | V               |
|                                                  |      | 5760.59              | 51.75               | -16.55                  | 68.3                        | 37.48                     | 34.57                         | 12.3                    | 32.6                       | 396                  | 333                     | P                       | V               |



|                                        |                                                                                             |          |        |        |      |       |       |       |       |     |     |   |   |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------|--------|--------|------|-------|-------|-------|-------|-----|-----|---|---|
| 802.11ac<br>VHT40<br>CH 134<br>5670MHz |                                                                                             | 5443.8   | 51.95  | -22.05 | 74   | 37.91 | 34.4  | 12.23 | 32.59 | 397 | 54  | P | H |
|                                        |                                                                                             | 5464.45  | 51.74  | -16.56 | 68.3 | 37.69 | 34.4  | 12.24 | 32.59 | 397 | 54  | P | H |
|                                        |                                                                                             | 5424.2   | 44.08  | -9.92  | 54   | 30.03 | 34.4  | 12.23 | 32.58 | 397 | 54  | A | H |
|                                        |                                                                                             | 5670     | 108.41 | -      | -    | 94.33 | 34.4  | 12.28 | 32.6  | 397 | 54  | P | H |
|                                        |                                                                                             | 5670     | 100.88 | -      | -    | 86.8  | 34.4  | 12.28 | 32.6  | 397 | 54  | A | H |
|                                        |                                                                                             | 5729.125 | 61.38  | -6.92  | 68.3 | 47.21 | 34.47 | 12.3  | 32.6  | 397 | 54  | P | H |
|                                        |                                                                                             | 5431.2   | 52.38  | -21.62 | 74   | 38.34 | 34.4  | 12.23 | 32.59 | 381 | 332 | P | V |
|                                        |                                                                                             | 5460.25  | 50.65  | -17.65 | 68.3 | 36.6  | 34.4  | 12.24 | 32.59 | 381 | 332 | P | V |
|                                        |                                                                                             | 5364.35  | 43.73  | -10.27 | 54   | 29.69 | 34.4  | 12.21 | 32.57 | 381 | 332 | A | V |
|                                        |                                                                                             | 5670     | 103.48 | -      | -    | 89.4  | 34.4  | 12.28 | 32.6  | 381 | 332 | P | V |
|                                        |                                                                                             | 5670     | 96.96  | -      | -    | 82.88 | 34.4  | 12.28 | 32.6  | 381 | 332 | A | V |
|                                        |                                                                                             | 5726.15  | 56.08  | -12.22 | 68.3 | 41.91 | 34.47 | 12.3  | 32.6  | 381 | 332 | P | V |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |          |        |        |      |       |       |       |       |     |     |   |   |



## U-NII-2C - 5470~5725MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac          |                                                                                             | 11020                | 50.73               | -23.27                  | 74                          | 47.82                     | 37.81                         | 16.49                   | 51.39                      | -                    | -                       | P                       | H               |
| VHT40             |                                                                                             | 16530                | 51.85               | -16.45                  | 68.3                        | 45.03                     | 41.37                         | 18.21                   | 52.76                      | -                    | -                       | P                       | H               |
| CH 102            |                                                                                             | 11020                | 50.28               | -23.72                  | 74                          | 47.37                     | 37.81                         | 16.49                   | 51.39                      | -                    | -                       | P                       | V               |
| 5510MHz           |                                                                                             | 16530                | 50.41               | -17.89                  | 68.3                        | 43.59                     | 41.37                         | 18.21                   | 52.76                      | -                    | -                       | P                       | V               |
| 802.11ac          |                                                                                             | 11100                | 50.05               | -23.95                  | 74                          | 46.99                     | 37.88                         | 16.5                    | 51.32                      | -                    | -                       | P                       | H               |
| VHT40             |                                                                                             | 16650                | 50.96               | -17.34                  | 68.3                        | 44.13                     | 41.56                         | 18.25                   | 52.98                      | -                    | -                       | P                       | H               |
| CH 110            |                                                                                             | 11100                | 50.72               | -23.28                  | 74                          | 47.66                     | 37.88                         | 16.5                    | 51.32                      | -                    | -                       | P                       | V               |
| 5550MHz           |                                                                                             | 16650                | 50.29               | -18.01                  | 68.3                        | 43.46                     | 41.56                         | 18.25                   | 52.98                      | -                    | -                       | P                       | V               |
| 802.11ac          |                                                                                             | 11340                | 50.37               | -23.63                  | 74                          | 46.91                     | 38.07                         | 16.52                   | 51.13                      | -                    | -                       | P                       | H               |
| VHT40             |                                                                                             | 17010                | 50.13               | -18.17                  | 68.3                        | 43.27                     | 42.08                         | 18.37                   | 53.59                      | -                    | -                       | P                       | H               |
| CH 134            |                                                                                             | 11340                | 50.71               | -23.29                  | 74                          | 47.25                     | 38.07                         | 16.52                   | 51.13                      | -                    | -                       | P                       | V               |
| 5670MHz           |                                                                                             | 17010                | 48.21               | -20.09                  | 68.3                        | 41.35                     | 42.08                         | 18.37                   | 53.59                      | -                    | -                       | P                       | V               |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



