



# FCC RF Test Report

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola  
**MODEL NAME** : XT1926-6, XT1926-7  
**FCC ID** : IHDT56WL4  
**STANDARD** : FCC Part 15 Subpart E §15.407  
**CLASSIFICATION** : (NII) Unlicensed National Information Infrastructure

The product was received on Dec. 27, 2017 and testing was completed on Jan. 22, 2018. We, Sporton International (Kunshan) 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 (Kunshan) Inc., the test report shall not be reproduced except in full.



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Approved by: James Huang / Manager

***Sporton International (Kunshan) Inc.***  
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***China***



## **TABLE OF CONTENTS**

|                                               |                                                          |           |
|-----------------------------------------------|----------------------------------------------------------|-----------|
| <b>1</b>                                      | <b>GENERAL DESCRIPTION .....</b>                         | <b>5</b>  |
| 1.1                                           | Applicant .....                                          | 5         |
| 1.2                                           | Manufacturer .....                                       | 5         |
| 1.3                                           | Product Feature of Equipment Under Test.....             | 5         |
| 1.4                                           | Product Specification of Equipment Under Test.....       | 6         |
| 1.5                                           | Specification of Accessory.....                          | 8         |
| 1.6                                           | Modification of EUT .....                                | 9         |
| 1.7                                           | Testing Location .....                                   | 9         |
| 1.8                                           | Applicable Standards.....                                | 10        |
| <b>2</b>                                      | <b>TEST CONFIGURATION OF EQUIPMENT UNDER TEST .....</b>  | <b>11</b> |
| 2.1                                           | Carrier Frequency Channel .....                          | 11        |
| 2.2                                           | Test Mode.....                                           | 13        |
| 2.3                                           | Connection Diagram of Test System.....                   | 15        |
| 2.4                                           | Support Unit used in test configuration and system ..... | 16        |
| 2.5                                           | EUT Operation Test Setup .....                           | 16        |
| 2.6                                           | Measurement Results Explanation Example.....             | 17        |
| <b>3</b>                                      | <b>TEST RESULT .....</b>                                 | <b>18</b> |
| 3.1                                           | 26dB & 99% Occupied Bandwidth Measurement .....          | 18        |
| 3.2                                           | Maximum Conducted Output Power Measurement .....         | 20        |
| 3.3                                           | Power Spectral Density Measurement .....                 | 22        |
| 3.4                                           | Unwanted Radiated Emission Measurement .....             | 25        |
| 3.5                                           | AC Conducted Emission Measurement.....                   | 31        |
| 3.6                                           | Automatically Discontinue Transmission .....             | 35        |
| 3.7                                           | Antenna Requirements .....                               | 36        |
| <b>4</b>                                      | <b>LIST OF MEASURING EQUIPMENTS.....</b>                 | <b>37</b> |
| <b>5</b>                                      | <b>UNCERTAINTY OF EVALUATION .....</b>                   | <b>38</b> |
| <b>APPENDIX A. CONDUCTED TEST RESULTS</b>     |                                                          |           |
| <b>APPENDIX B. RADIATED SPURIOUS EMISSION</b> |                                                          |           |
| <b>APPENDIX C. DUTY CYCLE PLOTS</b>           |                                                          |           |
| <b>APPENDIX D. SETUP PHOTOGRAPHS</b>          |                                                          |           |



## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FR7D2702E  | Rev. 01 | Initial issue of report | Feb. 01, 2018 |
|            |         |                         |               |
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## SUMMARY OF TEST RESULT

| Report Section | FCC Rule              | Description                            | Limit                               | Result | Remark                                    |
|----------------|-----------------------|----------------------------------------|-------------------------------------|--------|-------------------------------------------|
| 3.1            | 2.1049<br>15.403(i)   | 26dB & 99% Bandwidth                   | -                                   | Pass   | -                                         |
| 3.2            | 15.407(a)             | Maximum Conducted Output Power         | FCC<br>≤ 24 dBm<br>(depend on band) | Pass   | -                                         |
| 3.3            | 15.407(a)             | Power Spectral Density                 | FCC<br>≤ 11 dBm<br>(depend on band) | Pass   | -                                         |
| 3.4            | 15.407(b)             | Unwanted Emissions                     | 15.407(b)<br>15.209(a)              | Pass   | Under limit<br>3.03 dB at<br>5350.320 MHz |
| 3.5            | 15.207                | AC Conducted Emission                  | 15.207(a)                           | Pass   | Under limit<br>13.94 dB at<br>0.195 MHz   |
| 3.6            | 15.407(c)             | Automatically Discontinue Transmission | Discontinue Transmission            | Pass   | -                                         |
| 3.7            | 15.203 &<br>15.407(a) | Antenna Requirement                    | N/A                                 | Pass   | -                                         |



# 1 General Description

## 1.1 Applicant

**Motorola Mobility LLC**

222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

## 1.2 Manufacturer

**Motorola Mobility LLC**

222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

## 1.3 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                                                                                                                                                                   |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Mobile Cellular Phone                                                                                                                                                                                                                                             |
| Brand Name                      | Motorola                                                                                                                                                                                                                                                          |
| Model Name                      | XT1926-6, XT1926-7                                                                                                                                                                                                                                                |
| FCC ID                          | IHDT56WL4                                                                                                                                                                                                                                                         |
| EUT supports Radios application | GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA<br>/HSPA+/LTE/NFC<br>WLAN 2.4GHz 802.11b/g/n HT20<br>WLAN 5GHz 802.11a/n HT20/HT40<br>WLAN 5GHz 802.11ac VHT20/VHT40/VHT80<br>Bluetooth v3.0+EDR/ Bluetooth v4.0 LE/<br>Bluetooth v4.1 LE/Bluetooth v4.2 LE/ Bluetooth v5.0 LE |
| IMEI Code                       | Conducted: 351853090015717/351853090015725<br>Conduction: N/A<br>Radiation: 351853090016053/351853090016061                                                                                                                                                       |
| HW Version                      | DVT1B                                                                                                                                                                                                                                                             |
| SW Version                      | evert_n-userdebug 8.0.0 OPW27.88 1825 intcfg,test-keys                                                                                                                                                                                                            |
| EUT Stage                       | Identical Prototype                                                                                                                                                                                                                                               |

### Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT sample 1 and sample 2, the differences between two samples are only for SIM slot, sample 1(Model name: XT1926-7) is dual SIM slot, sample 2(Model name: XT1926-6) is single SIM slot. We only choose dual SIM sample to perform full test.

## 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 ~ 5700 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Maximum Output Power to Antenna</b>  | <b>&lt;5180 MHz ~ 5240 MHz&gt;</b><br>802.11a : 15.98 dBm / 0.0396 W<br>802.11n HT20 : 15.86 dBm / 0.0385 W<br>802.11n HT40 : 13.26 dBm / 0.0212 W<br>802.11ac VHT20 : 15.81 dBm / 0.0381 W<br>802.11ac VHT40 : 13.22 dBm / 0.0210 W<br>802.11ac VHT80 : 11.79 dBm / 0.0151 W<br><b>&lt;5260 MHz ~ 5320 MHz&gt;</b><br>802.11a : 15.89 dBm / 0.0388 W<br>802.11n HT20 : 15.81 dBm / 0.0381 W<br>802.11n HT40 : 13.12 dBm / 0.0205 W<br>802.11ac VHT20 : 15.71 dBm / 0.0372 W<br>802.11ac VHT40 : 13.09 dBm / 0.0204 W<br>802.11ac VHT80 : 10.92 dBm / 0.0124 W<br><b>&lt;5500 MHz ~ 5700 MHz &gt;</b><br>802.11a : 16.06 dBm / 0.0404 W<br>802.11n HT20 : 15.97 dBm / 0.0395 W<br>802.11n HT40 : 13.14 dBm / 0.0206 W<br>802.11ac VHT20 : 15.95 dBm / 0.0394 W<br>802.11ac VHT40 : 11.34 dBm / 0.0136 W<br>802.11ac VHT80 : 12.41 dBm / 0.0174 W |
| <b>99% Occupied Bandwidth</b>           | <b>&lt;5180 MHz ~ 5240 MHz&gt;</b><br>802.11a : 17.53 MHz<br>802.11n HT20 : 18.88 MHz<br>802.11n HT40 : 36.56 MHz<br>802.11ac VHT80 : 75.76 MHz<br><b>&lt;5260 MHz ~ 5320 MHz &gt;</b><br>802.11a : 17.53 MHz<br>802.11n HT20 : 18.73 MHz<br>802.11n HT40 : 36.56 MHz<br>802.11ac VHT80 : 75.76 MHz<br><b>&lt;5500 MHz ~ 5700 MHz &gt;</b><br>802.11a : 17.58 MHz<br>802.11n HT20 : 18.83 MHz<br>802.11n HT40 : 36.56 MHz<br>802.11ac VHT80 : 75.88 MHz                                                                                                                                                                                                                                                                                                                                                                                          |



|                            |                                                                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Antenna Gain / Gain</b> | <5180 MHz ~ 5240 MHz><br>PIFA Antenna with gain -1.4 dBi<br><5260 MHz ~ 5320 MHz><br>PIFA Antenna with gain -1.6 dBi<br><5500 MHz ~ 5700 MHz><br>PIFA Antenna with gain -0.9 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 has assessed only 802.11an HT20/ HT40 by referring to their maximum conducted power.



## 1.5 Specification of Accessory

| Specification of Accessory |                  |                                                                          |            |                     |
|----------------------------|------------------|--------------------------------------------------------------------------|------------|---------------------|
| AC Adapter 1(US)           | Brand Name       | Motorola (Salom)                                                         | Model Name | SC-22               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 1(EU)           | Brand Name       | Motorola (Salom)                                                         | Model Name | SC-23               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 1(UK)           | Brand Name       | Motorola (Salom)                                                         | Model Name | SC-24               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 1(IN)           | Brand Name       | Motorola (Salom)                                                         | Model Name | SC-25               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 1(AU)           | Brand Name       | Motorola (Salom)                                                         | Model Name | SC-26               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 1(AR)           | Brand Name       | Motorola (Salom)                                                         | Model Name | SC-27               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 2(US)           | Brand Name       | Motorola (Chenyang)                                                      | Model Name | SC-22               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 2(EU)           | Brand Name       | Motorola (Chenyang)                                                      | Model Name | SC-23               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 2(UK)           | Brand Name       | Motorola (Chenyang)                                                      | Model Name | SC-24               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 2(IN)           | Brand Name       | Motorola (Chenyang)                                                      | Model Name | SC-25               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 2(AU)           | Brand Name       | Motorola (Chenyang)                                                      | Model Name | SC-26               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| AC Adapter 2(AR)           | Brand Name       | Motorola (chenyang)                                                      | Model Name | SC-27               |
|                            | Power Rating     | I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA |            |                     |
| Battery                    | Brand Name       | Motorola (ATL)                                                           | Model Name | JT40                |
|                            | Power Rating     | 3.8Vdc,3200mAh                                                           | Type       | Li-ion Polymer      |
| Earphone 1                 | Brand Name       | Motorola (Jiahe)                                                         | Model Name | LS-118M-12          |
|                            | Signal Line Type | 1.2 meter, non-shielded cable, without ferrite core                      |            |                     |
| Earphone 2                 | Brand Name       | Motorola (Lianyun)                                                       | Model Name | TS910A-38AMS01WHR-M |
|                            | Signal Line Type | 1.2 meter, non-shielded cable, without ferrite core                      |            |                     |
| USB Cable                  | Brand Name       | Motorola (Liqi)                                                          | Model Name | L32B-053000100-ALL  |
|                            | Signal Line Type | 1.0 meter, shielded cable, without ferrite core                          |            |                     |



## 1.6 Modification of EUT

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

## 1.7 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

|                           |                                                                                                                                               |         |                                       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------------|
| <b>Test Site</b>          | Sporton International (Kunshan) Inc.                                                                                                          |         |                                       |
| <b>Test Site Location</b> | No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China<br>TEL : +86-512-57900158<br>FAX : +86-512-57900958 |         |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                       |         | <b>FCC Test Firm Registration No.</b> |
|                           | TH01-KS                                                                                                                                       | CO01-KS | 630927                                |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

Sporton International (Shenzhen) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No is CN5019.

|                           |                                                                                                                                                                       |  |                                       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------|
| <b>Test Site</b>          | Sporton International (Shenzhen) Inc.                                                                                                                                 |  |                                       |
| <b>Test Site Location</b> | No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District Shenzhen City Guangdong Province 518055 China<br>TEL: +86-755-3320-2398 |  |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                               |  | <b>FCC Test Firm Registration No.</b> |
|                           | 03CH01-SZ                                                                                                                                                             |  | 577730                                |

**Note:** The test site complies with ANSI C63.4 2014 requirement.



## 1.8 Applicable Standards

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

- ♦ FCC 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

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: conducted emission (150 kHz to 30 MHz) and radiated 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 were recorded in this report.

### 2.1 Carrier Frequency Channel

| Frequency Band                       | Channel         | Freq. (MHz) | Channel | Freq. (MHz) |
|--------------------------------------|-----------------|-------------|---------|-------------|
| 5180-5240 MHz<br>Band 1<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) |
|---------------------------------------|-----------------|-------------|---------|-------------|
| 5260-5320 MHz<br>Band 2<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) |
|---------------------------------------|------------------|-------------|---------|-------------|
| 5500-5700 MHz<br>Band 3<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           |

**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 mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

| Modulation     | Data Rate |
|----------------|-----------|
| 802.11a        | 6 Mbps    |
| 802.11n HT20   | MCS0      |
| 802.11n HT40   | MCS0      |
| 802.11ac VHT80 | MCS0      |

| Test Cases                                                                                                 |                                                                                                           |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| AC Conducted Emission                                                                                      | Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable (Charging from Adapter 1) + Earphone 1 |
| <b>Remark:</b> For Radiated Test Cases, The tests were performed with Earphone 1, Adapter 1 and USB Cable. |                                                                                                           |



| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11a                | 802.11a                 | 802.11a                 |
| L     | Low    | 36                     | 52                      | 100                     |
| M     | Middle | 44                     | 60                      | 116                     |
| H     | High   | 48                     | 64                      | 140                     |

| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11n HT20           | 802.11n HT20            | 802.11n HT20            |
| L     | Low    | 36                     | 52                      | 100                     |
| M     | Middle | 44                     | 60                      | 116                     |
| H     | High   | 48                     | 64                      | 140                     |

| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11n HT40           | 802.11n HT40            | 802.11n HT40            |
| L     | Low    | 38                     | 54                      | 102                     |
| M     | Middle | -                      | -                       | 110                     |
| H     | High   | 46                     | 62                      | 134                     |

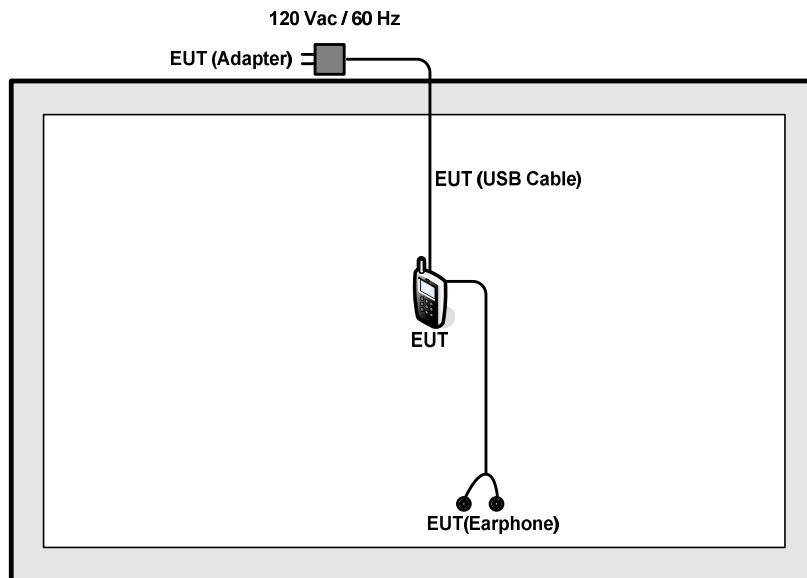
| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11ac VHT20         | 802.11ac VHT20          | 802.11ac VHT20          |
| L     | Low    | 36                     | 52                      | 100                     |
| M     | Middle | 44                     | 60                      | 116                     |
| H     | High   | 48                     | 64                      | 140                     |

| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11ac VHT40         | 802.11ac VHT40          | 802.11ac VHT40          |
| L     | Low    | 38                     | 54                      | 102                     |
| M     | Middle | -                      | -                       | 110                     |
| H     | High   | 46                     | 62                      | 134                     |

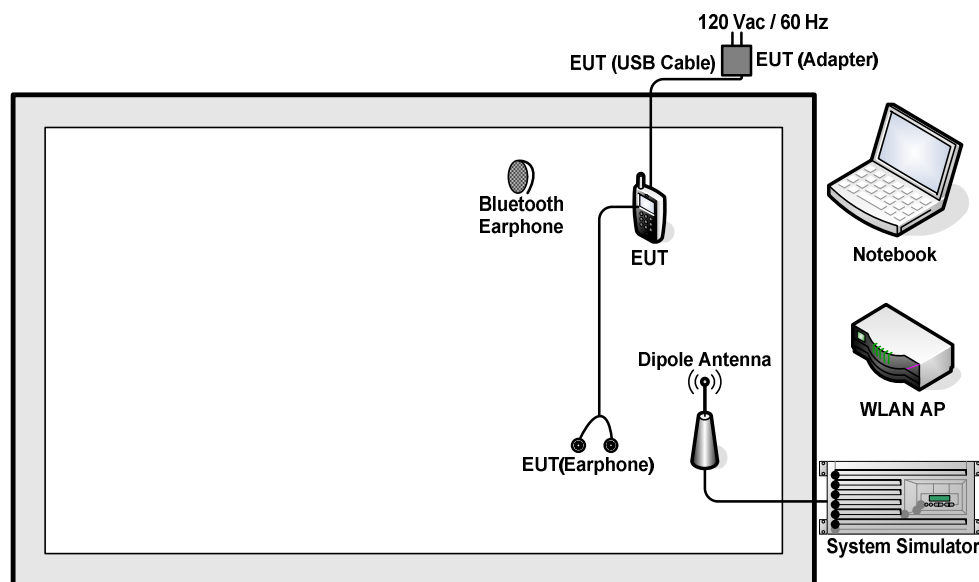
| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11ac VHT80         | 802.11ac VHT80          | 802.11ac VHT80          |
| L     | Low    | -                      | -                       | 106                     |
| M     | Middle | 42                     | 58                      | -                       |
| H     | High   | -                      | -                       | 122                     |

## 2.3 Connection Diagram of Test System

### < Radiated Emission Mode>



### <AC Conducted Emission Mode>



## 2.4 Support Unit used in test configuration and system

| Item | Equipment          | Trade Name | Model Name | FCC ID      | Data Cable | Power Cord                                                 |
|------|--------------------|------------|------------|-------------|------------|------------------------------------------------------------|
| 1.   | System Simulator   | R&S        | CMU 200    | N/A         | N/A        | Unshielded, 1.8 m                                          |
| 2.   | WLAN AP            | D-Link     | DIR-855    | KA2DIR855A2 | N/A        | Unshielded, 1.8 m                                          |
| 3.   | Notebook           | Lenovo     | G480       | N/A         | N/A        | AC I/P:<br>Unshielded, 1.8 m<br>DC O/P:<br>Shielded, 1.8 m |
| 4.   | Bluetooth Earphone | Lenovo     | LBH308     | 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 continuously transmit/receive.

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 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.

