



# FCC RF Test Report

APPLICANT : Huawei Technologies Co., Ltd.  
EQUIPMENT : Smart Phone  
BRAND NAME : HUAWEI  
MODEL NAME : GLK-LX1U  
FCC ID : QISGLK-LX1U  
STANDARD : FCC Part 15 Subpart E §15.407  
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on May 16, 2019 and testing was completed on May 30, 2019. We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

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**People's Republic of China**



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## REVISION HISTORY

| REPORT NO.   | VERSION | DESCRIPTION             | ISSUED DATE   |
|--------------|---------|-------------------------|---------------|
| FR932820-01E | Rev. 01 | Initial issue of report | Jun. 06, 2019 |
|              |         |                         |               |
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|              |         |                         |               |

## SUMMARY OF TEST RESULT

| Report Section | FCC Rule           | Description                            | Limit                    | Result | Remark                              |
|----------------|--------------------|----------------------------------------|--------------------------|--------|-------------------------------------|
| 3.1            | 2.1049 & 15.403(i) | 26dB & 99% Bandwidth                   | -                        | Pass   | -                                   |
| 3.2            | 15.407(a)          | Maximum Conducted Output Power         | $\leq 24$ dBm            | Pass   | -                                   |
| 3.3            | 15.407(a)          | Power Spectral Density                 | $\leq 11$ dBm            | Pass   | -                                   |
| 3.4            | 15.407(b)          | Unwanted Emissions                     | 15.407(b) & 15.209(a)    | Pass   | Under limit 2.86 dB at 5149.760 MHz |
| 3.5            | 15.207             | AC Conducted Emission                  | 15.207(a)                | Pass   | Under limit 12.04 dB at 0.490 MHz   |
| 3.6            | 15.407(c)          | Automatically Discontinue Transmission | Discontinue Transmission | Pass   | -                                   |
| 3.7            | 15.203 & 15.407(a) | Antenna Requirement                    | N/A                      | Pass   | -                                   |



# 1 General Description

## 1.1 Applicant

Huawei Technologies Co., Ltd.

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

## 1.2 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                                                                                                                                              |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Smart Phone                                                                                                                                                                                                                                  |
| Brand Name                      | HUAWEI                                                                                                                                                                                                                                       |
| Model Name                      | GLK-LX1U                                                                                                                                                                                                                                     |
| FCC ID                          | QISGLK-LX1U                                                                                                                                                                                                                                  |
| EUT supports Radios application | GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/<br>HSPA+(16QAM Uplink is not supported)/LTE/NFC<br>WLAN 2.4GHz 802.11b/g/n HT20/HT40<br>WLAN 5GHz 802.11a/n HT20/HT40<br>WLAN 5GHz 802.11ac VHT20/VHT40/VHT80<br>Bluetooth BR/EDR/LE<br>FM Receiver/GNSS |
| IMEI Code                       | Conducted: 865951040001537<br>Conduction: 865951040001362<br>Radiation: 865951040001479                                                                                                                                                      |
| HW Version                      | HL7SENEM                                                                                                                                                                                                                                     |
| SW Version                      | 9.1.0.102(C900E102R1P1)                                                                                                                                                                                                                      |

### 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. This is a variant report for GLK-LX1U, the change note could be referred to the product equality declaration which is exhibit separately. According to the change, all the test items are verified from original test report (Sporton Report Number FR932820E).