**U-NII-2C - 5470~5725MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac<br>VHT80<br>CH 106<br>5530MHz |                                                                                             | 5452.96              | 57.19               | -16.81                  | 74                          | 43.14                   | 34.4                          | 12.24                   | 32.59                      | 322                  | 215                     | P                     | H             |
|                                        |                                                                                             | 5470                 | 61.79               | -6.51                   | 68.3                        | 47.74                   | 34.4                          | 12.24                   | 32.59                      | 322                  | 215                     | P                     | H             |
|                                        |                                                                                             | 5459.44              | 49.93               | -4.07                   | 54                          | 35.88                   | 34.4                          | 12.24                   | 32.59                      | 322                  | 215                     | A                     | H             |
|                                        |                                                                                             | 5530                 | 99.74               | -                       | -                           | 85.71                   | 34.37                         | 12.26                   | 32.6                       | 322                  | 215                     | P                     | H             |
|                                        |                                                                                             | 5530                 | 93.66               | -                       | -                           | 79.63                   | 34.37                         | 12.26                   | 32.6                       | 322                  | 215                     | A                     | H             |
|                                        |                                                                                             | 5741.06              | 51.71               | -16.59                  | 68.3                        | 37.51                   | 34.5                          | 12.3                    | 32.6                       | 322                  | 215                     | P                     | H             |
|                                        |                                                                                             | 5458.72              | 60.17               | -13.83                  | 74                          | 46.12                   | 34.4                          | 12.24                   | 32.59                      | 341                  | 333                     | P                     | V             |
|                                        |                                                                                             | 5462.56              | 60.68               | -7.62                   | 68.3                        | 46.63                   | 34.4                          | 12.24                   | 32.59                      | 341                  | 333                     | P                     | V             |
|                                        |                                                                                             | 5459.68              | 53.39               | -0.61                   | 54                          | 39.34                   | 34.4                          | 12.24                   | 32.59                      | 341                  | 333                     | A                     | V             |
|                                        |                                                                                             | 5530                 | 98.85               | -                       | -                           | 84.82                   | 34.37                         | 12.26                   | 32.6                       | 341                  | 333                     | P                     | V             |
|                                        |                                                                                             | 5530                 | 91.92               | -                       | -                           | 77.89                   | 34.37                         | 12.26                   | 32.6                       | 341                  | 333                     | A                     | V             |
|                                        |                                                                                             | 5741.69              | 51.95               | -16.35                  | 68.3                        | 37.75                   | 34.5                          | 12.3                    | 32.6                       | 341                  | 333                     | P                     | V             |
| 802.11ac<br>VHT80<br>CH 122<br>5610MHz |                                                                                             | 5458.72              | 52.64               | -21.36                  | 74                          | 38.59                   | 34.4                          | 12.24                   | 32.59                      | 309                  | 98                      | P                     | H             |
|                                        |                                                                                             | 5469.52              | 52.62               | -15.68                  | 68.3                        | 38.57                   | 34.4                          | 12.24                   | 32.59                      | 309                  | 98                      | P                     | H             |
|                                        |                                                                                             | 5457.76              | 44.42               | -9.58                   | 54                          | 30.37                   | 34.4                          | 12.24                   | 32.59                      | 309                  | 98                      | A                     | H             |
|                                        |                                                                                             | 5610                 | 103.71              | -                       | -                           | 89.74                   | 34.3                          | 12.27                   | 32.6                       | 309                  | 98                      | P                     | H             |
|                                        |                                                                                             | 5610                 | 97.38               | -                       | -                           | 83.41                   | 34.3                          | 12.27                   | 32.6                       | 309                  | 98                      | A                     | H             |
|                                        |                                                                                             | 5726.85              | 55.99               | -12.31                  | 68.3                        | 41.82                   | 34.47                         | 12.3                    | 32.6                       | 309                  | 98                      | P                     | H             |
|                                        |                                                                                             | 5420.32              | 51.85               | -22.15                  | 74                          | 37.8                    | 34.4                          | 12.23                   | 32.58                      | 368                  | 332                     | P                     | V             |
|                                        |                                                                                             | 5464.72              | 51.31               | -16.99                  | 68.3                        | 37.26                   | 34.4                          | 12.24                   | 32.59                      | 368                  | 332                     | P                     | V             |
|                                        |                                                                                             | 5457.28              | 44.86               | -9.14                   | 54                          | 30.81                   | 34.4                          | 12.24                   | 32.59                      | 368                  | 332                     | A                     | V             |
|                                        |                                                                                             | 5610                 | 101.32              | -                       | -                           | 87.35                   | 34.3                          | 12.27                   | 32.6                       | 368                  | 332                     | P                     | V             |
|                                        |                                                                                             | 5610                 | 94.47               | -                       | -                           | 80.5                    | 34.3                          | 12.27                   | 32.6                       | 368                  | 332                     | A                     | V             |
|                                        |                                                                                             | 5738.575             | 57.15               | -11.15                  | 68.3                        | 42.95                   | 34.5                          | 12.3                    | 32.6                       | 368                  | 332                     | P                     | V             |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## U-NII-2C 5470~5725MHz