*Offset = RF cable loss.*

Following shows an offset computation example with cable loss 6.9 dB.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 6.9 \text{ (dB)}\end{aligned}$$

### 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.

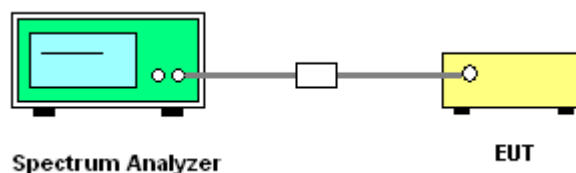
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

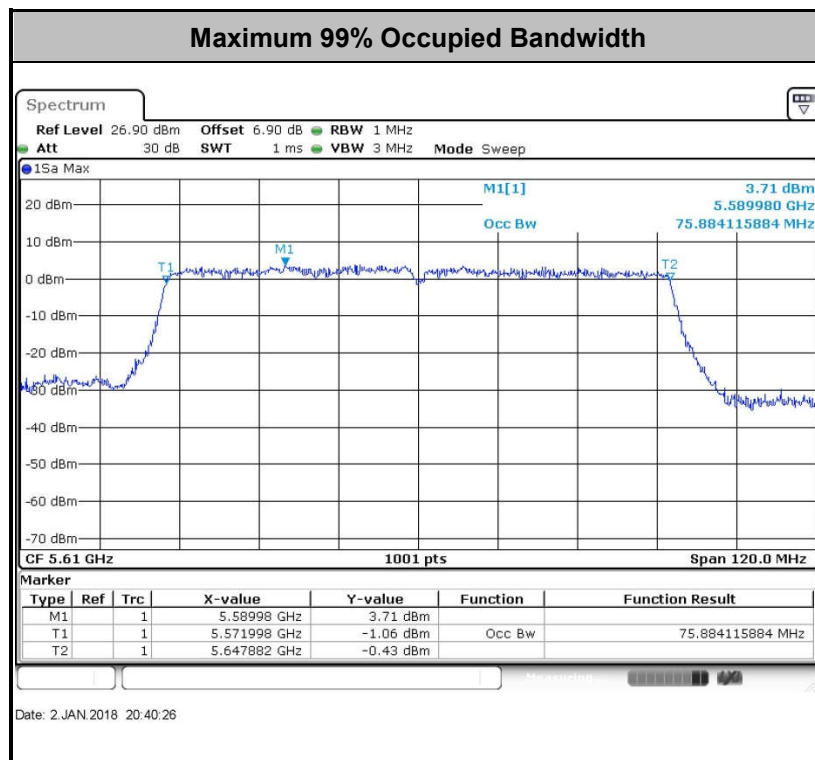
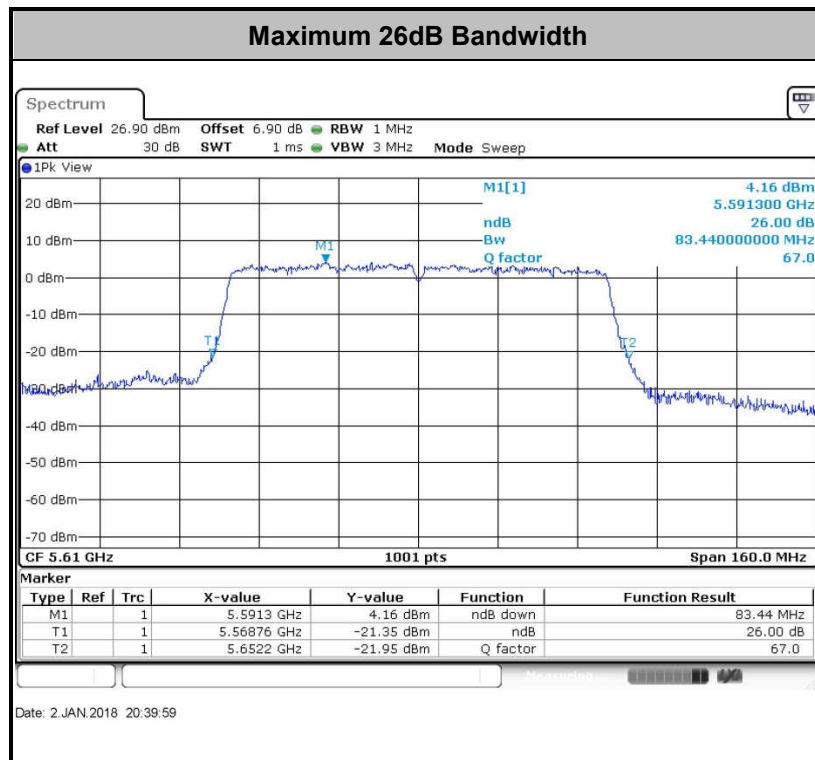
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.  
Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 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 Plots

Please refer to Appendix A.



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  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz.

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.

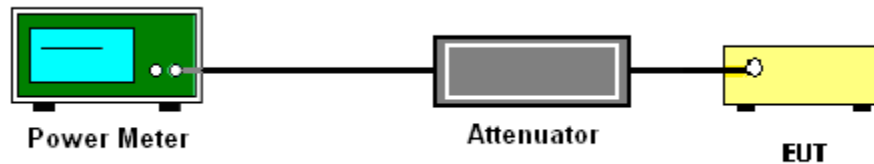
### 3.2.3 Test Procedures

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.

### 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.

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.

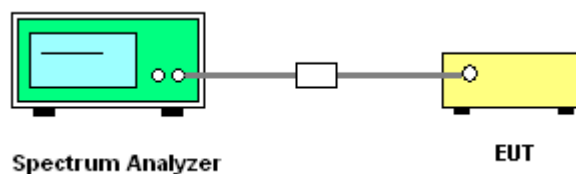
Section F) Maximum power spectral density.

#### # Method SA-2 #

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

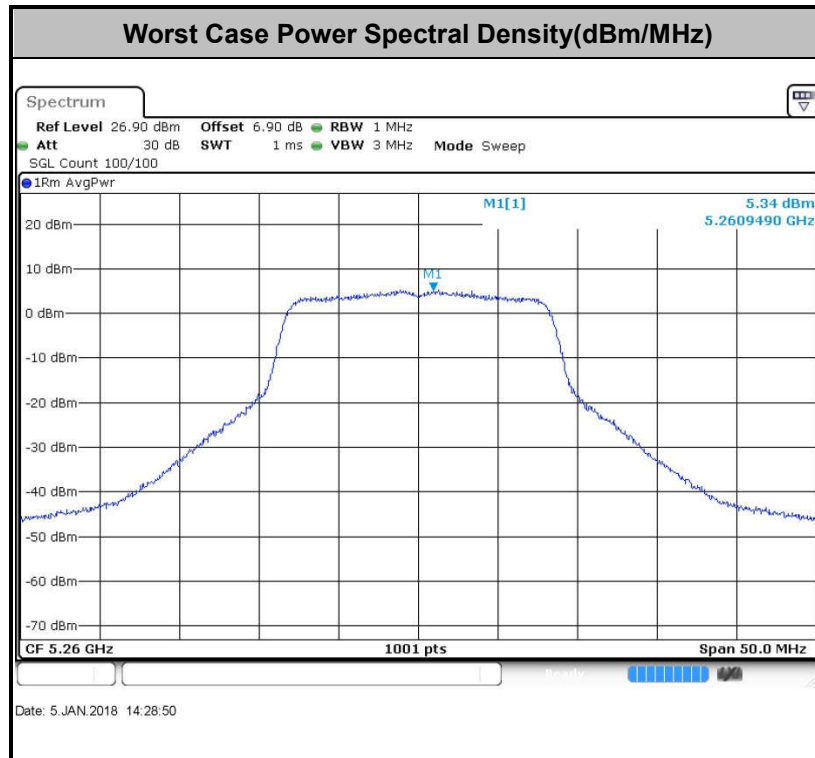
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
  - Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 1 MHz.
  - Set VBW  $\geq$  3 MHz.
  - Number of points in sweep  $\geq$  2 Span / 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.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. 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 Radiated Emission 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 5470-5725MHz band: all emissions outside of the 5470-5725MHz 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                                |

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

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

| EIRP (dBm) | Field Strength at 3m (dB $\mu$ V/m) |
|------------|-------------------------------------|
| - 27       | 68.3                                |

(3) KDB789033 D01 v02r01 G)2)c)

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.<sup>3</sup>
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.<sup>4</sup>

**Note 3:** An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

**Note 4:** Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).

### 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

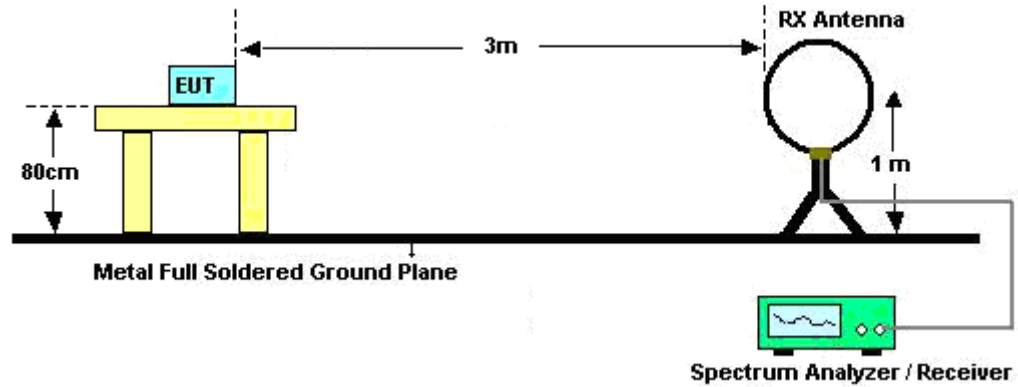
- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.



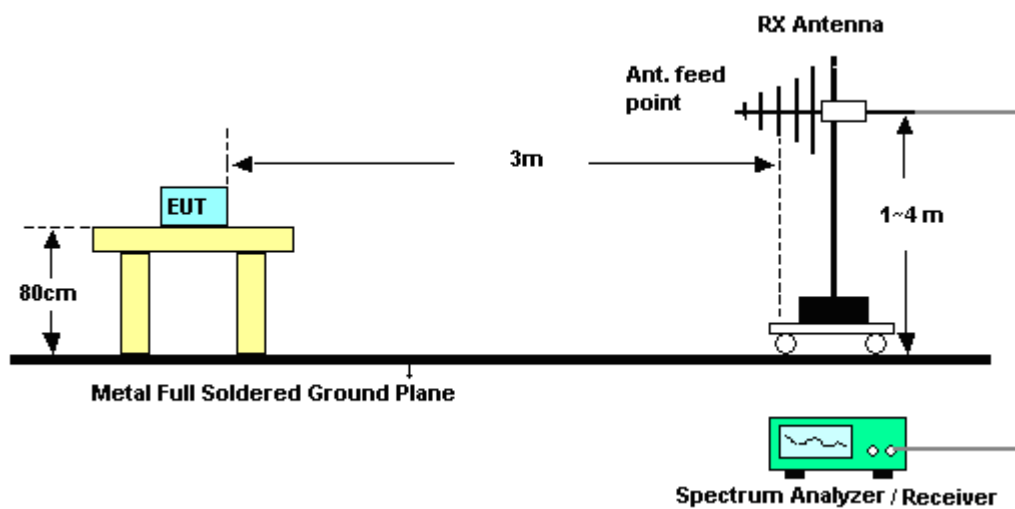
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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 average 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

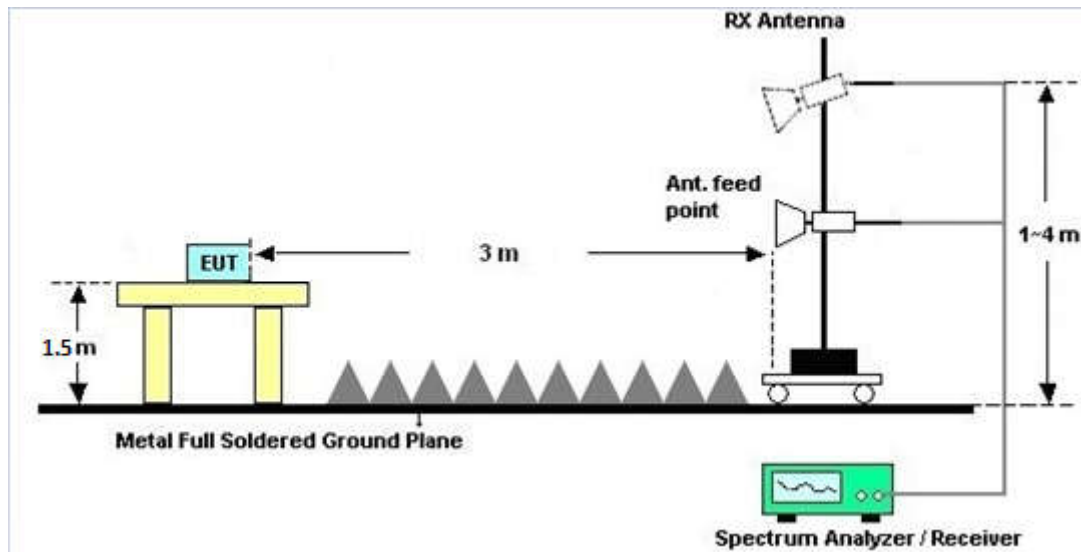
For radiated emissions below 30MHz



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.

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

Please refer to Appendix B.

### 3.4.7 Duty Cycle

Please refer to Appendix C.

### 3.4.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix B.

### 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.

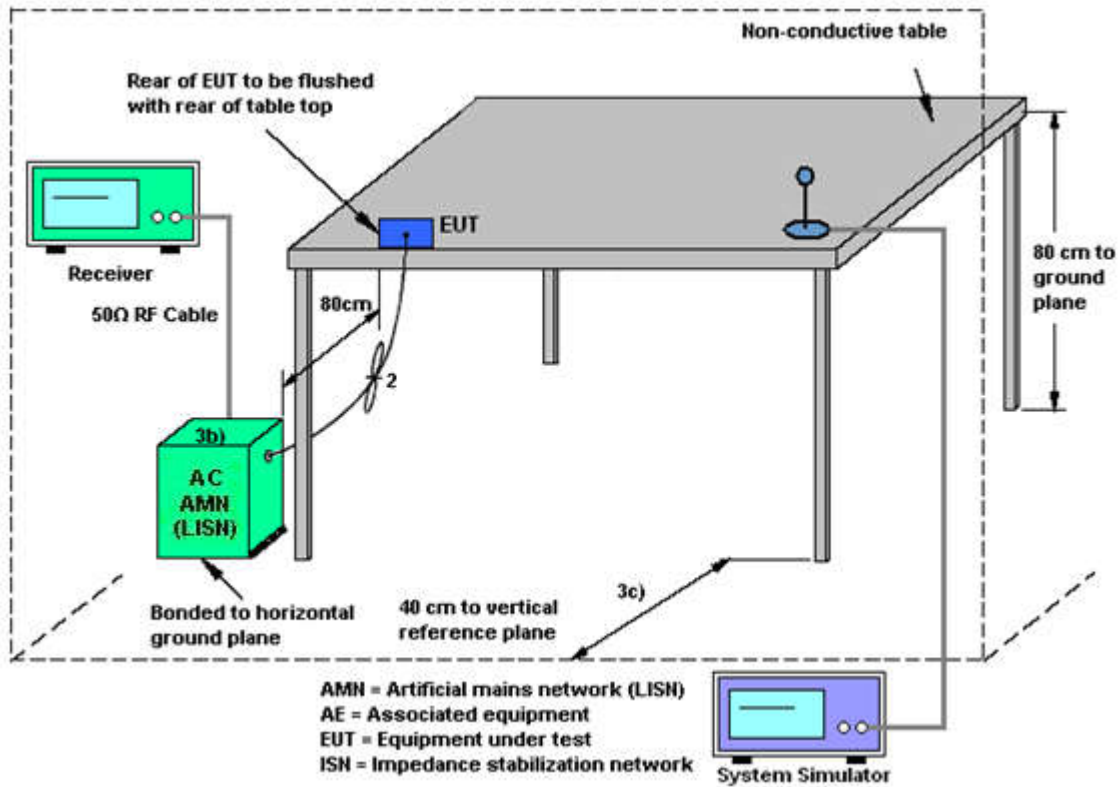
#### 3.5.2 Measuring Instruments

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.

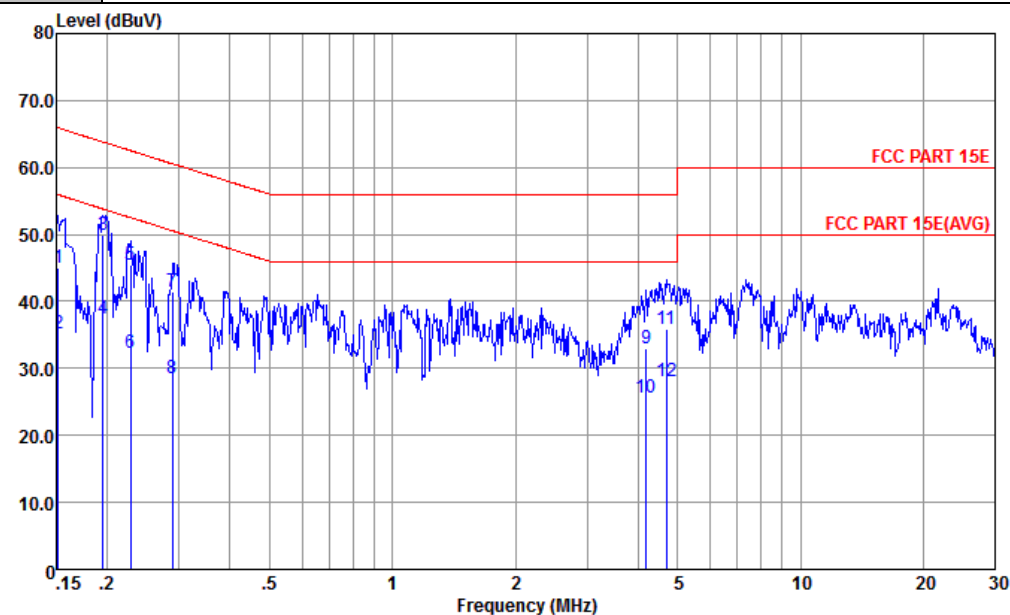
### 3.5.4 Test Setup





## 3.5.5 Test Result of AC Conducted Emission

|                 |                                                                                                  |                     |        |
|-----------------|--------------------------------------------------------------------------------------------------|---------------------|--------|
| Test Mode :     | Mode 1                                                                                           | Temperature :       | 22~24℃ |
| Test Engineer : | Eko Guan                                                                                         | Relative Humidity : | 40~42% |
| Test Voltage :  | 120Vac / 60Hz                                                                                    | Phase :             | Line   |
| Function Type : | GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable (Charging from Adapter 1) + Earphone 1 |                     |        |