### 1.3 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 : 14.72 dBm / 0.0296 W<br>802.11n HT20 : 13.69 dBm / 0.0234 W<br>802.11n HT40 : 13.13 dBm / 0.0206 W<br>802.11ac VHT20 : 13.56 dBm / 0.0227 W<br>802.11ac VHT40 : 13.04 dBm / 0.0201 W<br>802.11ac VHT80 : 10.66 dBm / 0.0116 W<br><b>&lt;5260 MHz ~ 5320 MHz&gt;</b><br>802.11a : 14.17 dBm / 0.0261 W<br>802.11n HT20 : 12.59 dBm / 0.0182 W<br>802.11n HT40 : 11.83 dBm / 0.0152 W<br>802.11ac VHT20 : 12.54 dBm / 0.0179 W<br>802.11ac VHT40 : 11.75 dBm / 0.0150 W<br>802.11ac VHT80 : 9.04 dBm / 0.0080 W<br><b>&lt;5500 MHz ~ 5700 MHz &gt;</b><br>802.11a : 14.22 dBm / 0.0264 W<br>802.11n HT20 : 13.15 dBm / 0.0207 W<br>802.11n HT40 : 12.77 dBm / 0.0189 W<br>802.11ac VHT20 : 13.07 dBm / 0.0203 W<br>802.11ac VHT40 : 12.65 dBm / 0.0184 W<br>802.11ac VHT80 : 9.77 dBm / 0.0095 W |
| <b>99% Occupied Bandwidth</b>           | <b>&lt;5180 MHz ~ 5240 MHz&gt;</b><br>802.11a : 17.68 MHz<br>802.11an HT20 : 18.38 MHz<br>802.11an HT40 : 36.26 MHz<br>802.11ac VHT80 : 74.93 MHz<br><b>&lt;5260 MHz ~ 5320 MHz&gt;</b><br>802.11a : 17.58 MHz<br>802.11an HT20 : 18.43 MHz<br>802.11an HT40 : 36.06 MHz<br>802.11ac VHT80 : 74.81 MHz<br><b>&lt;5500 MHz ~ 5700 MHz &gt;</b><br>802.11a : 17.58 MHz<br>802.11an HT20 : 18.38 MHz<br>802.11an HT40 : 36.16 MHz<br>802.11ac VHT80 : 74.81 MHz                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Antenna Type / Gain</b>              | <b>&lt;5180 MHz ~ 5240 MHz &gt;</b><br>Internal Antenna with gain 1.00 dBi<br><b>&lt;5260 MHz ~ 5320 MHz &gt;</b><br>Internal Antenna with gain 1.00 dBi<br><b>&lt;5500 MHz ~ 5700 MHz &gt;</b><br>Internal Antenna with gain 1.00 dBi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Type of Modulation</b>               | 802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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



## 1.4 Modification of EUT

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

## 1.5 Testing Location

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

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

|                    |                                                                                                                                                           |                     |                                |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------|
| Test Firm          | Sporton International (Shenzhen) Inc.                                                                                                                     |                     |                                |
| Test Site Location | No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China<br>TEL: +86-755-33202398 |                     |                                |
| Test Site No.      | Sporton Site No.                                                                                                                                          | FCC Designation No. | FCC Test Firm Registration No. |
|                    | 03CH01-SZ                                                                                                                                                 | CN1256              | 421272                         |

## 1.6 Applicable Standards

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

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

### Remark:

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



## 1.7 Specification of Accessory

|               |              |                                                           |                                   |              |
|---------------|--------------|-----------------------------------------------------------|-----------------------------------|--------------|
| AC Adapter 1  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200U02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: Salcomp                                     | SN                                |              |
| AC Adapter 2  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200U02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: BYD                                         | SN                                |              |
| AC Adapter 3  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200U02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: HUNTKEY                                     | SN                                |              |
| AC Adapter 4  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200U02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: PHIHONG                                     | SN                                |              |
| AC Adapter 5  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200E02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: Salcomp                                     | SN                                |              |
| AC Adapter 6  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200E02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: BYD                                         | SN                                |              |
| AC Adapter 7  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200E02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: HUNTKEY                                     | SN                                |              |
| AC Adapter 8  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200E02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: PHIHONG                                     | SN                                |              |
| AC Adapter 9  | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200B02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: Salcomp                                     | SN                                |              |
| AC Adapter 10 | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200B02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: BYD                                         | SN                                |              |
| AC Adapter 11 | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200B02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: HUNTKEY                                     | SN                                |              |
| AC Adapter 12 | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200B02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: PHIHONG                                     | SN                                |              |
| AC Adapter 13 | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200A02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: Salcomp                                     | SN                                |              |
| AC Adapter 14 | Brand Name   | Huawei Technologies Co., Ltd.                             | Model Name                        | HW-050200A02 |
|               | Power Rating | I/P: <u>100</u> - <u>240</u> Vac, <u>500</u> mA           | O/P: <u>5</u> Vdc, <u>2000</u> mA |              |
|               | Manufacturer | Manufacturer: BYD                                         | SN                                |              |
| USB Cable 1   | Brand Name   | Ningbo Broad Telecommunication Co., Ltd                   | Model Name                        | WA0020       |
|               | Signal Line  | <u>1</u> meter, non-shielded cable, with w/o ferrite core |                                   |              |