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

| WIFI Ant. 1 | Note                                                                                        | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|-------------|---------------------------------------------------------------------------------------------|-------------------|------------------|-------------------|-----------------------|-------------------|-------------------------|-------------------|----------------------|----------------|-------------------|-----------------|------------|
| 802.11ac    |                                                                                             | 11060             | 51.18            | -22.82            | 74                    | 48.19             | 37.85                   | 16.49             | 51.35                | -              | -                 | P               | H          |
| VHT80       |                                                                                             | 16590             | 50.46            | -17.84            | 68.3                  | 43.64             | 41.45                   | 18.23             | 52.86                | -              | -                 | P               | H          |
| CH 106      |                                                                                             | 11060             | 52.1             | -21.9             | 74                    | 49.11             | 37.85                   | 16.49             | 51.35                | -              | -                 | P               | V          |
| 5530MHz     |                                                                                             | 16590             | 51.3             | -17               | 68.3                  | 44.48             | 41.45                   | 18.23             | 52.86                | -              | -                 | P               | V          |
| 802.11ac    |                                                                                             | 11220             | 51.54            | -22.46            | 74                    | 48.28             | 37.98                   | 16.51             | 51.23                | -              | -                 | P               | H          |
| VHT80       |                                                                                             | 16830             | 49.08            | -19.22            | 68.3                  | 42.23             | 41.83                   | 18.31             | 53.29                | -              | -                 | P               | H          |
| CH 122      |                                                                                             | 11220             | 51.3             | -22.7             | 74                    | 48.04             | 37.98                   | 16.51             | 51.23                | -              | -                 | P               | V          |
| 5610MHz     |                                                                                             | 16830             | 50.23            | -18.07            | 68.3                  | 43.38             | 41.83                   | 18.31             | 53.29                | -              | -                 | P               | V          |
| Remark      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                   |                  |                   |                       |                   |                         |                   |                      |                |                   |                 |            |



## U-NII-2C - Straddle Channel

## WIFI 802.11a (Band Edge @ 3m)

| WIFI                         | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                         |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                            |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 144<br>5720MHz |                                                                                             | 5444.6    | 52.23      | -21.77 | 74         | 38.19    | 34.4     | 12.23  | 32.59  | 309    | 208     | P       | H       |
|                              |                                                                                             | 5461.65   | 50.99      | -17.31 | 68.3       | 36.94    | 34.4     | 12.24  | 32.59  | 309    | 208     | P       | H       |
|                              |                                                                                             | 5720      | 106.16     | -      | -          | 92       | 34.47    | 12.29  | 32.6   | 309    | 208     | P       | H       |
|                              |                                                                                             | 5870.85   | 54.13      | -14.17 | 68.3       | 39.48    | 34.93    | 12.32  | 32.6   | 309    | 208     | P       | H       |
|                              |                                                                                             | 5351.1    | 45.58      | -8.42  | 54         | 31.54    | 34.4     | 12.21  | 32.57  | 309    | 208     | A       | H       |
|                              |                                                                                             | 5440.2    | 51.7       | -22.3  | 74         | 37.66    | 34.4     | 12.23  | 32.59  | 159    | 22      | P       | V       |
|                              |                                                                                             | 5468.8    | 50.6       | -17.7  | 68.3       | 36.55    | 34.4     | 12.24  | 32.59  | 159    | 22      | P       | V       |
|                              |                                                                                             | 5720      | 103.84     | -      | -          | 89.68    | 34.47    | 12.29  | 32.6   | 159    | 22      | P       | V       |
|                              |                                                                                             | 5865.35   | 53.67      | -14.63 | 68.3       | 39.08    | 34.87    | 12.32  | 32.6   | 159    | 22      | P       | V       |
|                              |                                                                                             | 5460      | 45.86      | -8.14  | 54         | 31.81    | 34.4     | 12.24  | 32.59  | 159    | 22      | A       | V       |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |