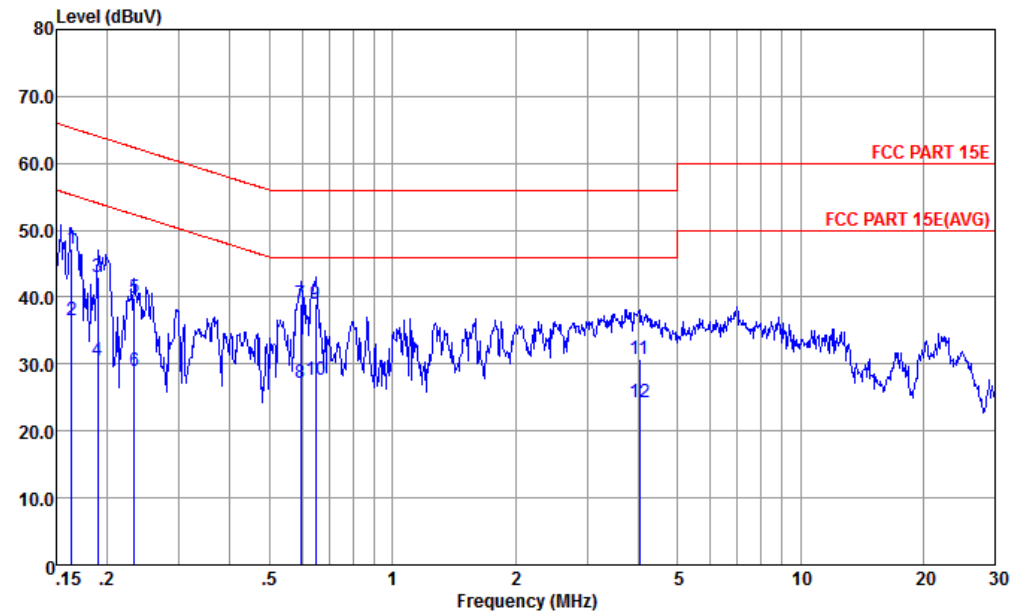


Site : CO01-KS  
Condition : FCC PART 15E LISN-L-171013-060103 LINE

|     | Freq  | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  |
|-----|-------|-------|------------|------------|------------|-------------|------------|---------|
|     | MHz   | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |
| 1   | 0.152 | 44.97 | -20.94     | 65.91      | 34.20      | 0.16        | 10.61      | QP      |
| 2   | 0.152 | 35.27 | -20.64     | 55.91      | 24.50      | 0.16        | 10.61      | Average |
| 3 * | 0.195 | 49.86 | -13.94     | 63.80      | 39.19      | 0.20        | 10.47      | QP      |
| 4   | 0.195 | 37.46 | -16.34     | 53.80      | 26.79      | 0.20        | 10.47      | Average |
| 5   | 0.228 | 45.45 | -17.07     | 62.52      | 34.79      | 0.21        | 10.45      | QP      |
| 6   | 0.228 | 32.25 | -20.27     | 52.52      | 21.59      | 0.21        | 10.45      | Average |
| 7   | 0.289 | 41.45 | -19.09     | 60.54      | 30.80      | 0.22        | 10.43      | QP      |
| 8   | 0.289 | 28.55 | -21.99     | 50.54      | 17.90      | 0.22        | 10.43      | Average |
| 9   | 4.180 | 33.03 | -22.97     | 56.00      | 22.50      | 0.35        | 10.18      | QP      |
| 10  | 4.180 | 25.73 | -20.27     | 46.00      | 15.20      | 0.35        | 10.18      | Average |
| 11  | 4.696 | 35.78 | -20.22     | 56.00      | 25.21      | 0.36        | 10.21      | QP      |
| 12  | 4.696 | 28.08 | -17.92     | 46.00      | 17.51      | 0.36        | 10.21      | Average |



|                        |                                                                                                  |                            |         |
|------------------------|--------------------------------------------------------------------------------------------------|----------------------------|---------|
| <b>Test Mode :</b>     | Mode 1                                                                                           | <b>Temperature :</b>       | 22~24℃  |
| <b>Test Engineer :</b> | Eko Guan                                                                                         | <b>Relative Humidity :</b> | 40~42%  |
| <b>Test Voltage :</b>  | 120Vac / 60Hz                                                                                    | <b>Phase :</b>             | Neutral |
| <b>Function Type :</b> | GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable (Charging from Adapter 1) + Earphone 1 |                            |         |



Site : CO01-KS  
Condition : FCC PART 15E LISN-N-171013-060103 NEUTRAL

|     | Freq  | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  |
|-----|-------|-------|------------|------------|------------|-------------|------------|---------|
|     | MHz   | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |
| 1   | 0.163 | 47.15 | -18.15     | 65.30      | 36.30      | 0.28        | 10.57      | QP      |
| 2   | 0.163 | 36.65 | -18.65     | 55.30      | 25.80      | 0.28        | 10.57      | Average |
| 3   | 0.189 | 43.07 | -20.99     | 64.06      | 32.30      | 0.28        | 10.49      | QP      |
| 4   | 0.189 | 30.57 | -23.49     | 54.06      | 19.80      | 0.28        | 10.49      | Average |
| 5   | 0.233 | 39.93 | -22.42     | 62.35      | 29.21      | 0.28        | 10.44      | QP      |
| 6   | 0.233 | 28.93 | -23.42     | 52.35      | 18.21      | 0.28        | 10.44      | Average |
| 7 * | 0.595 | 39.03 | -16.97     | 56.00      | 28.50      | 0.30        | 10.23      | QP      |
| 8   | 0.595 | 27.13 | -18.87     | 46.00      | 16.60      | 0.30        | 10.23      | Average |
| 9   | 0.647 | 38.99 | -17.01     | 56.00      | 28.49      | 0.30        | 10.20      | QP      |
| 10  | 0.647 | 27.69 | -18.31     | 46.00      | 17.19      | 0.30        | 10.20      | Average |
| 11  | 4.027 | 30.80 | -25.20     | 56.00      | 20.29      | 0.34        | 10.17      | QP      |
| 12  | 4.027 | 24.30 | -21.70     | 46.00      | 13.79      | 0.34        | 10.17      | Average |



## **3.6 Automatically Discontinue Transmission**

### **3.6.1 Limit of Automatically Discontinue Transmission**

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

### **3.6.2 Measuring Instruments**

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

### **3.6.3 Test Result of Automatically Discontinue Transmission**

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.



## **3.7 Antenna Requirements**

### **3.7.1 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.

### **3.7.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.7.3 Antenna Gain**

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



## 4 List of Measuring Equipments

| Instrument                           | Manufacturer | Model No.                    | Serial No.       | Characteristics            | Calibration Date | Test Date                       | Due Date      | Remark                |
|--------------------------------------|--------------|------------------------------|------------------|----------------------------|------------------|---------------------------------|---------------|-----------------------|
| Spectrum Analyzer                    | R&S          | FSV40                        | 101040           | 10Hz~40GHz                 | Aug. 08, 2017    | Jan. 02, 2018~<br>Jan. 05, 2018 | Aug. 07, 2018 | Conducted (TH01-KS)   |
| Pulse Power Sensor                   | Anritsu      | MA2411B                      | 0917070          | 300MHz~40GHz               | Jan. 19, 2017    | Jan. 02, 2018~<br>Jan. 05, 2018 | Jan. 18, 2018 | Conducted (TH01-KS)   |
| Power Meter                          | Anritsu      | ML2495A                      | 1005002          | 50MHz Bandwidth            | Jan. 19, 2017    | Jan. 02, 2018~<br>Jan. 05, 2018 | Jan. 18, 2018 | Conducted (TH01-KS)   |
| EMI Test Receiver&SA                 | Agilent      | N9038A                       | MY52260185       | 20Hz~26.5GHz               | Apr. 20, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Apr. 19, 2018 | Radiation (03CH01-SZ) |
| Loop Antenna                         | R&S          | HFH2-Z2                      | 100354           | 9kHz~30MHz                 | May 14, 2017     | Jan. 12, 2018~<br>Jan. 17, 2018 | May 13, 2018  | Radiation (03CH01-SZ) |
| Bilog Antenna                        | TeseQ        | CBL6112D                     | 23188            | 30MHz~2GHz                 | Apr. 25, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Apr. 24, 2018 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna            | ETS Lindgren | 3117                         | 119436           | 1GHz~18GHz                 | Jul. 28, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Jul. 27, 2018 | Radiation (03CH01-SZ) |
| SHF-EHF Horn                         | com-power    | AH-840                       | 101071           | 18Ghz~40GHz                | Jun. 16, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Jun. 15, 2018 | Radiation (03CH01-SZ) |
| LF Amplifier                         | Burgeon      | BPA-530                      | 102209           | 0.01~3000Mhz               | Apr. 20, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Apr. 19, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier                         | MITEQ        | AMF-7D-0010<br>1800-30-10P-R | 1707137          | 1GHz~18GHz                 | Oct. 19, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Oct. 18, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier                         | KEYSIGHT     | 83017A                       | MY53270104       | 0.5GHz~26.5GHz             | Oct. 19, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Oct. 18, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier                         | MITEQ        | TTA1840-35-H<br>G            | 1871923          | 18GHz~40GHz                | Jul. 18, 2017    | Jan. 12, 2018~<br>Jan. 17, 2018 | Jul. 17, 2018 | Radiation (03CH01-SZ) |
| AC Power Source                      | Chroma       | 61601                        | 6160100019<br>85 | N/A                        | NCR              | Jan. 12, 2018~<br>Jan. 17, 2018 | NCR           | Radiation (03CH01-SZ) |
| Turn Table                           | EM           | EM1000                       | N/A              | 0~360 degree               | NCR              | Jan. 12, 2018~<br>Jan. 17, 2018 | NCR           | Radiation (03CH01-SZ) |
| EMI Receiver                         | R&S          | ESC17                        | 100768           | 9kHz~7GHz;                 | Apr. 20, 2017    | Jan. 22, 2018                   | Apr. 19, 2018 | Conduction (CO01-KS)  |
| AC LISN                              | MessTec      | AN3016                       | 060103           | 9kHz~30MHz                 | Oct. 13, 2017    | Jan. 22, 2018                   | Oct. 12, 2018 | Conduction (CO01-KS)  |
| AC LISN<br>(for auxiliary equipment) | MessTec      | AN3016                       | 060105           | 9kHz~30MHz                 | Oct. 13, 2017    | Jan. 22, 2018                   | Oct. 12, 2018 | Conduction (CO01-KS)  |
| AC Power Source                      | Chroma       | 61602                        | ABP0000008<br>11 | AC 0V~300V,<br>45Hz~1000Hz | Oct. 12, 2017    | Jan. 22, 2018                   | Oct. 11, 2018 | Conduction (CO01-KS)  |

NCR: No Calibration Required

## 5 Uncertainty of Evaluation

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

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2U_c(y)$ ) | 2.3dB |
|-----------------------------------------------------------------------------|-------|

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

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2U_c(y)$ ) | 4.8dB |
|-----------------------------------------------------------------------------|-------|

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

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

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

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



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

Report Number : FR7D2702E

|                |                     |                    |       |    |
|----------------|---------------------|--------------------|-------|----|
| Test Engineer: | Silent Hai          | Temperature:       | 21~25 | °C |
| Test Date:     | 2018/1/2 ~ 2018/1/5 | Relative Humidity: | 51~55 | %  |

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

| Band I |           |     |     |             |                     |                       |                                    |                                   |  |  |
|--------|-----------|-----|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--|--|
| 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    | 6M bps    | 1   | 36  | 5180        | 17.43               | 23.03                 | -                                  | 22.41                             |  |  |
| 11a    | 6M bps    | 1   | 44  | 5220        | 17.53               | 23.38                 | -                                  | 22.44                             |  |  |
| 11a    | 6M bps    | 1   | 48  | 5240        | 17.48               | 23.78                 | -                                  | 22.43                             |  |  |
| HT20   | MCS0      | 1   | 36  | 5180        | 18.83               | 25.48                 | -                                  | 22.75                             |  |  |
| HT20   | MCS0      | 1   | 44  | 5220        | 18.88               | 25.38                 | -                                  | 22.76                             |  |  |
| HT20   | MCS0      | 1   | 48  | 5240        | 18.73               | 25.48                 | -                                  | 22.73                             |  |  |
| HT40   | MCS0      | 1   | 38  | 5190        | 36.56               | 41.81                 | -                                  | 23.01                             |  |  |
| HT40   | MCS0      | 1   | 46  | 5230        | 36.56               | 41.81                 | -                                  | 23.01                             |  |  |
| VHT80  | MCS0      | 1   | 42  | 5210        | 75.76               | 82.80                 | -                                  | 23.01                             |  |  |

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

| FCC Band I |           |     |     |             |                  |                               |                                 |          |  |           |
|------------|-----------|-----|-----|-------------|------------------|-------------------------------|---------------------------------|----------|--|-----------|
| Mod.       | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) |  | Pass/Fail |
| 11a        | 6M bps    | 1   | 36  | 5180        | 0.20             | 15.75                         | 24.00                           | -1.40    |  | Pass      |
| 11a        | 6M bps    | 1   | 44  | 5220        | 0.20             | 15.77                         | 24.00                           | -1.40    |  | Pass      |
| 11a        | 6M bps    | 1   | 48  | 5240        | 0.20             | 15.98                         | 24.00                           | -1.40    |  | Pass      |
| HT20       | MCS0      | 1   | 36  | 5180        | 0.26             | 15.65                         | 24.00                           | -1.40    |  | Pass      |
| HT20       | MCS0      | 1   | 44  | 5220        | 0.26             | 15.80                         | 24.00                           | -1.40    |  | Pass      |
| HT20       | MCS0      | 1   | 48  | 5240        | 0.26             | 15.86                         | 24.00                           | -1.40    |  | Pass      |
| HT40       | MCS0      | 1   | 38  | 5190        | 0.45             | 13.03                         | 24.00                           | -1.40    |  | Pass      |
| HT40       | MCS0      | 1   | 46  | 5230        | 0.45             | 13.26                         | 24.00                           | -1.40    |  | Pass      |
| VHT20      | MCS0      | 1   | 36  | 5180        | 0.20             | 15.62                         | 24.00                           | -1.40    |  | Pass      |
| VHT20      | MCS0      | 1   | 44  | 5220        | 0.20             | 15.79                         | 24.00                           | -1.40    |  | Pass      |
| VHT20      | MCS0      | 1   | 48  | 5240        | 0.20             | 15.81                         | 24.00                           | -1.40    |  | Pass      |
| VHT40      | MCS0      | 1   | 38  | 5190        | 0.40             | 12.91                         | 24.00                           | -1.40    |  | Pass      |
| VHT40      | MCS0      | 1   | 46  | 5230        | 0.40             | 13.22                         | 24.00                           | -1.40    |  | Pass      |
| VHT80      | MCS0      | 1   | 42  | 5210        | 0.75             | 11.79                         | 24.00                           | -1.40    |  | Pass      |

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

| FCC Band I |           |                 |     |             |                  |                                 |                             |          |   |           |
|------------|-----------|-----------------|-----|-------------|------------------|---------------------------------|-----------------------------|----------|---|-----------|
| Mod.       | Data Rate | N <sub>TX</sub> | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) | - | Pass/Fail |
| 11a        | 6M bps    | 1               | 36  | 5180        | 0.56             | 5.48                            | 11.00                       | -1.40    |   | Pass      |
| 11a        | 6M bps    | 1               | 44  | 5220        | 0.56             | 5.19                            | 11.00                       | -1.40    |   | Pass      |
| 11a        | 6M bps    | 1               | 48  | 5240        | 0.56             | 5.63                            | 11.00                       | -1.40    |   | Pass      |
| HT20       | MCS0      | 1               | 36  | 5180        | 0.26             | 5.22                            | 11.00                       | -1.40    |   | Pass      |
| HT20       | MCS0      | 1               | 44  | 5220        | 0.26             | 5.24                            | 11.00                       | -1.40    |   | Pass      |
| HT20       | MCS0      | 1               | 48  | 5240        | 0.26             | 5.75                            | 11.00                       | -1.40    |   | Pass      |
| HT40       | MCS0      | 1               | 38  | 5190        | 0.45             | -0.63                           | 11.00                       | -1.40    |   | Pass      |
| HT40       | MCS0      | 1               | 46  | 5230        | 0.45             | -0.39                           | 11.00                       | -1.40    |   | Pass      |
| VHT80      | MCS0      | 1               | 42  | 5210        | 0.75             | -5.25                           | 11.00                       | -1.40    |   | Pass      |

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

| Band II |           |                 |     |             |                     |                       |                                    |                                   |                                      |      |
|---------|-----------|-----------------|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--------------------------------------|------|
| Mod.    | Data Rate | N <sub>TX</sub> | 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        | 17.53               | 23.58                 | 23.44                              | 29.44                             | 23.98                                |      |
| 11a     | 6M bps    | 1               | 60  | 5300        | 17.53               | 22.98                 | 23.44                              | 29.44                             | 23.98                                |      |
| 11a     | 6M bps    | 1               | 64  | 5320        | 17.43               | 23.93                 | 23.41                              | 29.41                             | 23.98                                |      |
| HT20    | MCS 0     | 1               | 52  | 5260        | 18.73               | 24.98                 | 23.73                              | 29.73                             | 23.98                                |      |
| HT20    | MCS 0     | 1               | 60  | 5300        | 18.73               | 25.52                 | 23.73                              | 29.73                             | 23.98                                |      |
| HT20    | MCS 0     | 1               | 64  | 5320        | 18.73               | 24.68                 | 23.73                              | 29.73                             | 23.98                                |      |
| HT40    | MCS 0     | 1               | 54  | 5270        | 36.56               | 41.81                 | 23.98                              | 30.00                             | 23.98                                |      |
| HT40    | MCS 0     | 1               | 62  | 5310        | 36.46               | 41.63                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80   | MCS 0     | 1               | 58  | 5290        | 75.76               | 82.96                 | 23.98                              | 30.00                             | 23.98                                |      |

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

| FCC Band II |           |                 |     |             |                  |                               |                                 |          |                        |           |
|-------------|-----------|-----------------|-----|-------------|------------------|-------------------------------|---------------------------------|----------|------------------------|-----------|
| 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               | 52  | 5260        | 0.20             | 15.89                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| 11a         | 6M bps    | 1               | 60  | 5300        | 0.20             | 15.62                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| 11a         | 6M bps    | 1               | 64  | 5320        | 0.20             | 15.56                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| HT20        | MCS 0     | 1               | 52  | 5260        | 0.26             | 15.81                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| HT20        | MCS 0     | 1               | 60  | 5300        | 0.26             | 15.65                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| HT20        | MCS 0     | 1               | 64  | 5320        | 0.26             | 15.64                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| HT40        | MCS 0     | 1               | 54  | 5270        | 0.45             | 13.12                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| HT40        | MCS 0     | 1               | 62  | 5310        | 0.45             | 12.92                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| VHT20       | MCS 0     | 1               | 52  | 5260        | 0.20             | 15.71                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| VHT20       | MCS 0     | 1               | 60  | 5300        | 0.20             | 15.62                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| VHT20       | MCS 0     | 1               | 64  | 5320        | 0.20             | 15.63                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| VHT40       | MCS 0     | 1               | 54  | 5270        | 0.40             | 13.09                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| VHT40       | MCS 0     | 1               | 62  | 5310        | 0.40             | 12.89                         | 23.98                           | -1.60    | 26.99                  | Pass      |
| VHT80       | MCS 0     | 1               | 58  | 5290        | 0.75             | 10.92                         | 23.98                           | -1.60    | 26.99                  | Pass      |

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

| Band II |           |                 |     |             |                  |                                 |                             |          |  |           |
|---------|-----------|-----------------|-----|-------------|------------------|---------------------------------|-----------------------------|----------|--|-----------|
| Mod.    | Data Rate | N <sub>TX</sub> | 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        | 0.56             | 5.90                            | 11.00                       | -1.60    |  | Pass      |
| 11a     | 6M bps    | 1               | 60  | 5300        | 0.56             | 5.18                            | 11.00                       | -1.60    |  | Pass      |
| 11a     | 6M bps    | 1               | 64  | 5320        | 0.56             | 5.58                            | 11.00                       | -1.60    |  | Pass      |
| HT20    | MCS 0     | 1               | 52  | 5260        | 0.26             | 5.44                            | 11.00                       | -1.60    |  | Pass      |
| HT20    | MCS 0     | 1               | 60  | 5300        | 0.26             | 4.96                            | 11.00                       | -1.60    |  | Pass      |
| HT20    | MCS 0     | 1               | 64  | 5320        | 0.26             | 5.75                            | 11.00                       | -1.60    |  | Pass      |
| HT40    | MCS 0     | 1               | 54  | 5270        | 0.45             | -0.35                           | 11.00                       | -1.60    |  | Pass      |
| HT40    | MCS 0     | 1               | 62  | 5310        | 0.45             | -0.67                           | 11.00                       | -1.60    |  | Pass      |
| VHT80   | MCS 0     | 1               | 58  | 5290        | 0.75             | -5.80                           | 11.00                       | -1.60    |  | Pass      |