|             |              |                                                             |            |                     |
|-------------|--------------|-------------------------------------------------------------|------------|---------------------|
| USB Cable 2 | Brand Name   | Dongguan Mingji Electronics Technology Group Co.,Ltd        | Model Name | 203-1572-0          |
|             | Signal Line  | <u>1</u> meter, non-shielded cable, with w/o ferrite core   |            |                     |
| USB Cable 3 | Brand Name   | Freeport Resources Enterprises (Jiangxi) Co.,Ltd            | Model Name | 18-93C2CHO-001HF    |
|             | Signal Line  | <u>1</u> meter, non-shielded cable, with w/o ferrite core   |            |                     |
| USB Cable 4 | Brand Name   | HONGFUJIN PRECISION INDUSTRIAL(SHENZHEN).LTD                | Model Name | CUDU01B-HC295-EH    |
|             | Signal Line  | <u>1</u> meter, non-shielded cable, with w/o ferrite core   |            |                     |
| USB Cable 5 | Brand Name   | LUXSHARE Precision Industry Co., Ltd.                       | Model Name | L99UC131-CS-H       |
|             | Signal Line  | <u>1</u> meter, non-shielded cable, with w/o ferrite core   |            |                     |
| USB Cable 6 | Brand Name   | HUIZHOU DEHONG TECHNOLOGY CO.,LTD.                          | Model Name | 330-50507           |
|             | Signal Line  | <u>1</u> meter, non-shielded cable, with w/o ferrite core   |            |                     |
| Earphone 1  | Brand Name   | HONGFUJIN PRECISION INDUSTRIAL(SHENZHEN).LTD                | Model Name | EPAB542-2WH06-DH    |
|             | Signal Line  | <u>1.1</u> meter, non-shielded cable, with w/o ferrite core |            |                     |
| Earphone 2  | Brand Name   | HONGFUJIN PRECISION INDUSTRIAL(SHENZHEN).LTD                | Model Name | EPAB542-2WH05-DH    |
|             | Signal Line  | <u>1.1</u> meter, non-shielded cable, with w/o ferrite core |            |                     |
| Earphone 3  | Brand Name   | Boluo County Quancheng Electronic Co., Ltd.                 | Model Name | 1293-3283-3.5MM-322 |
|             | Signal Line  | <u>1.1</u> meter, non-shielded cable, with w/o ferrite core |            |                     |
| Earphone 4  | Brand Name   | Jiangxi Lianchuang Hongsheng Electronic Co., LTD.           | Model Name | MEND1532B528A02     |
|             | Signal Line  | <u>1.1</u> meter, non-shielded cable, with w/o ferrite core |            |                     |
| Earphone 5  | Brand Name   | Jiangxi Lianchuang Hongsheng Electronic Co., LTD.           | Model Name | MEND1532B528B00     |
|             | Signal Line  | <u>1.1</u> meter, non-shielded cable, with w/o ferrite core |            |                     |
| Battery     | Brand Name   | HuaweiTechnologies Co., Ltd.                                | Model Name | HB446486ECW         |
|             | Power Rating | <u>3.82</u> Vdc, <u>3900</u> mAh                            | Type       | Li-ion, <u>Yes</u>  |

## 2 Test Configuration of Equipment Under Test

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

### 2.1 Carrier Frequency and Channel

| Frequency Band                        | Channel          | Freq. (MHz) | Channel | Freq. (MHz) |
|---------------------------------------|------------------|-------------|---------|-------------|
| 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 modes 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 VHT20 | MCS0      |
| 802.11ac VHT40 | MCS0      |
| 802.11ac VHT80 | MCS0      |

| Test Cases                                                                                                  |                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| AC<br>Conducted<br>Emission                                                                                 | Mode 1 : GSM 850 Idle + Bluetooth Link + WLAN Link(5G) + Earphone 1 + USB Cable 1(Charging from Adapter 1) + SIM 1 |
| <b>Remark:</b> For Radiated Test Cases, The tests were performance with Adapter 5, Earphone 5, USB Cable 5. |                                                                                                                    |