## U-NII-2C - Straddle Channel

## WIFI 802.11a (Harmonic @ 3m)

| WIFI                         | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                         |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                            |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 144<br>5720MHz |                                                                                             | 11440     | 50.47      | -23.53 | 74         | 27.88    | 38.15    | 16.53  | 32.09  | -      | -       | P       | H       |
|                              |                                                                                             | 17160     | 53.26      | -15.04 | 68.3       | 27.37    | 41.93    | 18.43  | 34.47  | -      | -       | P       | H       |
|                              |                                                                                             | 11440     | 50.6       | -23.4  | 74         | 28.01    | 38.15    | 16.53  | 32.09  | -      | -       | P       | V       |
|                              |                                                                                             | 17160     | 52.19      | -16.11 | 68.3       | 26.3     | 41.93    | 18.43  | 34.47  | -      | -       | P       | V       |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## U-NII-2C - Straddle Channel

## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 144<br>5720MHz |                                                                                             | 5370.9               | 51.99               | -22.01                  | 74                          | 37.95                     | 34.4                          | 12.21                   | 32.57                      | 308                  | 215                     | P                       | H               |
|                                      |                                                                                             | 5467.7               | 51.5                | -16.8                   | 68.3                        | 37.45                     | 34.4                          | 12.24                   | 32.59                      | 308                  | 215                     | P                       | H               |
|                                      |                                                                                             | 5720                 | 107.89              | -                       | -                           | 93.73                     | 34.47                         | 12.29                   | 32.6                       | 308                  | 215                     | P                       | H               |
|                                      |                                                                                             | 5889                 | 53.03               | -15.27                  | 68.3                        | 38.3                      | 35                            | 12.33                   | 32.6                       | 308                  | 215                     | P                       | H               |
|                                      |                                                                                             | 5383.55              | 45.64               | -8.36                   | 54                          | 31.6                      | 34.4                          | 12.22                   | 32.58                      | 308                  | 215                     | A                       | H               |
|                                      |                                                                                             | 5434.15              | 51.01               | -22.99                  | 74                          | 36.97                     | 34.4                          | 12.23                   | 32.59                      | 301                  | 176                     | P                       | V               |
|                                      |                                                                                             | 5464.4               | 50.03               | -18.27                  | 68.3                        | 35.98                     | 34.4                          | 12.24                   | 32.59                      | 301                  | 176                     | P                       | V               |
|                                      |                                                                                             | 5720                 | 104.4               | -                       | -                           | 90.24                     | 34.47                         | 12.29                   | 32.6                       | 301                  | 176                     | P                       | V               |
|                                      |                                                                                             | 5889                 | 52.36               | -15.94                  | 68.3                        | 37.63                     | 35                            | 12.33                   | 32.6                       | 301                  | 176                     | P                       | V               |
|                                      |                                                                                             | 5460                 | 45.12               | -8.88                   | 54                          | 31.07                     | 34.4                          | 12.24                   | 32.59                      | 301                  | 176                     | A                       | V               |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |

## U-NII-2C - Straddle Channel

## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1                    | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 144<br>5720MHz |                                                                                             | 11440                | 50.84               | -23.16                  | 74                          | 28.25                     | 38.15                         | 16.53                   | 32.09                      | -                    | -                       | P                       | H               |
|                                      |                                                                                             | 17160                | 52.19               | -16.11                  | 68.3                        | 26.3                      | 41.93                         | 18.43                   | 34.47                      | -                    | -                       | P                       | H               |
|                                      |                                                                                             | 11440                | 50.89               | -23.11                  | 74                          | 28.3                      | 38.15                         | 16.53                   | 32.09                      | -                    | -                       | P                       | V               |
|                                      |                                                                                             | 17160                | 51.13               | -17.17                  | 68.3                        | 25.24                     | 41.93                         | 18.43                   | 34.47                      | -                    | -                       | P                       | V               |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |





**U-NII-2C - Straddle Channel**  
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 142<br>5710MHz |                                                                                             | 5436.35              | 51.51               | -22.49                  | 74                          | 37.47                     | 34.4                          | 12.23                   | 32.59                      | 315                  | 221                     | P                       | H               |
|                                        |                                                                                             | 5469.35              | 50.07               | -18.23                  | 68.3                        | 36.02                     | 34.4                          | 12.24                   | 32.59                      | 315                  | 221                     | P                       | H               |
|                                        |                                                                                             | 5710                 | 104.24              | -                       | -                           | 90.12                     | 34.43                         | 12.29                   | 32.6                       | 315                  | 221                     | P                       | H               |
|                                        |                                                                                             | 5869.2               | 54.27               | -14.03                  | 68.3                        | 39.68                     | 34.87                         | 12.32                   | 32.6                       | 315                  | 221                     | P                       | H               |
|                                        |                                                                                             | 5403.9               | 45.47               | -8.53                   | 54                          | 31.43                     | 34.4                          | 12.22                   | 32.58                      | 315                  | 221                     | A                       | H               |
|                                        |                                                                                             | 5372.55              | 51.45               | -22.55                  | 74                          | 37.41                     | 34.4                          | 12.21                   | 32.57                      | 301                  | 180                     | P                       | V               |
|                                        |                                                                                             | 5461.1               | 49.99               | -18.31                  | 68.3                        | 35.94                     | 34.4                          | 12.24                   | 32.59                      | 301                  | 180                     | P                       | V               |
|                                        |                                                                                             | 5710                 | 100.39              | -                       | -                           | 86.27                     | 34.43                         | 12.29                   | 32.6                       | 301                  | 180                     | P                       | V               |
|                                        |                                                                                             | 5887.35              | 54.84               | -13.46                  | 68.3                        | 40.18                     | 34.93                         | 12.33                   | 32.6                       | 301                  | 180                     | P                       | V               |
|                                        |                                                                                             | 5433.05              | 45.45               | -8.55                   | 54                          | 31.41                     | 34.4                          | 12.23                   | 32.59                      | 301                  | 180                     | A                       | V               |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |