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

| Band III |           |                 |     |             |                     |                       |                                    |                                   |                                      |      |
|----------|-----------|-----------------|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--------------------------------------|------|
| Mod.     | Data Rate | N <sub>TX</sub> | 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        | 17.48               | 23.53                 | 23.43                              | 29.43                             | 23.98                                |      |
| 11a      | 6M bps    | 1               | 116 | 5580        | 17.48               | 23.53                 | 23.43                              | 29.43                             | 23.98                                |      |
| 11a      | 6M bps    | 1               | 140 | 5700        | 17.58               | 23.38                 | 23.45                              | 29.45                             | 23.98                                |      |
| HT20     | MCS 0     | 1               | 100 | 5500        | 18.83               | 25.38                 | 23.75                              | 29.75                             | 23.98                                |      |
| HT20     | MCS 0     | 1               | 116 | 5580        | 18.78               | 25.28                 | 23.74                              | 29.74                             | 23.98                                |      |
| HT20     | MCS 0     | 1               | 140 | 5700        | 18.78               | 25.57                 | 23.74                              | 29.74                             | 23.98                                |      |
| HT40     | MCS 0     | 1               | 102 | 5510        | 36.56               | 41.81                 | 23.98                              | 30.00                             | 23.98                                |      |
| HT40     | MCS 0     | 1               | 110 | 5550        | 36.56               | 41.90                 | 23.98                              | 30.00                             | 23.98                                |      |
| HT40     | MCS 0     | 1               | 134 | 5670        | 36.56               | 41.90                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1               | 106 | 5530        | 75.76               | 83.28                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1               | 122 | 5610        | 75.88               | 83.44                 | 23.98                              | 30.00                             | 23.98                                |      |

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

| FCC Band III |           |                 |     |             |                  |                               |                                 |          |                        |           |
|--------------|-----------|-----------------|-----|-------------|------------------|-------------------------------|---------------------------------|----------|------------------------|-----------|
| 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        | 0.20             | 16.06                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| 11a          | 6M bps    | 1               | 116 | 5580        | 0.20             | 15.55                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| 11a          | 6M bps    | 1               | 140 | 5700        | 0.20             | 15.02                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| HT20         | MCS 0     | 1               | 100 | 5500        | 0.26             | 15.97                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| HT20         | MCS 0     | 1               | 116 | 5580        | 0.26             | 15.77                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| HT20         | MCS 0     | 1               | 140 | 5700        | 0.26             | 14.75                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| HT40         | MCS 0     | 1               | 102 | 5510        | 0.45             | 13.14                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| HT40         | MCS 0     | 1               | 110 | 5550        | 0.45             | 13.11                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| HT40         | MCS 0     | 1               | 134 | 5670        | 0.45             | 12.43                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT20        | MCS 0     | 1               | 100 | 5500        | 0.20             | 15.95                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT20        | MCS 0     | 1               | 116 | 5580        | 0.20             | 15.75                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT20        | MCS 0     | 1               | 140 | 5700        | 0.20             | 14.74                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT40        | MCS 0     | 1               | 102 | 5510        | 0.40             | 11.34                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT40        | MCS 0     | 1               | 110 | 5550        | 0.40             | 11.22                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT40        | MCS 0     | 1               | 134 | 5670        | 0.40             | 10.61                         | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT80        | MCS 0     | 1               | 106 | 5530        | 0.75             | 8.84                          | 23.98                           | -0.90    | 26.99                  | Pass      |
| VHT80        | MCS 0     | 1               | 122 | 5610        | 0.75             | 12.41                         | 23.98                           | -0.90    | 26.99                  | Pass      |

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

| Band III |           |                 |     |             |                  |                                 |                             |          |  |           |
|----------|-----------|-----------------|-----|-------------|------------------|---------------------------------|-----------------------------|----------|--|-----------|
| Mod.     | Data Rate | N <sub>TX</sub> | 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        | 0.56             | 5.64                            | 11.00                       | -0.90    |  | Pass      |
| 11a      | 6M bps    | 1               | 116 | 5580        | 0.56             | 5.70                            | 11.00                       | -0.90    |  | Pass      |
| 11a      | 6M bps    | 1               | 140 | 5700        | 0.56             | 5.27                            | 11.00                       | -0.90    |  | Pass      |
| HT20     | MCS 0     | 1               | 100 | 5500        | 0.26             | 5.76                            | 11.00                       | -0.90    |  | Pass      |
| HT20     | MCS 0     | 1               | 116 | 5580        | 0.26             | 5.29                            | 11.00                       | -0.90    |  | Pass      |
| HT20     | MCS 0     | 1               | 140 | 5700        | 0.26             | 4.40                            | 11.00                       | -0.90    |  | Pass      |
| HT40     | MCS 0     | 1               | 102 | 5510        | 0.45             | 0.17                            | 11.00                       | -0.90    |  | Pass      |
| HT40     | MCS 0     | 1               | 110 | 5550        | 0.45             | -0.29                           | 11.00                       | -0.90    |  | Pass      |
| HT40     | MCS 0     | 1               | 134 | 5670        | 0.45             | -1.09                           | 11.00                       | -0.90    |  | Pass      |
| VHT80    | MCS 0     | 1               | 106 | 5530        | 0.75             | -8.05                           | 11.00                       | -0.90    |  | Pass      |
| VHT80    | MCS 0     | 1               | 122 | 5610        | 0.75             | -4.64                           | 11.00                       | -0.90    |  | Pass      |



## Appendix B. Radiated Spurious Emission

### Band 1 - 5150~5250MHz

#### 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 36<br>5180MHz |      | 5146.38   | 52.6       | -21.4  | 74         | 40.46    | 33.87    | 11.37  | 33.1   | 167    | 305     | P       | H       |
|                             |      | 5149.76   | 45.9       | -8.1   | 54         | 33.76    | 33.87    | 11.37  | 33.1   | 167    | 305     | A       | H       |
|                             | *    | 5180      | 103.87     | -      | -          | 91.58    | 33.92    | 11.47  | 33.1   | 167    | 305     | P       | H       |
|                             | *    | 5180      | 96.79      | -      | -          | 84.5     | 33.92    | 11.47  | 33.1   | 167    | 305     | A       | H       |
|                             |      | 5146.12   | 53.74      | -20.26 | 74         | 41.6     | 33.87    | 11.37  | 33.1   | 188    | 247     | P       | V       |
|                             |      | 5150      | 44.85      | -9.15  | 54         | 32.71    | 33.87    | 11.37  | 33.1   | 188    | 247     | A       | V       |
|                             | *    | 5180      | 100.58     | -      | -          | 88.29    | 33.92    | 11.47  | 33.1   | 188    | 247     | P       | V       |
|                             | *    | 5180      | 94.44      | -      | -          | 82.15    | 33.92    | 11.47  | 33.1   | 188    | 247     | A       | V       |
| 802.11a<br>CH 44<br>5220MHz |      | 5093.6    | 53.23      | -20.77 | 74         | 41.26    | 33.81    | 11.26  | 33.1   | 145    | 308     | P       | H       |
|                             |      | 5149.24   | 43.67      | -10.33 | 54         | 31.53    | 33.87    | 11.37  | 33.1   | 145    | 308     | A       | H       |
|                             | *    | 5220      | 103.98     | -      | -          | 91.54    | 33.96    | 11.58  | 33.1   | 145    | 308     | P       | H       |
|                             | *    | 5220      | 97.04      | -      | -          | 84.6     | 33.96    | 11.58  | 33.1   | 145    | 308     | A       | H       |
|                             |      | 5404.28   | 52.78      | -21.22 | 74         | 39.9     | 34.2     | 11.78  | 33.1   | 145    | 308     | P       | H       |
|                             |      | 5447.4    | 43.8       | -10.2  | 54         | 30.8     | 34.26    | 11.84  | 33.1   | 145    | 308     | A       | H       |
|                             |      | 5064.74   | 50.93      | -23.07 | 74         | 39.11    | 33.76    | 11.16  | 33.1   | 204    | 246     | P       | V       |
|                             |      | 5148.98   | 41.81      | -12.19 | 54         | 29.67    | 33.87    | 11.37  | 33.1   | 204    | 246     | A       | V       |
|                             | *    | 5220      | 100.58     | -      | -          | 88.14    | 33.96    | 11.58  | 33.1   | 204    | 246     | P       | V       |
|                             | *    | 5220      | 94.03      | -      | -          | 81.59    | 33.96    | 11.58  | 33.1   | 204    | 246     | A       | V       |
|                             |      | 5451.04   | 51.36      | -22.64 | 74         | 38.36    | 34.26    | 11.84  | 33.1   | 204    | 246     | P       | V       |
|                             |      | 5459.72   | 42.56      | -11.44 | 54         | 29.56    | 34.26    | 11.84  | 33.1   | 204    | 246     | A       | V       |



|                             |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-----------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| 802.11a<br>CH 48<br>5240MHz |                                                                                             | 5004.68 | 52.49  | -21.51 | 74 | 40.84 | 33.7  | 11.05 | 33.1 | 159 | 309 | P | H |
|                             |                                                                                             | 5083.2  | 43.8   | -10.2  | 54 | 31.85 | 33.79 | 11.26 | 33.1 | 159 | 309 | A | H |
|                             | *                                                                                           | 5240    | 103.02 | -      | -  | 90.52 | 33.98 | 11.62 | 33.1 | 159 | 309 | P | H |
|                             | *                                                                                           | 5240    | 96.7   | -      | -  | 84.2  | 33.98 | 11.62 | 33.1 | 159 | 309 | A | H |
|                             |                                                                                             | 5395.04 | 53.11  | -20.89 | 74 | 40.23 | 34.2  | 11.78 | 33.1 | 159 | 309 | P | H |
|                             |                                                                                             | 5446.56 | 43.75  | -10.25 | 54 | 30.75 | 34.26 | 11.84 | 33.1 | 159 | 309 | A | H |
|                             |                                                                                             | 5017.68 | 50.17  | -23.83 | 74 | 38.52 | 33.7  | 11.05 | 33.1 | 207 | 248 | P | V |
|                             |                                                                                             | 5112.32 | 41.93  | -12.07 | 54 | 29.94 | 33.83 | 11.26 | 33.1 | 207 | 248 | A | V |
|                             | *                                                                                           | 5240    | 100.09 | -      | -  | 87.59 | 33.98 | 11.62 | 33.1 | 207 | 248 | P | V |
|                             | *                                                                                           | 5240    | 94.14  | -      | -  | 81.64 | 33.98 | 11.62 | 33.1 | 207 | 248 | A | V |
|                             |                                                                                             | 5382.16 | 50.88  | -23.12 | 74 | 38.06 | 34.18 | 11.74 | 33.1 | 207 | 248 | P | V |
|                             |                                                                                             | 5433.12 | 42.81  | -11.19 | 54 | 29.83 | 34.24 | 11.84 | 33.1 | 207 | 248 | A | V |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



## Band 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                | 49.76               | -24.24                  | 74                          | 53.98                   | 37.02                         | 14.61                   | 55.85                      | 152                  | 260                     | P                     | H             |
|                             |                                                                                             | 15540                | 50.13               | -23.87                  | 74                          | 49.74                   | 40.78                         | 16.34                   | 56.73                      | 189                  | 238                     | P                     | H             |
|                             |                                                                                             | 10360                | 50.99               | -23.01                  | 74                          | 55.21                   | 37.02                         | 14.61                   | 55.85                      | 152                  | 260                     | P                     | V             |
|                             |                                                                                             | 15540                | 50.77               | -23.23                  | 74                          | 50.38                   | 40.78                         | 16.34                   | 56.73                      | 189                  | 238                     | P                     | V             |
| 802.11a<br>CH 44<br>5220MHz |                                                                                             | 10440                | 50.39               | -23.61                  | 74                          | 54.58                   | 37.06                         | 14.63                   | 55.88                      | 150                  | 230                     | P                     | H             |
|                             |                                                                                             | 15660                | 54.45               | -19.55                  | 74                          | 53.44                   | 41.07                         | 16.43                   | 56.49                      | 160                  | 225                     | P                     | H             |
|                             |                                                                                             | 10440                | 50.61               | -23.39                  | 74                          | 54.8                    | 37.06                         | 14.63                   | 55.88                      | 150                  | 230                     | P                     | V             |
|                             |                                                                                             | 15660                | 54.82               | -19.18                  | 74                          | 53.81                   | 41.07                         | 16.43                   | 56.49                      | 160                  | 225                     | P                     | V             |
| 802.11a<br>CH 48<br>5240MHz |                                                                                             | 10480                | 50.71               | -23.29                  | 74                          | 54.88                   | 37.09                         | 14.64                   | 55.9                       | 150                  | 289                     | P                     | H             |
|                             |                                                                                             | 15720                | 50.98               | -23.02                  | 74                          | 49.64                   | 41.24                         | 16.45                   | 56.35                      | 150                  | 291                     | P                     | H             |
|                             |                                                                                             | 10480                | 50.51               | -23.49                  | 74                          | 54.68                   | 37.09                         | 14.64                   | 55.9                       | 150                  | 289                     | P                     | V             |
|                             |                                                                                             | 15720                | 50.77               | -23.23                  | 74                          | 49.43                   | 41.24                         | 16.45                   | 56.35                      | 150                  | 291                     | P                     | V             |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**Band 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 |      | 5148.98              | 53.3                | -20.7                   | 74                          | 41.16                     | 33.87                         | 11.37                   | 33.1                       | 144                  | 311                     | P                       | H               |
|                                     |      | 5148.98              | 45.84               | -8.16                   | 54                          | 33.7                      | 33.87                         | 11.37                   | 33.1                       | 144                  | 311                     | A                       | H               |
|                                     | *    | 5180                 | 103.87              | -                       | -                           | 91.58                     | 33.92                         | 11.47                   | 33.1                       | 144                  | 311                     | P                       | H               |
|                                     | *    | 5180                 | 96.83               | -                       | -                           | 84.54                     | 33.92                         | 11.47                   | 33.1                       | 144                  | 311                     | A                       | H               |
|                                     |      | 5105.82              | 53.69               | -20.31                  | 74                          | 41.7                      | 33.83                         | 11.26                   | 33.1                       | 391                  | 245                     | P                       | V               |
|                                     |      | 5150                 | 46.52               | -7.48                   | 54                          | 34.38                     | 33.87                         | 11.37                   | 33.1                       | 391                  | 245                     | A                       | V               |
|                                     | *    | 5180                 | 103.66              | -                       | -                           | 91.37                     | 33.92                         | 11.47                   | 33.1                       | 391                  | 245                     | P                       | V               |
|                                     | *    | 5180                 | 96.93               | -                       | -                           | 84.64                     | 33.92                         | 11.47                   | 33.1                       | 391                  | 245                     | A                       | V               |
| 802.11n<br>HT20<br>CH 44<br>5220MHz |      | 5046.02              | 53.07               | -20.93                  | 74                          | 41.27                     | 33.74                         | 11.16                   | 33.1                       | 163                  | 312                     | P                       | H               |
|                                     |      | 5015.6               | 43.69               | -10.31                  | 54                          | 32.04                     | 33.7                          | 11.05                   | 33.1                       | 163                  | 312                     | A                       | H               |
|                                     | *    | 5220                 | 104.15              | -                       | -                           | 91.71                     | 33.96                         | 11.58                   | 33.1                       | 163                  | 312                     | P                       | H               |
|                                     | *    | 5220                 | 96.85               | -                       | -                           | 84.41                     | 33.96                         | 11.58                   | 33.1                       | 163                  | 312                     | A                       | H               |
|                                     |      | 5439.84              | 52.54               | -21.46                  | 74                          | 39.56                     | 34.24                         | 11.84                   | 33.1                       | 163                  | 312                     | P                       | H               |
|                                     |      | 5459.72              | 43.95               | -10.05                  | 54                          | 30.95                     | 34.26                         | 11.84                   | 33.1                       | 163                  | 312                     | A                       | H               |
|                                     |      | 5062.14              | 52.71               | -21.29                  | 74                          | 40.89                     | 33.76                         | 11.16                   | 33.1                       | 387                  | 255                     | P                       | V               |
|                                     |      | 5143.26              | 43.98               | -10.02                  | 54                          | 31.84                     | 33.87                         | 11.37                   | 33.1                       | 387                  | 255                     | A                       | V               |
|                                     | *    | 5220                 | 105.51              | -                       | -                           | 93.07                     | 33.96                         | 11.58                   | 33.1                       | 387                  | 255                     | P                       | V               |
|                                     | *    | 5220                 | 97.84               | -                       | -                           | 85.4                      | 33.96                         | 11.58                   | 33.1                       | 387                  | 255                     | A                       | V               |
|                                     |      | 5440.68              | 52.37               | -21.63                  | 74                          | 39.39                     | 34.24                         | 11.84                   | 33.1                       | 387                  | 255                     | P                       | V               |
|                                     |      | 5454.4               | 43.9                | -10.1                   | 54                          | 30.9                      | 34.26                         | 11.84                   | 33.1                       | 387                  | 255                     | A                       | V               |



|                                     |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| 802.11n<br>HT20<br>CH 48<br>5240MHz |                                                                                             | 5037.96 | 52.69  | -21.31 | 74 | 40.89 | 33.74 | 11.16 | 33.1 | 163 | 312 | P | H |
|                                     |                                                                                             | 5037.44 | 43.7   | -10.3  | 54 | 31.92 | 33.72 | 11.16 | 33.1 | 163 | 312 | A | H |
|                                     | *                                                                                           | 5240    | 103.01 | -      | -  | 90.51 | 33.98 | 11.62 | 33.1 | 163 | 312 | P | H |
|                                     | *                                                                                           | 5240    | 96.15  | -      | -  | 83.65 | 33.98 | 11.62 | 33.1 | 163 | 312 | A | H |
|                                     |                                                                                             | 5444.6  | 52.82  | -21.18 | 74 | 39.84 | 34.24 | 11.84 | 33.1 | 163 | 312 | P | H |
|                                     |                                                                                             | 5456.92 | 43.82  | -10.18 | 54 | 30.82 | 34.26 | 11.84 | 33.1 | 163 | 312 | A | H |
|                                     |                                                                                             | 5072.8  | 53.79  | -20.21 | 74 | 41.94 | 33.79 | 11.16 | 33.1 | 384 | 277 | P | V |
|                                     |                                                                                             | 5063.96 | 43.77  | -10.23 | 54 | 31.95 | 33.76 | 11.16 | 33.1 | 384 | 277 | A | V |
|                                     | *                                                                                           | 5240    | 105.42 | -      | -  | 92.92 | 33.98 | 11.62 | 33.1 | 384 | 277 | P | V |
|                                     | *                                                                                           | 5240    | 96.71  | -      | -  | 84.21 | 33.98 | 11.62 | 33.1 | 384 | 277 | A | V |
|                                     |                                                                                             | 5445.16 | 52.69  | -21.31 | 74 | 39.71 | 34.24 | 11.84 | 33.1 | 384 | 277 | P | V |
|                                     |                                                                                             | 5456.08 | 43.83  | -10.17 | 54 | 30.83 | 34.26 | 11.84 | 33.1 | 384 | 277 | A | V |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