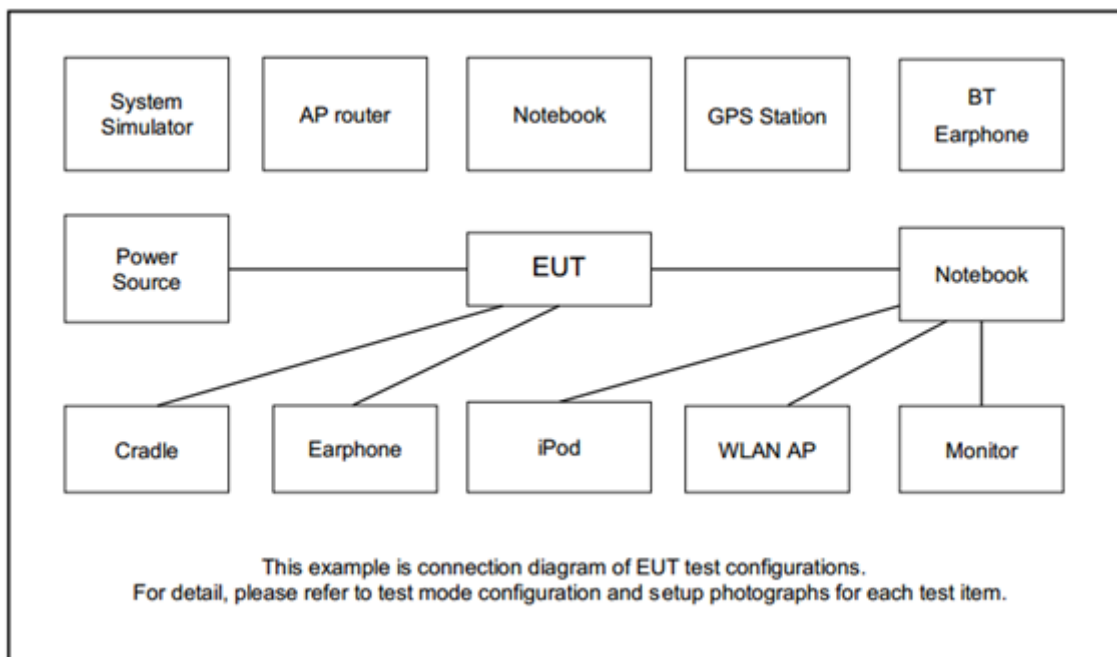
| Ch. # |        | Band I : 5180-5240 MHz | Band II : 5260-5320 MHz | Band III : 5500-5700MHz |
|-------|--------|------------------------|-------------------------|-------------------------|
|       |        | 802.11a                | 802.11a                 | 802.11a                 |
| L     | Low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

## 2.3 Connection Diagram of Test System



## 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   | Anritsu    | MT8820C    | N/A         | N/A        | Unshielded,1.8m                                           |
| 2.   | WLAN AP            | D-Link     | DIR-820L   | KA2IR820LA1 | N/A        | Unshielded,1.8m                                           |
| 3.   | Bluetooth Earphone | Samsung    | EO-MG900   | N/A         | N/A        | N/A                                                       |
| 4.   | Notebook           | Lenovo     | E540       | FCC DoC     | N/A        | AC I/P:<br>Unshielded, 1.2m<br>DC O/P:<br>Shielded, 1.8 m |

## 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 and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

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

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 5.4 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5.4 + 10 = 15.4 \text{ (dB)}\end{aligned}$$

### 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.

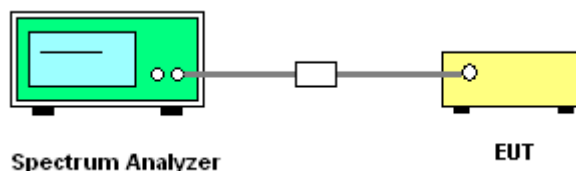
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