**U-NII-2C - Straddle Channel**  
**WIFI 802.11ac VHT40 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1                      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 142<br>5710MHz |                                                                                             | 11420                | 50.9                | -23.1                   | 74                          | 28.32                     | 38.14                         | 16.52                   | 32.08                      | -                    | -                       | P                       | H               |
|                                        |                                                                                             | 17130                | 50.64               | -17.66                  | 68.3                        | 24.73                     | 41.96                         | 18.42                   | 34.47                      | -                    | -                       | P                       | H               |
|                                        |                                                                                             | 11420                | 50.99               | -23.01                  | 74                          | 28.41                     | 38.14                         | 16.52                   | 32.08                      | -                    | -                       | P                       | V               |
|                                        |                                                                                             | 17130                | 50.86               | -17.44                  | 68.3                        | 24.95                     | 41.96                         | 18.42                   | 34.47                      | -                    | -                       | P                       | V               |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## U-NII-2C - Straddle Channel

## WIFI 802.11ac VHT80 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT80<br>CH 138<br>5690MHz |                                                                                             | 5364.85              | 51.43               | -22.57                  | 74                          | 37.39                     | 34.4                          | 12.21                   | 32.57                      | 316                  | 216                     | P                       | H               |
|                                        |                                                                                             | 5463.3               | 51.61               | -16.69                  | 68.3                        | 37.56                     | 34.4                          | 12.24                   | 32.59                      | 316                  | 216                     | P                       | H               |
|                                        |                                                                                             | 5690                 | 101.21              | -                       | -                           | 87.12                     | 34.4                          | 12.29                   | 32.6                       | 316                  | 216                     | P                       | H               |
|                                        |                                                                                             | 5900                 | 53.37               | -14.93                  | 68.3                        | 38.64                     | 35                            | 12.33                   | 32.6                       | 316                  | 216                     | P                       | H               |
|                                        |                                                                                             | 5352.2               | 45.25               | -8.75                   | 54                          | 31.21                     | 34.4                          | 12.21                   | 32.57                      | 316                  | 216                     | A                       | H               |
|                                        |                                                                                             | 5433.6               | 51.99               | -22.01                  | 74                          | 37.95                     | 34.4                          | 12.23                   | 32.59                      | 302                  | 177                     | P                       | V               |
|                                        |                                                                                             | 5468.25              | 51.1                | -17.2                   | 68.3                        | 37.05                     | 34.4                          | 12.24                   | 32.59                      | 302                  | 177                     | P                       | V               |
|                                        |                                                                                             | 5690                 | 98.22               | -                       | -                           | 84.13                     | 34.4                          | 12.29                   | 32.6                       | 302                  | 177                     | P                       | V               |
|                                        |                                                                                             | 5893.95              | 52.79               | -15.51                  | 68.3                        | 38.06                     | 35                            | 12.33                   | 32.6                       | 302                  | 177                     | P                       | V               |
|                                        |                                                                                             | 5455.05              | 45.48               | -8.52                   | 54                          | 31.43                     | 34.4                          | 12.24                   | 32.59                      | 302                  | 177                     | A                       | V               |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |

## U-NII-2C - Straddle Channel

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1                      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT80<br>CH 138<br>5690MHz |                                                                                             | 11380                | 50.25               | -23.75                  | 74                          | 27.69                     | 38.11                         | 16.52                   | 32.07                      | -                    | -                       | P                       | H               |
|                                        |                                                                                             | 17070                | 49.83               | -18.47                  | 68.3                        | 23.89                     | 42.03                         | 18.4                    | 34.49                      | -                    | -                       | P                       | H               |
|                                        |                                                                                             | 11380                | 49.88               | -24.12                  | 74                          | 27.32                     | 38.11                         | 16.52                   | 32.07                      | -                    | -                       | P                       | V               |
|                                        |                                                                                             | 17070                | 50.54               | -17.76                  | 68.3                        | 24.6                      | 42.03                         | 18.4                    | 34.49                      | -                    | -                       | P                       | V               |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## Emission below 1GHz