**Band 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                | 53.75               | -20.25                  | 74                          | 57.97                   | 37.02                         | 14.61                   | 55.85                      | 152                  | 260                     | P                     | H             |
|                                     |                                                                                             | 10360                | 49.38               | -4.62                   | 54                          | 53.6                    | 37.02                         | 14.61                   | 55.85                      | 152                  | 260                     | A                     | H             |
|                                     |                                                                                             | 15540                | 50.65               | -23.35                  | 74                          | 50.26                   | 40.78                         | 16.34                   | 56.73                      | 189                  | 238                     | P                     | H             |
|                                     |                                                                                             | 10360                | 50.72               | -23.28                  | 74                          | 54.94                   | 37.02                         | 14.61                   | 55.85                      | 149                  | 360                     | P                     | V             |
|                                     |                                                                                             | 15540                | 50.9                | -23.1                   | 74                          | 50.51                   | 40.78                         | 16.34                   | 56.73                      | 189                  | 238                     | P                     | V             |
| 802.11n<br>HT20<br>CH 44<br>5220MHz |                                                                                             | 10440                | 54.09               | -19.91                  | 74                          | 58.28                   | 37.06                         | 14.63                   | 55.88                      | 150                  | 230                     | P                     | H             |
|                                     |                                                                                             | 10440                | 48.94               | -5.06                   | 54                          | 53.13                   | 37.06                         | 14.63                   | 55.88                      | 150                  | 230                     | A                     | H             |
|                                     |                                                                                             | 15660                | 50.75               | -23.25                  | 74                          | 49.74                   | 41.07                         | 16.43                   | 56.49                      | 160                  | 225                     | P                     | H             |
|                                     |                                                                                             | 10440                | 50.49               | -23.51                  | 74                          | 54.68                   | 37.06                         | 14.63                   | 55.88                      | 150                  | 230                     | P                     | V             |
|                                     |                                                                                             | 15660                | 50.55               | -23.45                  | 74                          | 49.54                   | 41.07                         | 16.43                   | 56.49                      | 160                  | 225                     | P                     | V             |
| 802.11n<br>HT20<br>CH 48<br>5240MHz |                                                                                             | 10480                | 54.3                | -19.7                   | 74                          | 58.47                   | 37.09                         | 14.64                   | 55.9                       | 150                  | 289                     | P                     | H             |
|                                     |                                                                                             | 10480                | 50.3                | -3.7                    | 54                          | 54.47                   | 37.09                         | 14.64                   | 55.9                       | 150                  | 289                     | A                     | H             |
|                                     |                                                                                             | 15720                | 50.44               | -23.56                  | 74                          | 49.1                    | 41.24                         | 16.45                   | 56.35                      | 150                  | 291                     | P                     | H             |
|                                     |                                                                                             | 10480                | 48.78               | -25.22                  | 74                          | 52.95                   | 37.09                         | 14.64                   | 55.9                       | 150                  | 289                     | P                     | V             |
|                                     |                                                                                             | 15720                | 50.07               | -23.93                  | 74                          | 48.73                   | 41.24                         | 16.45                   | 56.35                      | 150                  | 291                     | P                     | V             |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Band 1 5150~5250MHz

## WIFI 802.11n HT40 (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>HT40<br>CH 38<br>5190MHz |                                                                                             | 5148.46              | 58.4                | -15.6                   | 74                          | 46.26                     | 33.87                         | 11.37                   | 33.1                       | 137                  | 306                     | P                       | H               |
|                                     |                                                                                             | 5150                 | 47.65               | -6.35                   | 54                          | 35.51                     | 33.87                         | 11.37                   | 33.1                       | 137                  | 306                     | A                       | H               |
|                                     | *                                                                                           | 5190                 | 100.8               | -                       | -                           | 88.51                     | 33.92                         | 11.47                   | 33.1                       | 137                  | 306                     | P                       | H               |
|                                     | *                                                                                           | 5190                 | 91.52               | -                       | -                           | 79.23                     | 33.92                         | 11.47                   | 33.1                       | 137                  | 306                     | A                       | H               |
|                                     |                                                                                             | 5425.56              | 52.42               | -21.58                  | 74                          | 39.52                     | 34.22                         | 11.78                   | 33.1                       | 137                  | 306                     | P                       | H               |
|                                     |                                                                                             | 5456.92              | 42.03               | -11.97                  | 54                          | 29.03                     | 34.26                         | 11.84                   | 33.1                       | 137                  | 306                     | A                       | H               |
|                                     |                                                                                             | 5147.42              | 55.95               | -18.05                  | 74                          | 43.81                     | 33.87                         | 11.37                   | 33.1                       | 157                  | 273                     | P                       | V               |
|                                     |                                                                                             | 5150                 | 47.24               | -6.76                   | 54                          | 35.1                      | 33.87                         | 11.37                   | 33.1                       | 157                  | 273                     | A                       | V               |
|                                     | *                                                                                           | 5190                 | 96.7                | -                       | -                           | 84.41                     | 33.92                         | 11.47                   | 33.1                       | 157                  | 273                     | P                       | V               |
|                                     | *                                                                                           | 5190                 | 88.99               | -                       | -                           | 76.7                      | 33.92                         | 11.47                   | 33.1                       | 157                  | 273                     | A                       | V               |
|                                     |                                                                                             | 5401.76              | 52.66               | -21.34                  | 74                          | 39.78                     | 34.2                          | 11.78                   | 33.1                       | 157                  | 273                     | P                       | V               |
|                                     |                                                                                             | 5393.08              | 41.71               | -12.29                  | 54                          | 28.85                     | 34.18                         | 11.78                   | 33.1                       | 157                  | 273                     | A                       | V               |
| 802.11n<br>HT40<br>CH 46<br>5230MHz |                                                                                             | 5047.58              | 52.31               | -21.69                  | 74                          | 40.51                     | 33.74                         | 11.16                   | 33.1                       | 158                  | 306                     | P                       | H               |
|                                     |                                                                                             | 5149.5               | 42.49               | -11.51                  | 54                          | 30.35                     | 33.87                         | 11.37                   | 33.1                       | 158                  | 306                     | A                       | H               |
|                                     | *                                                                                           | 5230                 | 99.54               | -                       | -                           | 87.08                     | 33.98                         | 11.58                   | 33.1                       | 158                  | 306                     | P                       | H               |
|                                     | *                                                                                           | 5230                 | 90.69               | -                       | -                           | 78.23                     | 33.98                         | 11.58                   | 33.1                       | 158                  | 306                     | A                       | H               |
|                                     |                                                                                             | 5389.92              | 52.52               | -21.48                  | 74                          | 39.66                     | 34.18                         | 11.78                   | 33.1                       | 158                  | 306                     | P                       | H               |
|                                     |                                                                                             | 5436.96              | 41.63               | -12.37                  | 54                          | 28.65                     | 34.24                         | 11.84                   | 33.1                       | 158                  | 306                     | A                       | H               |
|                                     |                                                                                             | 5143.26              | 53.25               | -20.75                  | 74                          | 41.11                     | 33.87                         | 11.37                   | 33.1                       | 157                  | 275                     | P                       | V               |
|                                     |                                                                                             | 5143                 | 42.5                | -11.5                   | 54                          | 30.36                     | 33.87                         | 11.37                   | 33.1                       | 157                  | 275                     | A                       | V               |
|                                     | *                                                                                           | 5230                 | 97.81               | -                       | -                           | 85.35                     | 33.98                         | 11.58                   | 33.1                       | 157                  | 275                     | P                       | V               |
|                                     | *                                                                                           | 5230                 | 90.69               | -                       | -                           | 78.23                     | 33.98                         | 11.58                   | 33.1                       | 157                  | 275                     | A                       | V               |
|                                     |                                                                                             | 5428.56              | 51.82               | -22.18                  | 74                          | 38.84                     | 34.24                         | 11.84                   | 33.1                       | 157                  | 275                     | P                       | V               |
|                                     |                                                                                             | 5452.8               | 41.71               | -12.29                  | 54                          | 28.71                     | 34.26                         | 11.84                   | 33.1                       | 157                  | 275                     | A                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



**Band 1 5150~5250MHz**  
**WIFI 802.11n HT40 (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>HT40<br>CH 38<br>5190MHz |                                                                                             | 10380                | 48.76               | -25.24                  | 74                          | 52.97                   | 37.03                         | 14.62                   | 55.86                      | 150                  | 360                     | P                     | H             |
|                                     |                                                                                             | 15570                | 50.41               | -23.59                  | 74                          | 49.83                   | 40.87                         | 16.37                   | 56.66                      | 155                  | 360                     | P                     | H             |
|                                     |                                                                                             | 10380                | 50.62               | -23.38                  | 74                          | 54.83                   | 37.03                         | 14.62                   | 55.86                      | 150                  | 360                     | P                     | V             |
|                                     |                                                                                             | 15570                | 49.83               | -24.17                  | 74                          | 49.25                   | 40.87                         | 16.37                   | 56.66                      | 155                  | 360                     | P                     | V             |
| 802.11n<br>HT40<br>CH 46<br>5230MHz |                                                                                             | 10460                | 50.12               | -23.88                  | 74                          | 54.29                   | 37.07                         | 14.64                   | 55.88                      | 150                  | 360                     | P                     | H             |
|                                     |                                                                                             | 15690                | 50.67               | -23.33                  | 74                          | 49.48                   | 41.16                         | 16.45                   | 56.42                      | 150                  | 225                     | P                     | H             |
|                                     |                                                                                             | 10460                | 50.96               | -23.04                  | 74                          | 55.13                   | 37.07                         | 14.64                   | 55.88                      | 150                  | 360                     | P                     | V             |
|                                     |                                                                                             | 15690                | 50.61               | -23.39                  | 74                          | 49.42                   | 41.16                         | 16.45                   | 56.42                      | 150                  | 225                     | P                     | V             |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**Band 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 |                                                                                             | 5141.18              | 58.51               | -15.49                  | 74                          | 46.37                   | 33.87                         | 11.37                   | 33.1                       | 144                  | 303                     | P                     | H             |
|                                       |                                                                                             | 5144.82              | 50.52               | -3.48                   | 54                          | 38.38                   | 33.87                         | 11.37                   | 33.1                       | 144                  | 303                     | A                     | H             |
|                                       | *                                                                                           | 5210                 | 96.36               | -                       | -                           | 83.92                   | 33.96                         | 11.58                   | 33.1                       | 144                  | 303                     | P                     | H             |
|                                       | *                                                                                           | 5210                 | 89.58               | -                       | -                           | 77.14                   | 33.96                         | 11.58                   | 33.1                       | 144                  | 303                     | A                     | H             |
|                                       |                                                                                             | 5433.6               | 52.02               | -21.98                  | 74                          | 39.04                   | 34.24                         | 11.84                   | 33.1                       | 144                  | 303                     | P                     | H             |
|                                       |                                                                                             | 5453.28              | 44.08               | -9.92                   | 54                          | 31.08                   | 34.26                         | 11.84                   | 33.1                       | 144                  | 303                     | A                     | H             |
|                                       |                                                                                             | 5145.6               | 55.42               | -18.58                  | 74                          | 43.28                   | 33.87                         | 11.37                   | 33.1                       | 363                  | 290                     | P                     | V             |
|                                       |                                                                                             | 5147.42              | 47.75               | -6.25                   | 54                          | 35.61                   | 33.87                         | 11.37                   | 33.1                       | 363                  | 290                     | A                     | V             |
|                                       | *                                                                                           | 5210                 | 94.05               | -                       | -                           | 81.61                   | 33.96                         | 11.58                   | 33.1                       | 363                  | 290                     | P                     | V             |
|                                       | *                                                                                           | 5210                 | 87.76               | -                       | -                           | 75.32                   | 33.96                         | 11.58                   | 33.1                       | 363                  | 290                     | A                     | V             |
|                                       |                                                                                             | 5454.68              | 52.27               | -21.73                  | 74                          | 39.27                   | 34.26                         | 11.84                   | 33.1                       | 363                  | 290                     | P                     | V             |
|                                       |                                                                                             | 5446.84              | 44.59               | -9.41                   | 54                          | 31.59                   | 34.26                         | 11.84                   | 33.1                       | 363                  | 290                     | A                     | V             |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Band 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                | 50.05               | -23.95                  | 74                          | 54.24                   | 37.05                         | 14.63                   | 55.87                      | 150                  | 230                     | P                     | H             |
| VHT80             |                                                                                             | 15630                | 49.35               | -24.65                  | 74                          | 48.44                   | 41.03                         | 16.4                    | 56.52                      | 160                  | 225                     | P                     | H             |
| CH 42             |                                                                                             | 10420                | 50.44               | -23.56                  | 74                          | 54.63                   | 37.05                         | 14.63                   | 55.87                      | 150                  | 230                     | P                     | V             |
| 5210MHz           |                                                                                             | 15630                | 49.98               | -24.02                  | 74                          | 49.07                   | 41.03                         | 16.4                    | 56.52                      | 160                  | 225                     | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Band 2 - 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 |      | 5150      | 52.39      | -21.61 | 74         | 40.25    | 33.87    | 11.37  | 33.1   | 167    | 304     | P       | H       |
|                             |      | 5048.65   | 43.95      | -10.05 | 54         | 32.15    | 33.74    | 11.16  | 33.1   | 167    | 304     | A       | H       |
|                             | *    | 5260      | 102.79     | -      | -          | 90.25    | 34.02    | 11.62  | 33.1   | 167    | 304     | P       | H       |
|                             | *    | 5260      | 96.7       | -      | -          | 84.16    | 34.02    | 11.62  | 33.1   | 167    | 304     | A       | H       |
|                             |      | 5443.92   | 52.46      | -21.54 | 74         | 39.48    | 34.24    | 11.84  | 33.1   | 167    | 304     | P       | H       |
|                             |      | 5456.88   | 43.83      | -10.17 | 54         | 30.83    | 34.26    | 11.84  | 33.1   | 167    | 304     | A       | H       |
|                             |      | 5050.4    | 51.74      | -22.26 | 74         | 39.94    | 33.74    | 11.16  | 33.1   | 375    | 259     | P       | V       |
|                             |      | 5116.9    | 42.05      | -11.95 | 54         | 29.95    | 33.83    | 11.37  | 33.1   | 375    | 259     | A       | V       |
|                             | *    | 5260      | 101.93     | -      | -          | 89.39    | 34.02    | 11.62  | 33.1   | 375    | 259     | P       | V       |
|                             | *    | 5260      | 96.1       | -      | -          | 83.56    | 34.02    | 11.62  | 33.1   | 375    | 259     | A       | V       |
|                             |      | 5443.68   | 52.85      | -21.15 | 74         | 39.87    | 34.24    | 11.84  | 33.1   | 375    | 259     | P       | V       |
|                             |      | 5429.52   | 42.7       | -11.3  | 54         | 29.72    | 34.24    | 11.84  | 33.1   | 375    | 259     | A       | V       |
| 802.11a<br>CH 60<br>5300MHz |      | 5041.3    | 52.43      | -21.57 | 74         | 40.63    | 33.74    | 11.16  | 33.1   | 156    | 302     | P       | H       |
|                             |      | 5066.15   | 43.88      | -10.12 | 54         | 32.06    | 33.76    | 11.16  | 33.1   | 156    | 302     | A       | H       |
|                             | *    | 5300      | 103.15     | -      | -          | 90.52    | 34.07    | 11.66  | 33.1   | 156    | 302     | P       | H       |
|                             | *    | 5300      | 96.64      | -      | -          | 84.01    | 34.07    | 11.66  | 33.1   | 156    | 302     | A       | H       |
|                             |      | 5454.96   | 52.66      | -21.34 | 74         | 39.66    | 34.26    | 11.84  | 33.1   | 156    | 302     | P       | H       |
|                             |      | 5452.56   | 43.99      | -10.01 | 54         | 30.99    | 34.26    | 11.84  | 33.1   | 156    | 302     | A       | H       |
|                             |      | 5086.8    | 50.81      | -23.19 | 74         | 38.86    | 33.79    | 11.26  | 33.1   | 375    | 259     | P       | V       |
|                             |      | 5110.95   | 41.98      | -12.02 | 54         | 29.99    | 33.83    | 11.26  | 33.1   | 375    | 259     | A       | V       |
|                             | *    | 5300      | 102.48     | -      | -          | 89.85    | 34.07    | 11.66  | 33.1   | 375    | 259     | P       | V       |
|                             | *    | 5300      | 95.95      | -      | -          | 83.32    | 34.07    | 11.66  | 33.1   | 375    | 259     | A       | V       |
|                             |      | 5356.56   | 50.89      | -23.11 | 74         | 38.12    | 34.13    | 11.74  | 33.1   | 375    | 259     | P       | V       |
|                             |      | 5413.68   | 42.83      | -11.17 | 54         | 29.93    | 34.22    | 11.78  | 33.1   | 375    | 259     | A       | V       |



|                                                  |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|--------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11a</b><br><b>CH 64</b><br><b>5320MHz</b> | *                                                                                           | 5320    | 102.1  | -      | -  | 89.41 | 34.09 | 11.7  | 33.1 | 157 | 305 | P | H |
|                                                  | *                                                                                           | 5320    | 96.19  | -      | -  | 83.5  | 34.09 | 11.7  | 33.1 | 157 | 305 | A | H |
|                                                  |                                                                                             | 5434.08 | 53.56  | -20.44 | 74 | 40.58 | 34.24 | 11.84 | 33.1 | 157 | 305 | P | H |
|                                                  |                                                                                             | 5350.24 | 44.29  | -9.71  | 54 | 31.52 | 34.13 | 11.74 | 33.1 | 157 | 305 | A | H |
|                                                  | *                                                                                           | 5320    | 101.91 | -      | -  | 89.22 | 34.09 | 11.7  | 33.1 | 375 | 261 | P | V |
|                                                  | *                                                                                           | 5320    | 95.05  | -      | -  | 82.36 | 34.09 | 11.7  | 33.1 | 375 | 261 | A | V |
|                                                  |                                                                                             | 5358.56 | 52.3   | -21.7  | 74 | 39.53 | 34.13 | 11.74 | 33.1 | 375 | 261 | P | V |
|                                                  |                                                                                             | 5350.72 | 44.01  | -9.99  | 54 | 31.24 | 34.13 | 11.74 | 33.1 | 375 | 261 | A | V |
| <b>Remark</b>                                    | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