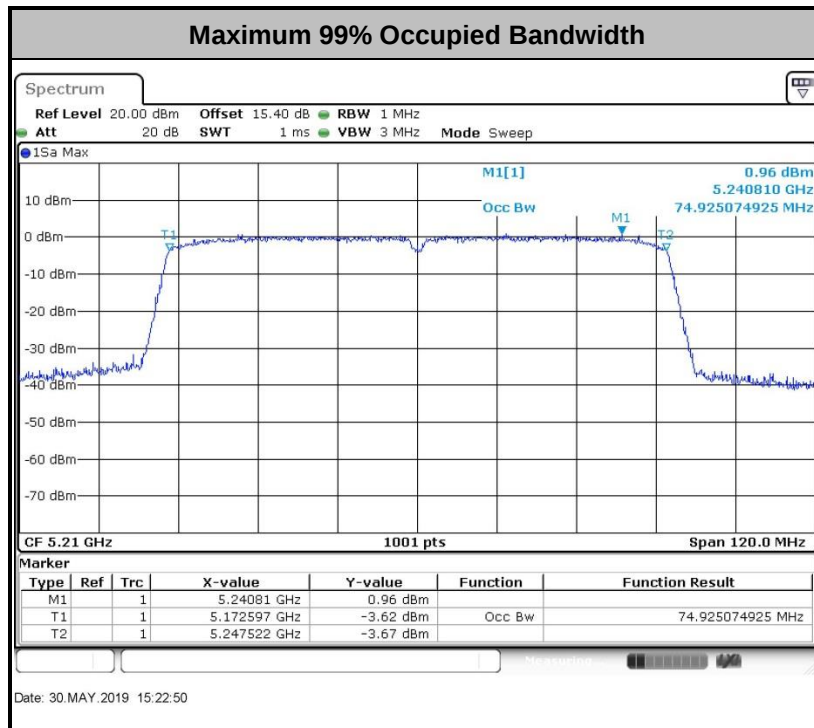
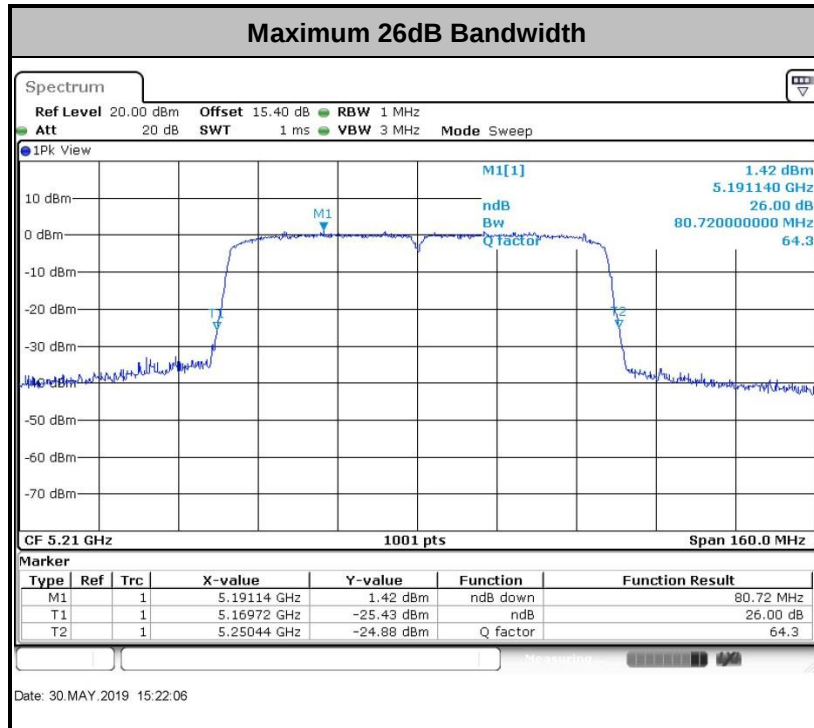
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB 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)  $\geq 3 * RBW$ .
8. Measure and record the results in the test report.