## WIFI 802.11ac VHT80 (LF @ 3m)

| WIFI                   | Note                                                                       | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------|----------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                   |                                                                            |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                      |                                                                            | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11n<br>VHT80<br>LF |                                                                            | 30        | 23.97      | -16.03 | 40         | 30.64    | 25.2     | 0.53   | 32.4   | -      | -       | P       | H       |
|                        |                                                                            | 141.55    | 18.85      | -24.65 | 43.5       | 32.33    | 17.5     | 1.22   | 32.2   | -      | -       | P       | H       |
|                        |                                                                            | 293.84    | 20.9       | -25.1  | 46         | 31.65    | 19.18    | 1.78   | 31.71  | -      | -       | P       | H       |
|                        |                                                                            | 569.32    | 28.43      | -17.57 | 46         | 30.49    | 26.26    | 2.5    | 30.82  | -      | -       | P       | H       |
|                        |                                                                            | 872.93    | 31.55      | -14.45 | 46         | 30.7     | 29.2     | 3.1    | 31.45  | -      | -       | P       | H       |
|                        |                                                                            | 984.48    | 34.08      | -19.92 | 54         | 31.14    | 30.83    | 3.29   | 31.18  | -      | -       | P       | H       |
|                        |                                                                            | 30.97     | 25.71      | -14.29 | 40         | 32.87    | 24.7     | 0.54   | 32.4   | -      | -       | P       | V       |
|                        |                                                                            | 66.86     | 25.57      | -14.43 | 40         | 44.95    | 12.2     | 0.82   | 32.4   | -      | -       | P       | V       |
|                        |                                                                            | 143.49    | 22.94      | -20.56 | 43.5       | 36.51    | 17.4     | 1.23   | 32.2   | -      | -       | P       | V       |
|                        |                                                                            | 566.41    | 28.68      | -17.32 | 46         | 30.58    | 26.44    | 2.49   | 30.83  | -      | -       | P       | V       |
|                        |                                                                            | 857.41    | 32.23      | -13.77 | 46         | 31.28    | 29.3     | 3.07   | 31.42  | -      | -       | P       | V       |
|                        |                                                                            | 971.87    | 33.81      | -20.19 | 54         | 30.57    | 31.26    | 3.27   | 31.29  | -      | -       | P       | V       |
| Remark                 | 1. No other spurious found.<br>2. All results are PASS against limit line. |           |            |        |            |          |          |        |        |        |         |         |         |

**Note symbol**

|     |                                                                                                                                                          |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| *   | <b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency. |
| !   | Test result is <b>over limit</b> line.                                                                                                                   |
| P/A | <b>P</b> eak or <b>A</b> verage                                                                                                                          |
| H/V | <b>H</b> orizontal or <b>V</b> ertical                                                                                                                   |



A calculation example for radiated spurious emission is shown as below:

| WIFI    | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.    |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1       |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11b |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
| CH 01   |      |           |            |        |            |          |          |        |        |        |         |         |         |
| 2412MHz |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)  
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
 = 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
 = 55.45 (dBμV/m)
2. Over Limit(dB)  
 = Level(dBμV/m) – Limit Line(dBμV/m)  
 = 55.45(dBμV/m) – 74(dBμV/m)  
 = -18.55(dB)

**For Average Limit @ 2390MHz:**

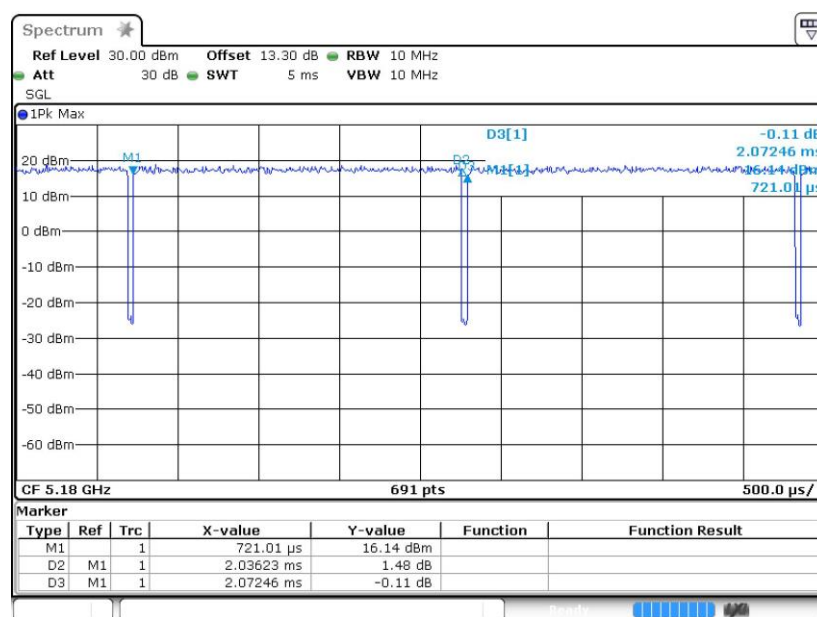
1. Level(dBμV/m)  
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)  
 = 43.54(dBμV/m) – 54(dBμV/m)  
 = -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