## Band 2 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                | 54.55               | -19.45                  | 74                          | 58.7                    | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | P                     | H             |
|                             |                                                                                             | 10520                | 50.53               | -3.47                   | 54                          | 54.68                   | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | A                     | H             |
|                             |                                                                                             | 15780                | 50.9                | -23.1                   | 74                          | 49.28                   | 41.36                         | 16.51                   | 56.25                      | 159                  | 345                     | P                     | H             |
|                             |                                                                                             | 10520                | 50.66               | -23.34                  | 74                          | 54.81                   | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | P                     | V             |
|                             |                                                                                             | 15780                | 50.64               | -23.36                  | 74                          | 49.02                   | 41.36                         | 16.51                   | 56.25                      | 159                  | 345                     | P                     | V             |
| 802.11a<br>CH 60<br>5300MHz |                                                                                             | 10600                | 50.26               | -23.74                  | 74                          | 54.37                   | 37.16                         | 14.67                   | 55.94                      | 185                  | 215                     | P                     | H             |
|                             |                                                                                             | 15900                | 50.65               | -23.35                  | 74                          | 48.42                   | 41.65                         | 16.59                   | 56.01                      | 196                  | 190                     | P                     | H             |
|                             |                                                                                             | 10600                | 49.74               | -24.26                  | 74                          | 53.85                   | 37.16                         | 14.67                   | 55.94                      | 185                  | 215                     | P                     | V             |
|                             |                                                                                             | 15900                | 50.49               | -23.51                  | 74                          | 48.26                   | 41.65                         | 16.59                   | 56.01                      | 196                  | 190                     | P                     | V             |
| 802.11a<br>CH 64<br>5320MHz |                                                                                             | 10640                | 49.73               | -24.27                  | 74                          | 53.83                   | 37.18                         | 14.68                   | 55.96                      | 152                  | 135                     | P                     | H             |
|                             |                                                                                             | 15960                | 50.66               | -23.34                  | 74                          | 48.07                   | 41.82                         | 16.64                   | 55.87                      | 173                  | 245                     | P                     | H             |
|                             |                                                                                             | 10640                | 50.69               | -23.31                  | 74                          | 54.79                   | 37.18                         | 14.68                   | 55.96                      | 152                  | 135                     | P                     | V             |
|                             |                                                                                             | 15960                | 50.28               | -23.72                  | 74                          | 47.69                   | 41.82                         | 16.64                   | 55.87                      | 173                  | 245                     | P                     | V             |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Band 2 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 ) |
|-------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 52<br>5260MHz |      | 5113.4               | 50.35               | -23.65                  | 74                          | 38.36                     | 33.83                         | 11.26                   | 33.1                       | 100                  | 215                     | P                       | H               |
|                                     |      | 5139.65              | 45.02               | -8.98                   | 54                          | 32.88                     | 33.87                         | 11.37                   | 33.1                       | 100                  | 215                     | A                       | H               |
|                                     | *    | 5260                 | 101.68              | -                       | -                           | 89.14                     | 34.02                         | 11.62                   | 33.1                       | 100                  | 215                     | P                       | H               |
|                                     | *    | 5260                 | 95.64               | -                       | -                           | 83.1                      | 34.02                         | 11.62                   | 33.1                       | 100                  | 215                     | A                       | H               |
|                                     |      | 5356.32              | 50.64               | -23.36                  | 74                          | 37.87                     | 34.13                         | 11.74                   | 33.1                       | 100                  | 215                     | P                       | H               |
|                                     |      | 5452.56              | 44.44               | -9.56                   | 54                          | 31.44                     | 34.26                         | 11.84                   | 33.1                       | 100                  | 215                     | A                       | H               |
|                                     |      | 5020.3               | 53.01               | -20.99                  | 74                          | 41.36                     | 33.7                          | 11.05                   | 33.1                       | 384                  | 277                     | P                       | V               |
|                                     |      | 5093.45              | 43.91               | -10.09                  | 54                          | 31.94                     | 33.81                         | 11.26                   | 33.1                       | 384                  | 277                     | A                       | V               |
|                                     | *    | 5260                 | 104.4               | -                       | -                           | 91.86                     | 34.02                         | 11.62                   | 33.1                       | 384                  | 277                     | P                       | V               |
|                                     | *    | 5260                 | 97.14               | -                       | -                           | 84.6                      | 34.02                         | 11.62                   | 33.1                       | 384                  | 277                     | A                       | V               |
|                                     |      | 5436.24              | 52.48               | -21.52                  | 74                          | 39.5                      | 34.24                         | 11.84                   | 33.1                       | 384                  | 277                     | P                       | V               |
|                                     |      | 5455.44              | 44.02               | -9.98                   | 54                          | 31.02                     | 34.26                         | 11.84                   | 33.1                       | 384                  | 277                     | A                       | V               |
| 802.11n<br>HT20<br>CH 60<br>5300MHz |      | 5107.45              | 52.89               | -21.11                  | 74                          | 40.9                      | 33.83                         | 11.26                   | 33.1                       | 100                  | 55                      | P                       | H               |
|                                     |      | 5059.5               | 45.59               | -8.41                   | 54                          | 33.77                     | 33.76                         | 11.16                   | 33.1                       | 100                  | 55                      | A                       | H               |
|                                     | *    | 5300                 | 102.59              | -                       | -                           | 89.96                     | 34.07                         | 11.66                   | 33.1                       | 100                  | 55                      | P                       | H               |
|                                     | *    | 5300                 | 95.49               | -                       | -                           | 82.86                     | 34.07                         | 11.66                   | 33.1                       | 100                  | 55                      | A                       | H               |
|                                     |      | 5458.32              | 51.27               | -22.73                  | 74                          | 38.27                     | 34.26                         | 11.84                   | 33.1                       | 100                  | 55                      | P                       | H               |
|                                     |      | 5432.64              | 44.69               | -9.31                   | 54                          | 31.71                     | 34.24                         | 11.84                   | 33.1                       | 100                  | 55                      | A                       | H               |
|                                     |      | 5113.75              | 52.54               | -21.46                  | 74                          | 40.55                     | 33.83                         | 11.26                   | 33.1                       | 384                  | 277                     | P                       | V               |
|                                     |      | 5091                 | 43.96               | -10.04                  | 54                          | 31.99                     | 33.81                         | 11.26                   | 33.1                       | 384                  | 277                     | A                       | V               |
|                                     | *    | 5300                 | 104.49              | -                       | -                           | 91.86                     | 34.07                         | 11.66                   | 33.1                       | 384                  | 277                     | P                       | V               |
|                                     | *    | 5300                 | 97.03               | -                       | -                           | 84.4                      | 34.07                         | 11.66                   | 33.1                       | 384                  | 277                     | A                       | V               |
|                                     |      | 5390.16              | 52.03               | -21.97                  | 74                          | 39.17                     | 34.18                         | 11.78                   | 33.1                       | 384                  | 277                     | P                       | V               |
|                                     |      | 5351.04              | 44.2                | -9.8                    | 54                          | 31.43                     | 34.13                         | 11.74                   | 33.1                       | 384                  | 277                     | A                       | V               |



|                                               |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-----------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n<br/>HT20<br/>CH 64<br/>5320MHz</b> | *                                                                                           | 5320    | 102.3  | -      | -  | 89.61 | 34.09 | 11.7  | 33.1 | 100 | 66  | P | H |
|                                               | *                                                                                           | 5320    | 95.6   | -      | -  | 82.91 | 34.09 | 11.7  | 33.1 | 100 | 66  | A | H |
|                                               |                                                                                             | 5352.48 | 53.28  | -20.72 | 74 | 40.51 | 34.13 | 11.74 | 33.1 | 100 | 66  | P | H |
|                                               |                                                                                             | 5350.08 | 45.21  | -8.79  | 54 | 32.44 | 34.13 | 11.74 | 33.1 | 100 | 66  | A | H |
|                                               | *                                                                                           | 5320    | 105.62 | -      | -  | 92.93 | 34.09 | 11.7  | 33.1 | 367 | 255 | P | V |
|                                               | *                                                                                           | 5320    | 97.49  | -      | -  | 84.8  | 34.09 | 11.7  | 33.1 | 367 | 255 | A | V |
|                                               |                                                                                             | 5351.84 | 53.88  | -20.12 | 74 | 41.11 | 34.13 | 11.74 | 33.1 | 367 | 255 | P | V |
|                                               |                                                                                             | 5350.08 | 46.31  | -7.69  | 54 | 33.54 | 34.13 | 11.74 | 33.1 | 367 | 255 | A | V |
| <b>Remark</b>                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



**Band 2 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<br>HT20<br>CH 52<br>5260MHz |                                                                                             | 10520                | 54.91               | -19.09                  | 74                          | 59.06                   | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | P                     | H             |
|                                     |                                                                                             | 10520                | 49.97               | -4.03                   | 54                          | 54.12                   | 37.11                         | 14.65                   | 55.91                      | 151                  | 360                     | A                     | H             |
|                                     |                                                                                             | 15780                | 50.81               | -23.19                  | 74                          | 49.19                   | 41.36                         | 16.51                   | 56.25                      | 159                  | 345                     | P                     | H             |
|                                     |                                                                                             | 10520                | 50.85               | -23.15                  | 74                          | 55                      | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | P                     | V             |
|                                     |                                                                                             | 10520                | 48.6                | -5.4                    | 54                          | 52.75                   | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | A                     | V             |
|                                     |                                                                                             | 15780                | 50.42               | -23.58                  | 74                          | 48.8                    | 41.36                         | 16.51                   | 56.25                      | 159                  | 345                     | P                     | V             |
| 802.11n<br>HT20<br>CH 60<br>5300MHz |                                                                                             | 10600                | 54.72               | -19.28                  | 74                          | 58.83                   | 37.16                         | 14.67                   | 55.94                      | 185                  | 215                     | P                     | H             |
|                                     |                                                                                             | 10600                | 50.45               | -3.55                   | 54                          | 54.56                   | 37.16                         | 14.67                   | 55.94                      | 185                  | 215                     | A                     | H             |
|                                     |                                                                                             | 15900                | 50.96               | -23.04                  | 74                          | 48.73                   | 41.65                         | 16.59                   | 56.01                      | 196                  | 190                     | P                     | H             |
|                                     |                                                                                             | 10600                | 54.52               | -19.48                  | 74                          | 58.63                   | 37.16                         | 14.67                   | 55.94                      | 185                  | 215                     | P                     | V             |
|                                     |                                                                                             | 10600                | 48.34               | -5.66                   | 54                          | 52.45                   | 37.16                         | 14.67                   | 55.94                      | 185                  | 215                     | A                     | V             |
|                                     |                                                                                             | 15900                | 50.54               | -23.46                  | 74                          | 48.31                   | 41.65                         | 16.59                   | 56.01                      | 196                  | 190                     | P                     | V             |
| 802.11n<br>HT20<br>CH 64<br>5320MHz |                                                                                             | 10520                | 55.44               | -18.56                  | 74                          | 59.59                   | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | P                     | H             |
|                                     |                                                                                             | 10520                | 50.31               | -3.69                   | 54                          | 54.46                   | 37.11                         | 14.65                   | 55.91                      | 150                  | 220                     | A                     | H             |
|                                     |                                                                                             | 15780                | 50.45               | -23.55                  | 74                          | 48.83                   | 41.36                         | 16.51                   | 56.25                      | 159                  | 345                     | P                     | H             |
|                                     |                                                                                             | 10640                | 49.84               | -24.16                  | 74                          | 53.94                   | 37.18                         | 14.68                   | 55.96                      | 152                  | 135                     | P                     | V             |
|                                     |                                                                                             | 15960                | 50.56               | -23.44                  | 74                          | 47.97                   | 41.82                         | 16.64                   | 55.87                      | 173                  | 245                     | P                     | V             |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Band 2 5250~5350MHz

## WIFI 802.11n HT40 (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>HT40<br>CH 54<br>5270MHz |                                                                                             | 5033.8               | 52.74               | -21.26                  | 74                          | 41.07                     | 33.72                         | 11.05                   | 33.1                       | 158                  | 303                     | P                       | H               |
|                                     |                                                                                             | 5134.16              | 42.32               | -11.68                  | 54                          | 30.2                      | 33.85                         | 11.37                   | 33.1                       | 158                  | 303                     | A                       | H               |
|                                     | *                                                                                           | 5270                 | 100.62              | -                       | -                           | 88.08                     | 34.02                         | 11.62                   | 33.1                       | 158                  | 303                     | P                       | H               |
|                                     | *                                                                                           | 5270                 | 91.79               | -                       | -                           | 79.25                     | 34.02                         | 11.62                   | 33.1                       | 158                  | 303                     | A                       | H               |
|                                     |                                                                                             | 5456.16              | 52.82               | -21.18                  | 74                          | 39.82                     | 34.26                         | 11.84                   | 33.1                       | 158                  | 303                     | P                       | H               |
|                                     |                                                                                             | 5354.64              | 41.87               | -12.13                  | 54                          | 29.1                      | 34.13                         | 11.74                   | 33.1                       | 158                  | 303                     | A                       | H               |
|                                     |                                                                                             | 5007.8               | 52.33               | -21.67                  | 74                          | 40.68                     | 33.7                          | 11.05                   | 33.1                       | 150                  | 268                     | P                       | V               |
|                                     |                                                                                             | 5067.08              | 42.32               | -11.68                  | 54                          | 30.5                      | 33.76                         | 11.16                   | 33.1                       | 150                  | 268                     | A                       | V               |
|                                     | *                                                                                           | 5270                 | 97.09               | -                       | -                           | 84.55                     | 34.02                         | 11.62                   | 33.1                       | 150                  | 268                     | P                       | V               |
|                                     | *                                                                                           | 5270                 | 89.91               | -                       | -                           | 77.37                     | 34.02                         | 11.62                   | 33.1                       | 150                  | 268                     | A                       | V               |
|                                     |                                                                                             | 5435.76              | 52.75               | -21.25                  | 74                          | 39.77                     | 34.24                         | 11.84                   | 33.1                       | 150                  | 268                     | P                       | V               |
|                                     |                                                                                             | 5453.04              | 41.64               | -12.36                  | 54                          | 28.64                     | 34.26                         | 11.84                   | 33.1                       | 150                  | 268                     | A                       | V               |
| 802.11n<br>HT40<br>CH 62<br>5310MHz |                                                                                             | 5128.1               | 52.86               | -21.14                  | 74                          | 40.74                     | 33.85                         | 11.37                   | 33.1                       | 164                  | 312                     | P                       | H               |
|                                     |                                                                                             | 5099.75              | 42.45               | -11.55                  | 54                          | 30.48                     | 33.81                         | 11.26                   | 33.1                       | 164                  | 312                     | A                       | H               |
|                                     | *                                                                                           | 5310                 | 98.78               | -                       | -                           | 86.09                     | 34.09                         | 11.7                    | 33.1                       | 164                  | 312                     | P                       | H               |
|                                     | *                                                                                           | 5310                 | 90.41               | -                       | -                           | 77.72                     | 34.09                         | 11.7                    | 33.1                       | 164                  | 312                     | A                       | H               |
|                                     |                                                                                             | 5350.08              | 55.98               | -18.02                  | 74                          | 43.21                     | 34.13                         | 11.74                   | 33.1                       | 164                  | 312                     | P                       | H               |
|                                     |                                                                                             | 5350.56              | 47.47               | -6.53                   | 54                          | 34.7                      | 34.13                         | 11.74                   | 33.1                       | 164                  | 312                     | A                       | H               |
|                                     |                                                                                             | 5136.85              | 52.87               | -21.13                  | 74                          | 40.75                     | 33.85                         | 11.37                   | 33.1                       | 150                  | 268                     | P                       | V               |
|                                     |                                                                                             | 5065.45              | 42.44               | -11.56                  | 54                          | 30.62                     | 33.76                         | 11.16                   | 33.1                       | 150                  | 268                     | A                       | V               |
|                                     | *                                                                                           | 5310                 | 97.5                | -                       | -                           | 84.81                     | 34.09                         | 11.7                    | 33.1                       | 150                  | 268                     | P                       | V               |
|                                     | *                                                                                           | 5310                 | 89.92               | -                       | -                           | 77.23                     | 34.09                         | 11.7                    | 33.1                       | 150                  | 268                     | A                       | V               |
|                                     |                                                                                             | 5350.32              | 54.41               | -19.59                  | 74                          | 41.64                     | 34.13                         | 11.74                   | 33.1                       | 150                  | 268                     | P                       | V               |
|                                     |                                                                                             | 5350.08              | 46.14               | -7.86                   | 54                          | 33.37                     | 34.13                         | 11.74                   | 33.1                       | 150                  | 268                     | A                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



**Band 2 5250~5350MHz**  
**WIFI 802.11n HT40 (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>HT40<br>CH 54<br>5270MHz |      | 10540                                                                                       | 50.54               | -23.46                  | 74                          | 54.68                   | 37.12                         | 14.66                   | 55.92                      | 150                  | 220                     | P                     | H             |
|                                     |      | 15810                                                                                       | 50.33               | -23.67                  | 74                          | 48.54                   | 41.44                         | 16.53                   | 56.18                      | 168                  | 345                     | P                     | H             |
|                                     |      | 10540                                                                                       | 50.06               | -23.94                  | 74                          | 54.2                    | 37.12                         | 14.66                   | 55.92                      | 150                  | 220                     | P                     | V             |
|                                     |      | 15810                                                                                       | 50.04               | -23.96                  | 74                          | 48.25                   | 41.44                         | 16.53                   | 56.18                      | 168                  | 345                     | P                     | V             |
| 802.11n<br>HT40<br>CH 62<br>5310MHz |      | 10620                                                                                       | 50.89               | -23.11                  | 74                          | 54.99                   | 37.17                         | 14.68                   | 55.95                      | 150                  | 220                     | P                     | H             |
|                                     |      | 15930                                                                                       | 50.14               | -23.86                  | 74                          | 47.73                   | 41.73                         | 16.62                   | 55.94                      | 160                  | 100                     | P                     | H             |
|                                     |      | 10620                                                                                       | 50.09               | -23.91                  | 74                          | 54.19                   | 37.17                         | 14.68                   | 55.95                      | 150                  | 220                     | P                     | V             |
|                                     |      | 15930                                                                                       | 50.51               | -23.49                  | 74                          | 48.1                    | 41.73                         | 16.62                   | 55.94                      | 160                  | 100                     | P                     | V             |
| <b>Remark</b>                       |      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**Band 2 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> |                                                                                             | 5056.35              | 55.68               | -18.32                  | 74                          | 41.45                     | 33.76                         | 11.16                   | 30.69                      | 144                  | 306                     | P                       | H               |
|                                                 |                                                                                             | 5038.15              | 47.01               | -6.99                   | 54                          | 32.8                      | 33.74                         | 11.16                   | 30.69                      | 144                  | 306                     | A                       | H               |
|                                                 | *                                                                                           | 5290                 | 96.66               | -                       | -                           | 81.65                     | 34.05                         | 11.66                   | 30.7                       | 144                  | 306                     | P                       | H               |
|                                                 | *                                                                                           | 5290                 | 90.13               | -                       | -                           | 75.12                     | 34.05                         | 11.66                   | 30.7                       | 144                  | 306                     | A                       | H               |
|                                                 |                                                                                             | 5362.8               | 58.07               | -15.93                  | 74                          | 42.88                     | 34.15                         | 11.74                   | 30.7                       | 144                  | 306                     | P                       | H               |
|                                                 |                                                                                             | 5350.32              | 50.97               | -3.03                   | 54                          | 35.8                      | 34.13                         | 11.74                   | 30.7                       | 144                  | 306                     | A                       | H               |
|                                                 |                                                                                             | 5109.55              | 56.45               | -17.55                  | 74                          | 42.05                     | 33.83                         | 11.26                   | 30.69                      | 400                  | 108                     | P                       | V               |
|                                                 |                                                                                             | 5007.7               | 47                  | -7                      | 54                          | 32.94                     | 33.7                          | 11.05                   | 30.69                      | 400                  | 108                     | A                       | V               |
|                                                 | *                                                                                           | 5290                 | 95.07               | -                       | -                           | 80.06                     | 34.05                         | 11.66                   | 30.7                       | 400                  | 108                     | P                       | V               |
|                                                 | *                                                                                           | 5290                 | 88.77               | -                       | -                           | 73.76                     | 34.05                         | 11.66                   | 30.7                       | 400                  | 108                     | A                       | V               |
|                                                 |                                                                                             | 5360.88              | 54.91               | -19.09                  | 74                          | 39.72                     | 34.15                         | 11.74                   | 30.7                       | 400                  | 108                     | P                       | V               |
|                                                 |                                                                                             | 5350.08              | 47.85               | -6.15                   | 54                          | 32.68                     | 34.13                         | 11.74                   | 30.7                       | 400                  | 108                     | A                       | V               |
| <b>Remark</b>                                   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## Band 2 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                | 49.56               | -24.44                  | 74                          | 53.68                   | 37.15                         | 14.67                   | 55.94                      | 150                  | 220                     | P                     | H             |
| VHT80             |                                                                                             | 15870                | 49.68               | -24.32                  | 74                          | 47.55                   | 41.61                         | 16.56                   | 56.04                      | 168                  | 345                     | P                     | H             |
| CH 58             |                                                                                             | 10580                | 50.34               | -23.66                  | 74                          | 54.46                   | 37.15                         | 14.67                   | 55.94                      | 150                  | 220                     | P                     | V             |
| 5290MHz           |                                                                                             | 15870                | 50.13               | -23.87                  | 74                          | 48                      | 41.61                         | 16.56                   | 56.04                      | 168                  | 345                     | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Band 3 - 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 |      | 5469.68   | 54.79      | -19.21 | 74         | 41.71    | 34.28    | 11.9   | 33.1   | 400    | 232     | P       | H       |
|                              |      | 5470      | 45.68      | -8.32  | 54         | 32.6     | 34.28    | 11.9   | 33.1   | 400    | 232     | A       | H       |
|                              | *    | 5500      | 101.16     | -      | -          | 88.03    | 34.33    | 11.9   | 33.1   | 400    | 232     | P       | H       |
|                              | *    | 5500      | 93.98      | -      | -          | 80.85    | 34.33    | 11.9   | 33.1   | 400    | 232     | A       | H       |
|                              |      | 5468.88   | 54.48      | -19.52 | 74         | 41.4     | 34.28    | 11.9   | 33.1   | 364    | 247     | P       | V       |
|                              |      | 5469.84   | 45.46      | -8.54  | 54         | 32.38    | 34.28    | 11.9   | 33.1   | 364    | 247     | A       | V       |
|                              | *    | 5500      | 98.58      | -      | -          | 85.45    | 34.33    | 11.9   | 33.1   | 364    | 247     | P       | V       |
|                              | *    | 5500      | 92.22      | -      | -          | 79.09    | 34.33    | 11.9   | 33.1   | 364    | 247     | A       | V       |
| 802.11a<br>CH 116<br>5580MHz |      | 5437.6    | 51.78      | -22.22 | 74         | 38.8     | 34.24    | 11.84  | 33.1   | 150    | 307     | P       | H       |
|                              |      | 5465.44   | 44         | -10    | 54         | 30.98    | 34.28    | 11.84  | 33.1   | 150    | 307     | A       | H       |
|                              | *    | 5580      | 100.66     | -      | -          | 87.32    | 34.41    | 12.03  | 33.1   | 150    | 307     | P       | H       |
|                              | *    | 5580      | 94.36      | -      | -          | 81.02    | 34.41    | 12.03  | 33.1   | 150    | 307     | A       | H       |
|                              |      | 5761.22   | 53.04      | -20.96 | 74         | 39.04    | 34.45    | 12.65  | 33.1   | 150    | 307     | P       | H       |
|                              |      | 5727.2    | 44.55      | -9.45  | 54         | 30.68    | 34.46    | 12.51  | 33.1   | 150    | 307     | A       | H       |
|                              |      | 5391.76   | 50.88      | -23.12 | 74         | 38.02    | 34.18    | 11.78  | 33.1   | 365    | 259     | P       | V       |
|                              |      | 5403.28   | 42.63      | -11.37 | 54         | 29.75    | 34.2     | 11.78  | 33.1   | 365    | 259     | A       | V       |
|                              | *    | 5580      | 99.46      | -      | -          | 86.12    | 34.41    | 12.03  | 33.1   | 365    | 259     | P       | V       |
|                              | *    | 5580      | 92.19      | -      | -          | 78.85    | 34.41    | 12.03  | 33.1   | 365    | 259     | A       | V       |
|                              |      | 5735.705  | 51.33      | -22.67 | 74         | 37.47    | 34.45    | 12.51  | 33.1   | 365    | 259     | P       | V       |
|                              |      | 5726.57   | 43.15      | -10.85 | 54         | 29.28    | 34.46    | 12.51  | 33.1   | 365    | 259     | A       | V       |