##### 3.1.4 Test Setup



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

Please refer to Appendix A.



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



## **3.2 Maximum Conducted Output Power Measurement**

### **3.2.1 Limit of Maximum Conducted Output Power**

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

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

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

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.

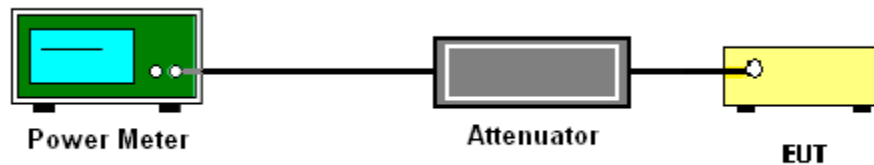
### 3.2.3 Test Procedures

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.

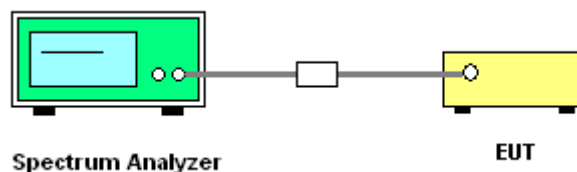
Section F) Maximum power spectral density.

#### # Method SA-2 #

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

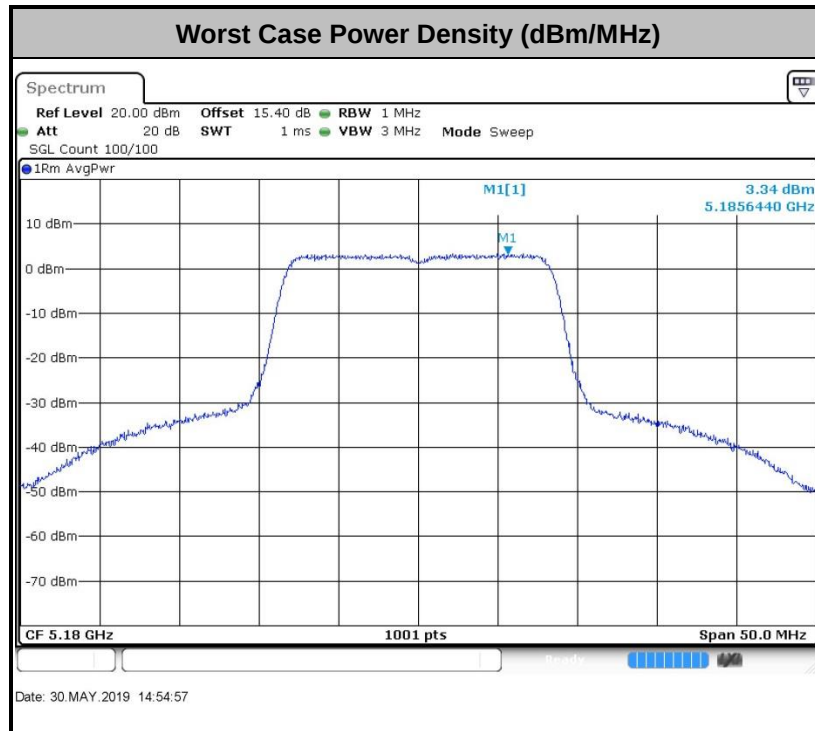
- Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 1 MHz.
  - Set VBW  $\geq$  3 MHz.
  - Number of points in sweep  $\geq$  2 Span / RBW.
  - Sweep time = auto.
  - Detector = RMS
  - Trace average at least 100 traces in power averaging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

### 3.3.4 Test Setup



### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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

### 3.4 Unwanted Emissions Measurement

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

#### 3.4.1 Limit of Unwanted Emissions

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

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

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz 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                                |