## Appendix D. Duty Cycle Plots

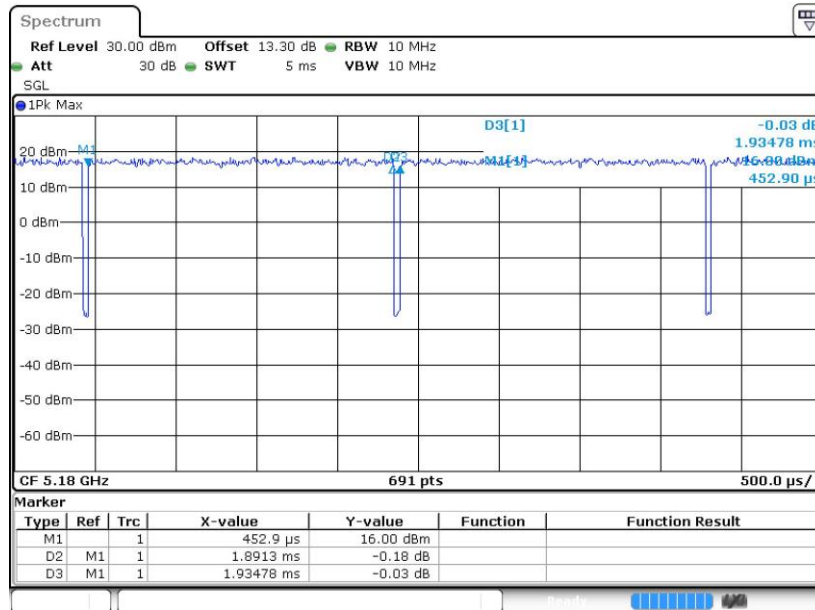
| Band           | Duty Cycle(%) | T(ms) | 1/T(kHz) | VBW Setting |
|----------------|---------------|-------|----------|-------------|
| 802.11a        | 98.25         | -     | -        | 10Hz        |
| 802.11n HT20   | 97.75         | 1.891 | 0.529    | 1KHz        |
| 802.11n HT40   | 96.24         | 0.928 | 1.078    | 3KHz        |
| 802.11ac VHT20 | 97.76         | 1.899 | 0.527    | 1KHz        |
| 802.11ac VHT40 | 96.27         | 0.935 | 1.070    | 3KHz        |
| 802.11ac VHT80 | 92.92         | 0.457 | 2.190    | 3KHz        |