|                                                   |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|---------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11a</b><br><b>CH 140</b><br><b>5700MHz</b> | *                                                                                           | 5700    | 101.05 | -      | -  | 87.16 | 34.48 | 12.51 | 33.1 | 158 | 305 | P | H |
|                                                   | *                                                                                           | 5700    | 95.29  | -      | -  | 81.4  | 34.48 | 12.51 | 33.1 | 158 | 305 | A | H |
|                                                   |                                                                                             | 5725.08 | 56.64  | -17.36 | 74 | 42.77 | 34.46 | 12.51 | 33.1 | 158 | 305 | P | H |
|                                                   |                                                                                             | 5725.24 | 48.95  | -5.05  | 54 | 35.08 | 34.46 | 12.51 | 33.1 | 158 | 305 | A | H |
|                                                   | *                                                                                           | 5700    | 99.73  | -      | -  | 85.84 | 34.48 | 12.51 | 33.1 | 364 | 259 | P | V |
|                                                   | *                                                                                           | 5700    | 94.14  | -      | -  | 80.25 | 34.48 | 12.51 | 33.1 | 364 | 259 | A | V |
|                                                   |                                                                                             | 5725    | 57.41  | -16.59 | 74 | 43.54 | 34.46 | 12.51 | 33.1 | 364 | 259 | P | V |
|                                                   |                                                                                             | 5725    | 48.46  | -5.54  | 54 | 34.59 | 34.46 | 12.51 | 33.1 | 364 | 259 | A | V |
| <b>Remark</b>                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



**Band 3 - 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 |                                                                                             | 11100                | 50.31               | -23.69                  | 74                          | 54.01                     | 37.46                         | 14.79                   | 55.95                      | 150                  | 200                     | P                       | H               |
|                              |                                                                                             | 16650                | 50.12               | -23.88                  | 74                          | 45.19                     | 43.68                         | 17.38                   | 56.13                      | 180                  | 350                     | P                       | H               |
|                              |                                                                                             | 11100                | 50.15               | -23.85                  | 74                          | 53.85                     | 37.46                         | 14.79                   | 55.95                      | 150                  | 200                     | P                       | V               |
|                              |                                                                                             | 16650                | 50.37               | -23.63                  | 74                          | 45.44                     | 43.68                         | 17.38                   | 56.13                      | 180                  | 350                     | P                       | V               |
| 802.11a<br>CH 116<br>5580MHz |                                                                                             | 11160                | 50.62               | -23.38                  | 74                          | 54.16                     | 37.5                          | 14.81                   | 55.85                      | 170                  | 200                     | P                       | H               |
|                              |                                                                                             | 16740                | 50.78               | -23.22                  | 74                          | 45.53                     | 43.91                         | 17.51                   | 56.17                      | 156                  | 350                     | P                       | H               |
|                              |                                                                                             | 11160                | 49.65               | -24.35                  | 74                          | 53.19                     | 37.5                          | 14.81                   | 55.85                      | 170                  | 200                     | P                       | V               |
|                              |                                                                                             | 16740                | 50.36               | -23.64                  | 74                          | 45.11                     | 43.91                         | 17.51                   | 56.17                      | 156                  | 350                     | P                       | V               |
| 802.11a<br>CH 140<br>5700MHz |                                                                                             | 11400                | 51.72               | -22.28                  | 74                          | 54.71                     | 37.64                         | 14.86                   | 55.49                      | 157                  | 285                     | P                       | H               |
|                              |                                                                                             | 17100                | 50.11               | -23.89                  | 74                          | 44.29                     | 44.29                         | 17.91                   | 56.38                      | 165                  | 246                     | P                       | H               |
|                              |                                                                                             | 11400                | 51.39               | -22.61                  | 74                          | 54.38                     | 37.64                         | 14.86                   | 55.49                      | 157                  | 285                     | P                       | V               |
|                              |                                                                                             | 17100                | 50.12               | -23.88                  | 74                          | 44.3                      | 44.29                         | 17.91                   | 56.38                      | 165                  | 246                     | P                       | V               |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



**Band 3 - 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 |      | 5468.4               | 54.48               | -19.52                  | 74                          | 41.4                    | 34.28                         | 11.9                    | 33.1                       | 100                  | 59                      | P                     | H             |
|                                      |      | 5470                 | 47.97               | -6.03                   | 54                          | 34.89                   | 34.28                         | 11.9                    | 33.1                       | 100                  | 59                      | A                     | H             |
|                                      | *    | 5500                 | 101.2               | -                       | -                           | 88.07                   | 34.33                         | 11.9                    | 33.1                       | 100                  | 59                      | P                     | H             |
|                                      | *    | 5500                 | 94.49               | -                       | -                           | 81.36                   | 34.33                         | 11.9                    | 33.1                       | 100                  | 59                      | A                     | H             |
|                                      |      | 5465.52              | 55.51               | -18.49                  | 74                          | 42.43                   | 34.28                         | 11.9                    | 33.1                       | 359                  | 254                     | P                     | V             |
|                                      |      | 5469.68              | 48.13               | -5.87                   | 54                          | 35.05                   | 34.28                         | 11.9                    | 33.1                       | 359                  | 254                     | A                     | V             |
|                                      | *    | 5500                 | 102.31              | -                       | -                           | 89.18                   | 34.33                         | 11.9                    | 33.1                       | 359                  | 254                     | P                     | V             |
|                                      | *    | 5500                 | 94.63               | -                       | -                           | 81.5                    | 34.33                         | 11.9                    | 33.1                       | 359                  | 254                     | A                     | V             |
| 802.11n<br>HT20<br>CH 116<br>5580MHz |      | 5445.04              | 51.11               | -22.89                  | 74                          | 38.13                   | 34.24                         | 11.84                   | 33.1                       | 100                  | 59                      | P                     | H             |
|                                      |      | 5443.12              | 44.06               | -9.94                   | 54                          | 31.08                   | 34.24                         | 11.84                   | 33.1                       | 100                  | 59                      | A                     | H             |
|                                      | *    | 5580                 | 101.56              | -                       | -                           | 88.22                   | 34.41                         | 12.03                   | 33.1                       | 100                  | 59                      | P                     | H             |
|                                      | *    | 5580                 | 95.15               | -                       | -                           | 81.81                   | 34.41                         | 12.03                   | 33.1                       | 100                  | 59                      | A                     | H             |
|                                      |      | 5736.335             | 52.14               | -21.86                  | 74                          | 38.28                   | 34.45                         | 12.51                   | 33.1                       | 100                  | 59                      | P                     | H             |
|                                      |      | 5733.5               | 46.09               | -7.91                   | 54                          | 32.22                   | 34.46                         | 12.51                   | 33.1                       | 100                  | 59                      | A                     | H             |
|                                      |      | 5433.76              | 51.81               | -22.19                  | 74                          | 38.83                   | 34.24                         | 11.84                   | 33.1                       | 364                  | 267                     | P                     | V             |
|                                      |      | 5463.28              | 44.15               | -9.85                   | 54                          | 31.13                   | 34.28                         | 11.84                   | 33.1                       | 364                  | 267                     | A                     | V             |
|                                      | *    | 5580                 | 102.63              | -                       | -                           | 89.29                   | 34.41                         | 12.03                   | 33.1                       | 364                  | 267                     | P                     | V             |
|                                      | *    | 5580                 | 94.74               | -                       | -                           | 81.4                    | 34.41                         | 12.03                   | 33.1                       | 364                  | 267                     | A                     | V             |
|                                      |      | 5738.54              | 52.72               | -21.28                  | 74                          | 38.72                   | 34.45                         | 12.65                   | 33.1                       | 364                  | 267                     | P                     | V             |
|                                      |      | 5763.425             | 44.51               | -9.49                   | 54                          | 30.51                   | 34.45                         | 12.65                   | 33.1                       | 364                  | 267                     | A                     | V             |



|                                                |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n<br/>HT20<br/>CH 140<br/>5700MHz</b> | *                                                                                           | 5700    | 102.11 | -      | -  | 88.22 | 34.48 | 12.51 | 33.1 | 100 | 60  | P | H |
|                                                | *                                                                                           | 5700    | 94.36  | -      | -  | 80.47 | 34.48 | 12.51 | 33.1 | 100 | 60  | A | H |
|                                                |                                                                                             | 5725.72 | 59.19  | -14.81 | 74 | 45.32 | 34.46 | 12.51 | 33.1 | 100 | 60  | P | H |
|                                                |                                                                                             | 5725.24 | 50.08  | -3.92  | 54 | 36.21 | 34.46 | 12.51 | 33.1 | 100 | 60  | A | H |
|                                                | *                                                                                           | 5700    | 100.92 | -      | -  | 87.03 | 34.48 | 12.51 | 33.1 | 100 | 119 | P | V |
|                                                | *                                                                                           | 5700    | 94.26  | -      | -  | 80.37 | 34.48 | 12.51 | 33.1 | 100 | 119 | A | V |
|                                                |                                                                                             | 5725.64 | 59.23  | -14.77 | 74 | 45.36 | 34.46 | 12.51 | 33.1 | 100 | 119 | P | V |
|                                                |                                                                                             | 5725.08 | 49.04  | -4.96  | 54 | 35.17 | 34.46 | 12.51 | 33.1 | 100 | 119 | A | V |
| <b>Remark</b>                                  | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



**Band 3 - 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<br>HT20<br>CH 100<br>5500MHz |                                                                                             | 11000                | 52.72               | -21.28                  | 74                          | 56.66                   | 37.4                          | 14.76                   | 56.1                       | 163                  | 230                     | P                     | H             |
|                                      |                                                                                             | 11000                | 49.07               | -4.93                   | 54                          | 53.01                   | 37.4                          | 14.76                   | 56.1                       | 163                  | 230                     | A                     | H             |
|                                      |                                                                                             | 16500                | 50.41               | -23.59                  | 74                          | 45.99                   | 43.27                         | 17.2                    | 56.05                      | 178                  | 296                     | P                     | H             |
|                                      |                                                                                             | 11000                | 49.79               | -24.21                  | 74                          | 53.73                   | 37.4                          | 14.76                   | 56.1                       | 163                  | 230                     | P                     | V             |
|                                      |                                                                                             | 16500                | 50.38               | -23.62                  | 74                          | 45.96                   | 43.27                         | 17.2                    | 56.05                      | 178                  | 296                     | P                     | V             |
| 802.11n<br>HT20<br>CH 116<br>5580MHz |                                                                                             | 11160                | 50.8                | -23.2                   | 74                          | 54.34                   | 37.5                          | 14.81                   | 55.85                      | 170                  | 200                     | P                     | H             |
|                                      |                                                                                             | 16740                | 50.54               | -23.46                  | 74                          | 45.29                   | 43.91                         | 17.51                   | 56.17                      | 156                  | 350                     | P                     | H             |
|                                      |                                                                                             | 11160                | 49.76               | -24.24                  | 74                          | 53.3                    | 37.5                          | 14.81                   | 55.85                      | 170                  | 200                     | P                     | V             |
|                                      |                                                                                             | 16740                | 50.43               | -23.57                  | 74                          | 45.18                   | 43.91                         | 17.51                   | 56.17                      | 156                  | 350                     | P                     | V             |
| 802.11n<br>HT20<br>CH 140<br>5700MHz |                                                                                             | 11400                | 50.63               | -23.37                  | 74                          | 53.62                   | 37.64                         | 14.86                   | 55.49                      | 157                  | 285                     | P                     | H             |
|                                      |                                                                                             | 17100                | 50.1                | -23.9                   | 74                          | 44.28                   | 44.29                         | 17.91                   | 56.38                      | 165                  | 246                     | P                     | H             |
|                                      |                                                                                             | 11400                | 49.39               | -24.61                  | 74                          | 52.38                   | 37.64                         | 14.86                   | 55.49                      | 157                  | 285                     | P                     | V             |
|                                      |                                                                                             | 17100                | 50.79               | -23.21                  | 74                          | 44.97                   | 44.29                         | 17.91                   | 56.38                      | 165                  | 246                     | P                     | V             |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



**Band 3 - 5470~5725MHz**  
**WIFI 802.11n HT40 (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>HT40<br>CH 102<br>5510MHz |      | 5469.28              | 62.08               | -11.92                  | 74                          | 49                        | 34.28                         | 11.9                    | 33.1                       | 158                  | 309                     | P                       | H               |
|                                      |      | 5470                 | 50.8                | -3.2                    | 54                          | 37.72                     | 34.28                         | 11.9                    | 33.1                       | 158                  | 309                     | A                       | H               |
|                                      | *    | 5510                 | 98.2                | -                       | -                           | 85                        | 34.33                         | 11.97                   | 33.1                       | 158                  | 309                     | P                       | H               |
|                                      | *    | 5510                 | 89.78               | -                       | -                           | 76.58                     | 34.33                         | 11.97                   | 33.1                       | 158                  | 309                     | A                       | H               |
|                                      |      | 5745.155             | 53.55               | -20.45                  | 74                          | 39.55                     | 34.45                         | 12.65                   | 33.1                       | 158                  | 309                     | P                       | H               |
|                                      |      | 5747.36              | 43.12               | -10.88                  | 54                          | 29.12                     | 34.45                         | 12.65                   | 33.1                       | 158                  | 309                     | A                       | H               |
|                                      |      | 5468.32              | 59.15               | -14.85                  | 74                          | 46.07                     | 34.28                         | 11.9                    | 33.1                       | 164                  | 255                     | P                       | V               |
|                                      |      | 5470                 | 48.93               | -5.07                   | 54                          | 35.85                     | 34.28                         | 11.9                    | 33.1                       | 164                  | 255                     | A                       | V               |
|                                      | *    | 5510                 | 95.19               | -                       | -                           | 81.99                     | 34.33                         | 11.97                   | 33.1                       | 164                  | 255                     | P                       | V               |
|                                      | *    | 5510                 | 86.31               | -                       | -                           | 73.11                     | 34.33                         | 11.97                   | 33.1                       | 164                  | 255                     | A                       | V               |
|                                      |      | 5757.755             | 53.36               | -20.64                  | 74                          | 39.36                     | 34.45                         | 12.65                   | 33.1                       | 164                  | 255                     | P                       | V               |
|                                      |      | 5751.77              | 43.15               | -10.85                  | 54                          | 29.15                     | 34.45                         | 12.65                   | 33.1                       | 164                  | 255                     | A                       | V               |
| 802.11n<br>HT40<br>CH 110<br>5550MHz |      | 5453.92              | 52.62               | -21.38                  | 74                          | 39.62                     | 34.26                         | 11.84                   | 33.1                       | 157                  | 308                     | P                       | H               |
|                                      |      | 5468.32              | 42.16               | -11.84                  | 54                          | 29.08                     | 34.28                         | 11.9                    | 33.1                       | 157                  | 308                     | A                       | H               |
|                                      | *    | 5550                 | 97.34               | -                       | -                           | 84.02                     | 34.39                         | 12.03                   | 33.1                       | 157                  | 308                     | P                       | H               |
|                                      | *    | 5550                 | 88.83               | -                       | -                           | 75.51                     | 34.39                         | 12.03                   | 33.1                       | 157                  | 308                     | A                       | H               |
|                                      |      | 5755.865             | 53.18               | -20.82                  | 74                          | 39.18                     | 34.45                         | 12.65                   | 33.1                       | 157                  | 308                     | P                       | H               |
|                                      |      | 5743.895             | 42.98               | -11.02                  | 54                          | 28.98                     | 34.45                         | 12.65                   | 33.1                       | 157                  | 308                     | A                       | H               |
|                                      |      | 5357.44              | 52.79               | -21.21                  | 74                          | 40.02                     | 34.13                         | 11.74                   | 33.1                       | 167                  | 272                     | P                       | V               |
|                                      |      | 5466.88              | 42.23               | -11.77                  | 54                          | 29.15                     | 34.28                         | 11.9                    | 33.1                       | 167                  | 272                     | A                       | V               |
|                                      | *    | 5550                 | 94.03               | -                       | -                           | 80.71                     | 34.39                         | 12.03                   | 33.1                       | 167                  | 272                     | P                       | V               |
|                                      | *    | 5550                 | 85.78               | -                       | -                           | 72.46                     | 34.39                         | 12.03                   | 33.1                       | 167                  | 272                     | A                       | V               |
|                                      |      | 5749.88              | 52.43               | -21.57                  | 74                          | 38.43                     | 34.45                         | 12.65                   | 33.1                       | 167                  | 272                     | P                       | V               |
|                                      |      | 5733.185             | 43.02               | -10.98                  | 54                          | 29.15                     | 34.46                         | 12.51                   | 33.1                       | 167                  | 272                     | A                       | V               |



|                                                                              |   |                                                                                             |       |        |    |       |       |       |      |     |     |   |   |
|------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------|-------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n</b><br><br><b>HT40</b><br><br><b>CH 134</b><br><br><b>5670MHz</b> |   | 5450.8                                                                                      | 51.46 | -22.54 | 74 | 38.46 | 34.26 | 11.84 | 33.1 | 157 | 308 | P | H |
|                                                                              |   | 5467.6                                                                                      | 42.02 | -11.98 | 54 | 28.94 | 34.28 | 11.9  | 33.1 | 157 | 308 | A | H |
|                                                                              | * | 5670                                                                                        | 97.12 | -      | -  | 83.37 | 34.48 | 12.37 | 33.1 | 157 | 308 | P | H |
|                                                                              | * | 5670                                                                                        | 88.35 | -      | -  | 74.6  | 34.48 | 12.37 | 33.1 | 157 | 308 | A | H |
|                                                                              |   | 5738.225                                                                                    | 53.97 | -20.03 | 74 | 40.11 | 34.45 | 12.51 | 33.1 | 157 | 308 | P | H |
|                                                                              |   | 5726.675                                                                                    | 43.37 | -10.63 | 54 | 29.5  | 34.46 | 12.51 | 33.1 | 157 | 308 | A | H |
|                                                                              |   | 5358.05                                                                                     | 52.6  | -21.4  | 74 | 39.83 | 34.13 | 11.74 | 33.1 | 173 | 246 | P | V |
|                                                                              |   | 5453.95                                                                                     | 41.72 | -12.28 | 54 | 28.72 | 34.26 | 11.84 | 33.1 | 173 | 246 | A | V |
|                                                                              | * | 5670                                                                                        | 94.27 | -      | -  | 80.52 | 34.48 | 12.37 | 33.1 | 173 | 246 | P | V |
|                                                                              | * | 5670                                                                                        | 86.32 | -      | -  | 72.57 | 34.48 | 12.37 | 33.1 | 173 | 246 | A | V |
|                                                                              |   | 5735.25                                                                                     | 54.32 | -19.68 | 74 | 40.46 | 34.45 | 12.51 | 33.1 | 173 | 246 | P | V |
|                                                                              |   | 5726.675                                                                                    | 43.2  | -10.8  | 54 | 29.33 | 34.46 | 12.51 | 33.1 | 173 | 246 | A | V |
| <b>Remark</b>                                                                |   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |       |        |    |       |       |       |      |     |     |   |   |