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

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

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

where

EIRP is the equivalent isotropically radiated power, in dBm

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

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

### 3.4.2 Measuring Instruments

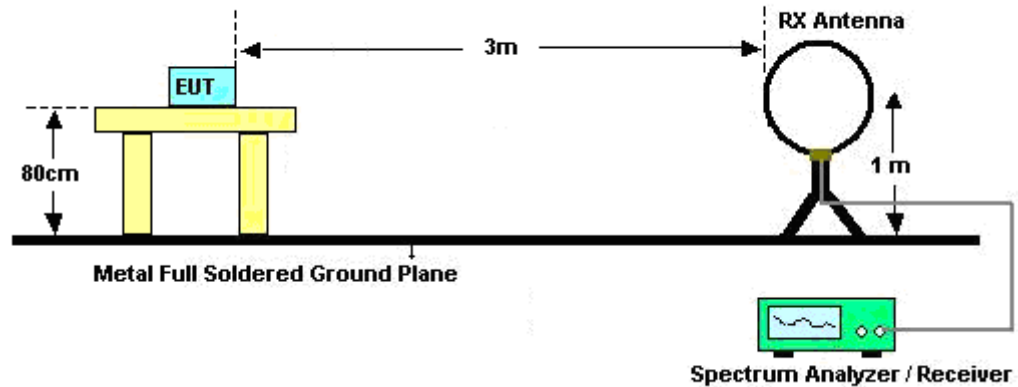
The measuring equipment is listed in the section 4 of this test report.

### 3.4.3 Test Procedures

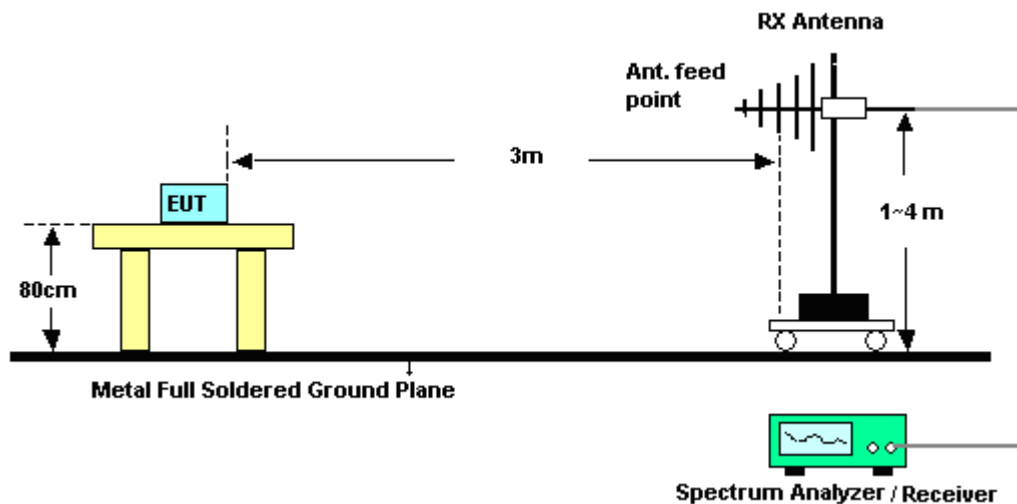
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.  
Section G) Unwanted emissions measurement.
  - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
    - RBW = 120 kHz
    - VBW = 300 kHz
    - Detector = Peak
    - Trace mode = max hold
  - (2) Procedure 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