### 802.11a



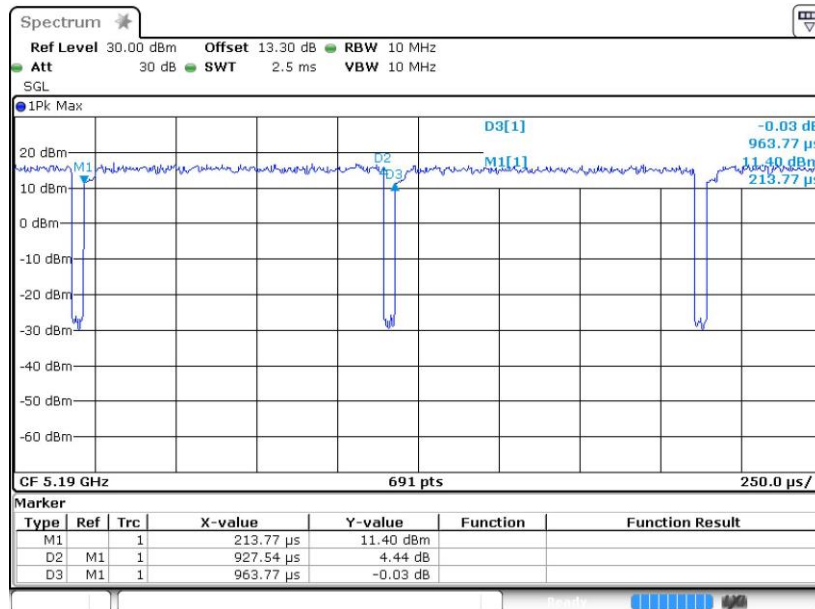
Date: 25.AUG.2021 13:47:31

## 802.11n HT20



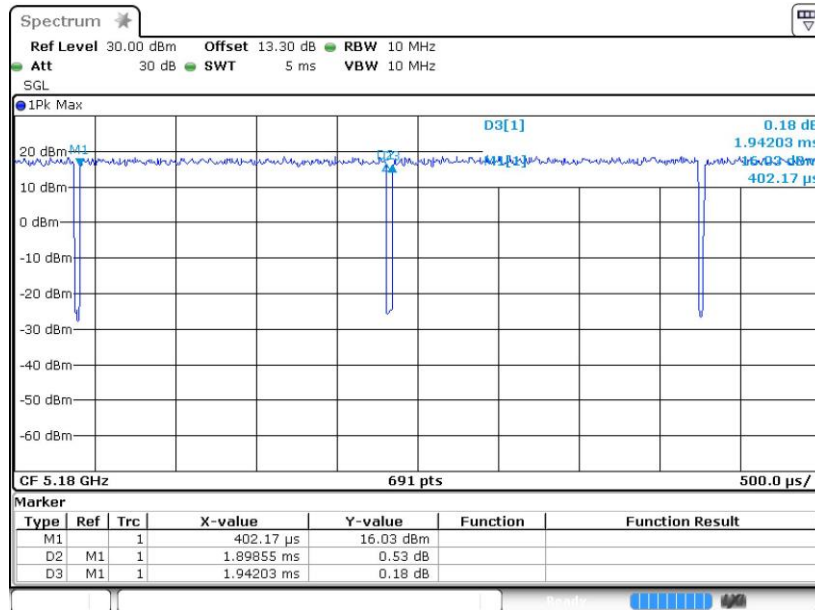
Date: 25.AUG.2021 13:48:16

## 802.11n HT40



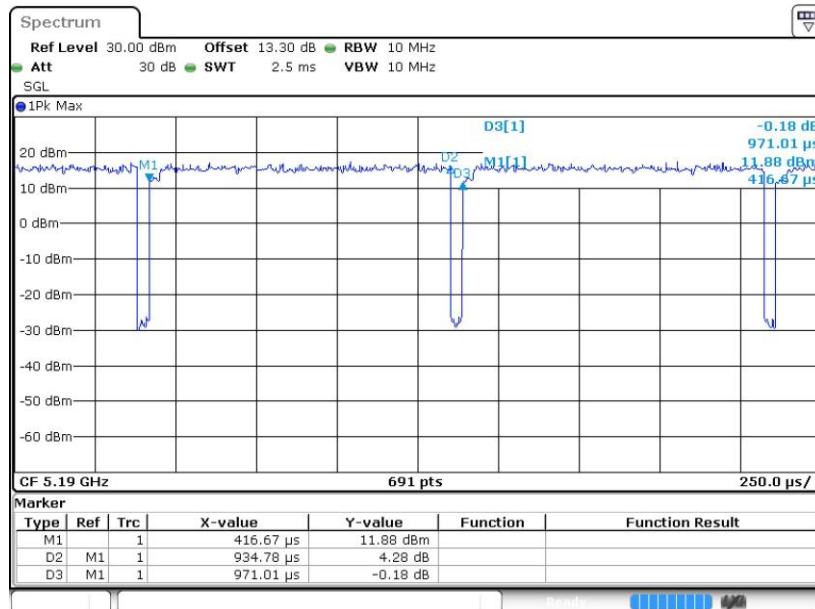
Date: 25.AUG.2021 13:49:21

## 802.11ac VHT20



Date: 25.AUG.2021 13:52:01

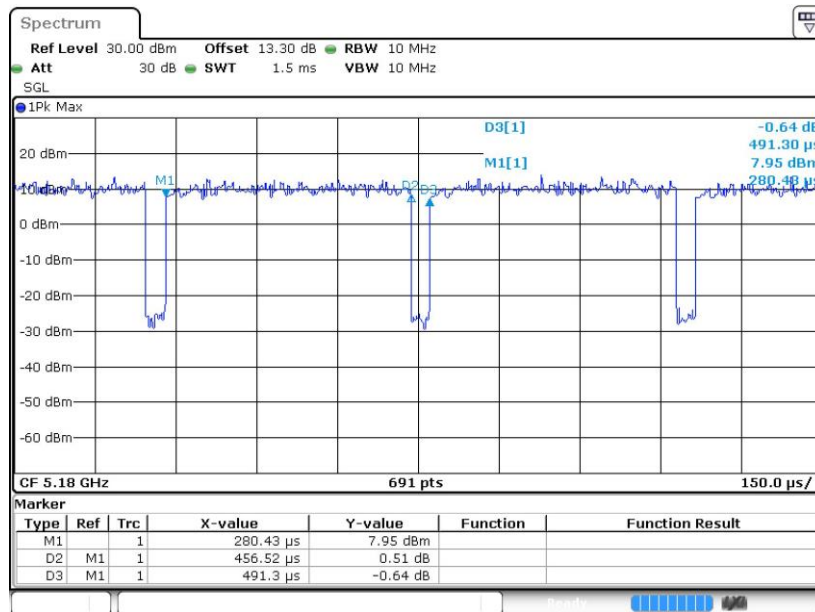
## 802.11ac VHT40



Date: 25.AUG.2021 13:50:29



## 802.11ac VHT80



Date: 25 AUG 2021 13:53:05