**Band 3 - 5470~5725MHz**  
**WIFI 802.11n HT40 (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           |                                                                                             | 11020                | 50.9                | -23.1                   | 74                          | 54.79                     | 37.41                         | 14.77                   | 56.07                      | 170                  | 230                     | P                       | H               |
| HT40              |                                                                                             | 16530                | 50.86               | -23.14                  | 74                          | 46.32                     | 43.36                         | 17.25                   | 56.07                      | 160                  | 300                     | P                       | H               |
| CH 102            |                                                                                             | 11020                | 50.19               | -23.81                  | 74                          | 54.08                     | 37.41                         | 14.77                   | 56.07                      | 170                  | 230                     | P                       | V               |
| 5510MHz           |                                                                                             | 16530                | 50.61               | -23.39                  | 74                          | 46.07                     | 43.36                         | 17.25                   | 56.07                      | 160                  | 300                     | P                       | V               |
| 802.11n           |                                                                                             | 11100                | 50.17               | -23.83                  | 74                          | 53.87                     | 37.46                         | 14.79                   | 55.95                      | 150                  | 200                     | P                       | H               |
| HT40              |                                                                                             | 16650                | 50.23               | -23.77                  | 74                          | 45.3                      | 43.68                         | 17.38                   | 56.13                      | 180                  | 350                     | P                       | H               |
| CH 110            |                                                                                             | 11100                | 50.14               | -23.86                  | 74                          | 53.84                     | 37.46                         | 14.79                   | 55.95                      | 150                  | 200                     | P                       | V               |
| 5550MHz           |                                                                                             | 16650                | 50.31               | -23.69                  | 74                          | 45.38                     | 43.68                         | 17.38                   | 56.13                      | 180                  | 350                     | P                       | V               |
| 802.11n           |                                                                                             | 11340                | 50.91               | -23.09                  | 74                          | 54.06                     | 37.6                          | 14.84                   | 55.59                      | 200                  | 360                     | P                       | H               |
| HT40              |                                                                                             | 17010                | 50.05               | -23.95                  | 74                          | 43.99                     | 44.55                         | 17.82                   | 56.31                      | 200                  | 360                     | P                       | H               |
| CH 134            |                                                                                             | 11340                | 50.88               | -23.12                  | 74                          | 54.03                     | 37.6                          | 14.84                   | 55.59                      | 200                  | 360                     | P                       | V               |
| 5670MHz           |                                                                                             | 17010                | 50.35               | -23.65                  | 74                          | 44.29                     | 44.55                         | 17.82                   | 56.31                      | 200                  | 360                     | P                       | V               |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



**Band 2 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 |                                                                                             | 5457.76              | 56.99               | -17.01                  | 74                          | 41.59                     | 34.26                         | 11.84                   | 30.7                       | 241                  | 301                     | P                       | H               |
|                                        |                                                                                             | 5461.84              | 49.44               | -4.56                   | 54                          | 34.04                     | 34.26                         | 11.84                   | 30.7                       | 241                  | 301                     | A                       | H               |
|                                        | *                                                                                           | 5530                 | 93.82               | -                       | -                           | 78.22                     | 34.35                         | 11.97                   | 30.72                      | 241                  | 301                     | P                       | H               |
|                                        | *                                                                                           | 5530                 | 87.63               | -                       | -                           | 72.03                     | 34.35                         | 11.97                   | 30.72                      | 241                  | 301                     | A                       | H               |
|                                        |                                                                                             | 5744.525             | 55.98               | -18.02                  | 74                          | 39.79                     | 34.45                         | 12.65                   | 30.91                      | 241                  | 301                     | P                       | H               |
|                                        |                                                                                             | 5757.125             | 47.33               | -6.67                   | 54                          | 31.16                     | 34.45                         | 12.65                   | 30.93                      | 241                  | 301                     | A                       | H               |
|                                        |                                                                                             | 5464                 | 56.74               | -17.26                  | 74                          | 41.32                     | 34.28                         | 11.84                   | 30.7                       | 351                  | 253                     | P                       | V               |
|                                        |                                                                                             | 5465.68              | 50.18               | -3.82                   | 54                          | 34.7                      | 34.28                         | 11.9                    | 30.7                       | 351                  | 253                     | A                       | V               |
|                                        | *                                                                                           | 5530                 | 95.82               | -                       | -                           | 80.22                     | 34.35                         | 11.97                   | 30.72                      | 351                  | 253                     | P                       | V               |
|                                        | *                                                                                           | 5530                 | 89.63               | -                       | -                           | 74.03                     | 34.35                         | 11.97                   | 30.72                      | 351                  | 253                     | A                       | V               |
|                                        |                                                                                             | 5734.445             | 54.36               | -19.64                  | 74                          | 38.29                     | 34.46                         | 12.51                   | 30.9                       | 351                  | 253                     | P                       | V               |
|                                        |                                                                                             | 5761.85              | 47.33               | -6.67                   | 54                          | 31.16                     | 34.45                         | 12.65                   | 30.93                      | 351                  | 253                     | A                       | V               |
| 802.11ac<br>VHT80<br>CH 122<br>5610MHz |                                                                                             | 5466.88              | 54.5                | -19.5                   | 74                          | 39.02                     | 34.28                         | 11.9                    | 30.7                       | 133                  | 303                     | P                       | H               |
|                                        |                                                                                             | 5468.32              | 47.21               | -6.79                   | 54                          | 31.73                     | 34.28                         | 11.9                    | 30.7                       | 133                  | 303                     | A                       | H               |
|                                        | *                                                                                           | 5610                 | 96.68               | -                       | -                           | 80.92                     | 34.46                         | 12.09                   | 30.79                      | 133                  | 303                     | P                       | H               |
|                                        | *                                                                                           | 5610                 | 90.39               | -                       | -                           | 74.63                     | 34.46                         | 12.09                   | 30.79                      | 133                  | 303                     | A                       | H               |
|                                        |                                                                                             | 5730.665             | 55.98               | -18.02                  | 74                          | 39.91                     | 34.46                         | 12.51                   | 30.9                       | 133                  | 303                     | P                       | H               |
|                                        |                                                                                             | 5725                 | 47.7                | -6.3                    | 54                          | 31.63                     | 34.46                         | 12.51                   | 30.9                       | 133                  | 303                     | A                       | H               |
|                                        |                                                                                             | 5451.28              | 55.78               | -18.22                  | 74                          | 40.38                     | 34.26                         | 11.84                   | 30.7                       | 344                  | 244                     | P                       | V               |
|                                        |                                                                                             | 5459.92              | 46.9                | -7.1                    | 54                          | 31.5                      | 34.26                         | 11.84                   | 30.7                       | 344                  | 244                     | A                       | V               |
|                                        | *                                                                                           | 5614                 | 97.5                | -                       | -                           | 81.74                     | 34.46                         | 12.09                   | 30.79                      | 344                  | 244                     | P                       | V               |
|                                        |                                                                                             | 5725.94              | 55.18               | -18.82                  | 74                          | 39.11                     | 34.46                         | 12.51                   | 30.9                       | 344                  | 244                     | P                       | V               |
|                                        |                                                                                             | 5727.2               | 47.53               | -6.47                   | 54                          | 31.46                     | 34.46                         | 12.51                   | 30.9                       | 344                  | 244                     | A                       | V               |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                         |                            |                      |                         |                         |                 |



## Band 3 5470~5725MHz

## 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          |                                                                                             | 11060                | 50.4                | -23.6                   | 74                          | 54.18                   | 37.44                         | 14.78                   | 56                         | 150                  | 200                     | P                     | H             |
| VHT80             |                                                                                             | 16590                | 50.29               | -23.71                  | 74                          | 45.56                   | 43.5                          | 17.33                   | 56.1                       | 180                  | 350                     | P                     | H             |
| CH 106            |                                                                                             | 11060                | 49.31               | -24.69                  | 74                          | 53.09                   | 37.44                         | 14.78                   | 56                         | 150                  | 200                     | P                     | V             |
| 5530MHz           |                                                                                             | 16590                | 50.71               | -23.29                  | 74                          | 45.98                   | 43.5                          | 17.33                   | 56.1                       | 180                  | 350                     | P                     | V             |
| 802.11ac          |                                                                                             | 11220                | 52.34               | -21.66                  | 74                          | 55.76                   | 37.53                         | 14.82                   | 55.77                      | 200                  | 360                     | P                     | H             |
|                   |                                                                                             | 11220                | 50.34               | -3.66                   | 54                          | 53.76                   | 37.53                         | 14.82                   | 55.77                      | 200                  | 360                     | A                     | H             |
| VHT80             |                                                                                             | 16830                | 50.24               | -23.76                  | 74                          | 44.72                   | 44.14                         | 17.6                    | 56.22                      | 200                  | 360                     | P                     | H             |
| CH 122            |                                                                                             | 11220                | 51.95               | -22.05                  | 74                          | 55.37                   | 37.53                         | 14.82                   | 55.77                      | 200                  | 360                     | P                     | V             |
| 5610MHz           |                                                                                             | 11220                | 49.32               | -4.68                   | 54                          | 52.74                   | 37.53                         | 14.82                   | 55.77                      | 200                  | 360                     | A                     | V             |
|                   |                                                                                             | 16830                | 50.76               | -23.24                  | 74                          | 45.24                   | 44.14                         | 17.6                    | 56.22                      | 200                  | 360                     | 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) |
| 802.11ac<br>VHT80<br>LF |                                             | 34.85     | 22.43      | -17.57 | 40         | 27.41  | 26.3     | 0.32   | 31.6   | -      | -       | P     | H     |
|                         |                                             | 173.56    | 24.95      | -18.55 | 43.5       | 36.95  | 17.86    | 1.45   | 31.31  | -      | -       | P     | H     |
|                         |                                             | 207.51    | 26.47      | -17.03 | 43.5       | 37.94  | 18.03    | 1.66   | 31.16  | -      | -       | P     | H     |
|                         |                                             | 228.85    | 26.23      | -19.77 | 46         | 36.33  | 19.22    | 1.76   | 31.08  | -      | -       | P     | H     |
|                         |                                             | 454.86    | 31.95      | -14.05 | 46         | 33.98  | 26.49    | 2.58   | 31.1   | 100    | 125     | P     | H     |
|                         |                                             | 982.54    | 29.24      | -24.76 | 54         | 26.13  | 30.42    | 4.12   | 31.43  | -      | -       | P     | H     |
|                         |                                             | 32.91     | 32.89      | -7.11  | 40         | 37.35  | 26.86    | 0.28   | 31.6   | 100    | 165     | P     | V     |
|                         |                                             | 172.59    | 20.41      | -23.09 | 43.5       | 32.41  | 17.87    | 1.44   | 31.31  | -      | -       | P     | V     |
|                         |                                             | 207.51    | 22.75      | -20.75 | 43.5       | 34.22  | 18.03    | 1.66   | 31.16  | -      | -       | P     | V     |
|                         |                                             | 228.85    | 21.4       | -24.6  | 46         | 31.5   | 19.22    | 1.76   | 31.08  | -      | -       | P     | V     |
|                         |                                             | 434.49    | 28.68      | -17.32 | 46         | 31.25  | 26.02    | 2.51   | 31.1   | -      | -       | P     | V     |
|                         |                                             | 851.59    | 26.75      | -19.25 | 46         | 27.3   | 27.05    | 3.7    | 31.3   | -      | -       | P     | V     |
| Remark                  | 1. No other spurious found.                 |           |            |        |            |        |          |        |        |        |         |       |       |
|                         | 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  | 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 ) |
| 802.11b |      | 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. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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)

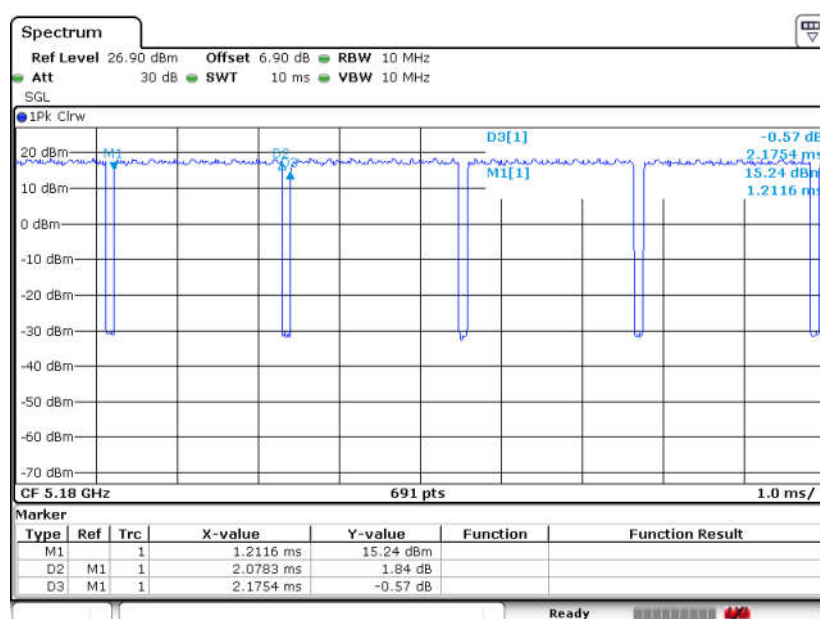
= -10.46(dB)

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

## Appendix C. Duty Cycle Plots

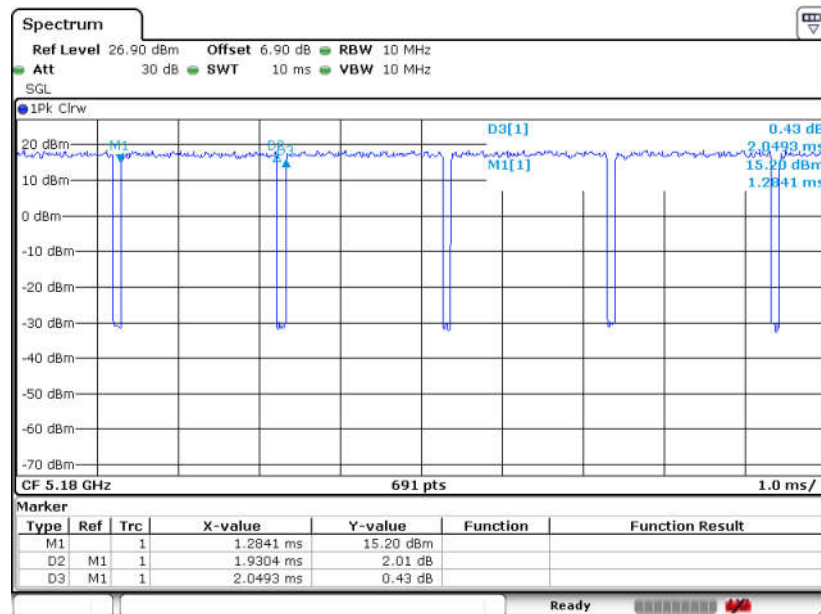
| Band           | Duty Cycle(%) | T(ms) | 1/T(kHz) | VBW Setting |
|----------------|---------------|-------|----------|-------------|
| 802.11a        | 95.54         | 2.078 | 0.481    | 1 kHz       |
| 802.11n HT20   | 94.20         | 1.930 | 0.518    | 1 kHz       |
| 802.11n HT40   | 90.10         | 0.949 | 1.053    | 3 kHz       |
| 802.11ac VHT80 | 84.21         | 0.464 | 2.156    | 3 kHz       |

### 802.11a

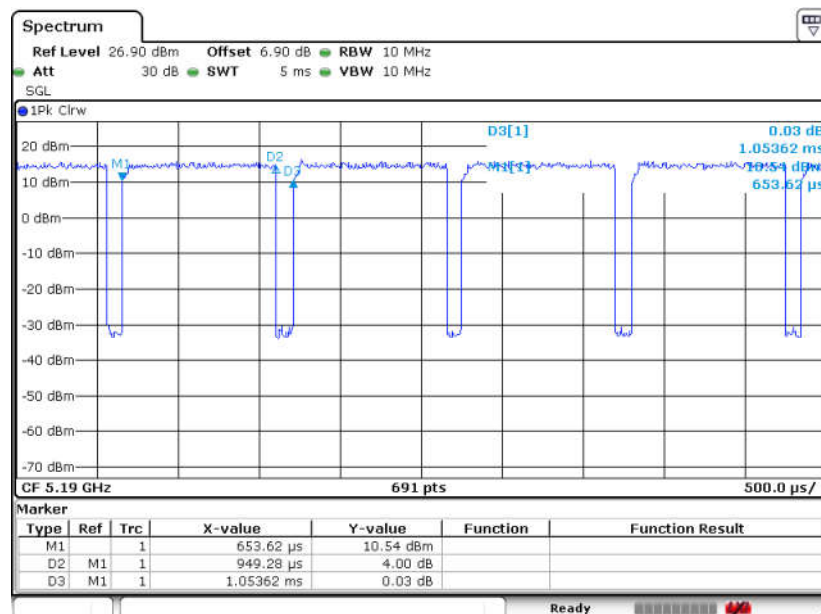




## 802.11n HT20



## 802.11n HT40





802.11ac VHT80