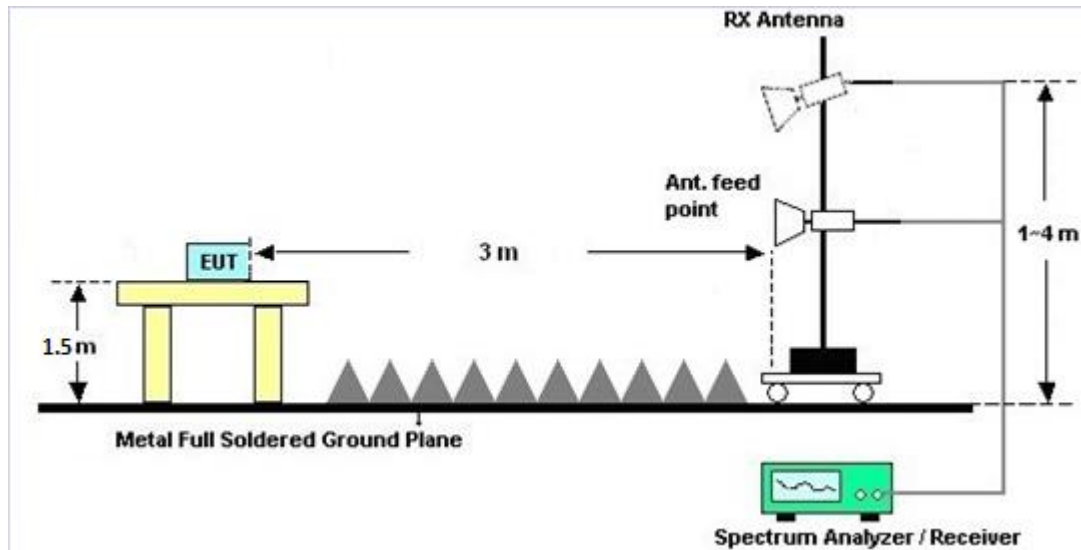
For radiated emissions below 30MHz



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.

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

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

Please refer to Appendix C.

### 3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

### 3.5 AC Conducted Emission Measurement

#### 3.5.1 Limit of AC Conducted Emission

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

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

\*Decreases with the logarithm of the frequency.

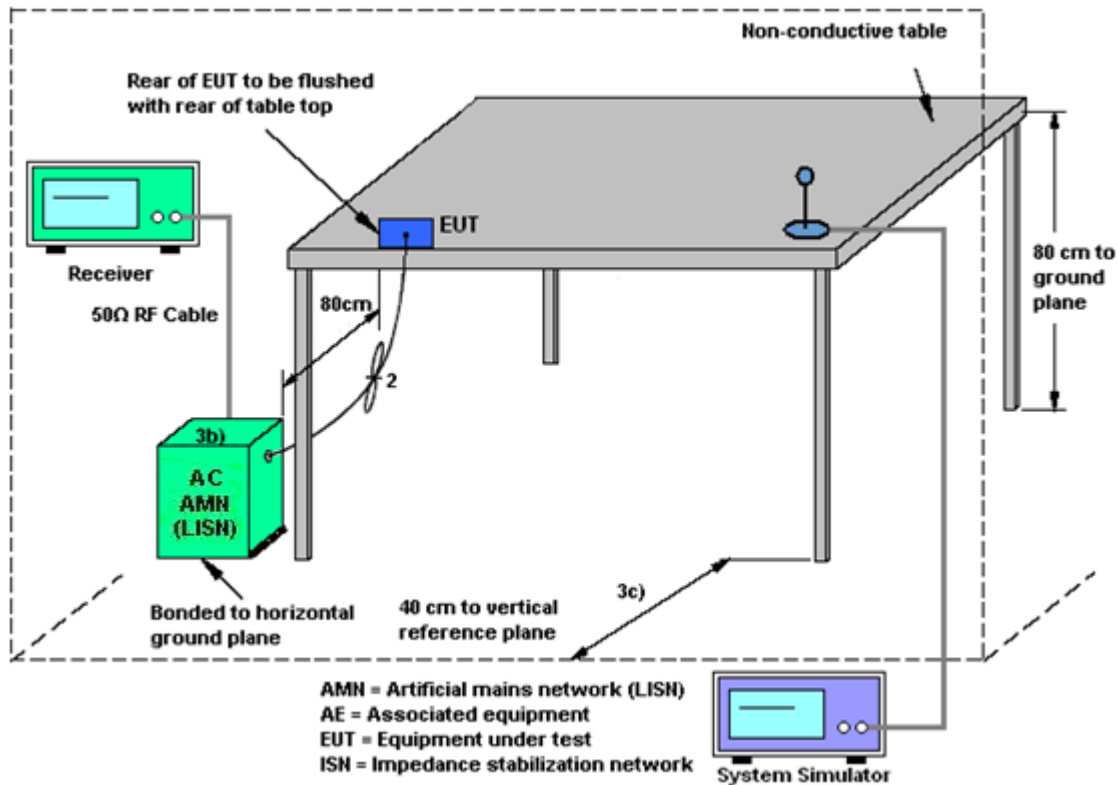
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

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

### 3.5.4 Test Setup



### 3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

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



## 4 List of Measuring Equipment

| Instrument                        | Manufacturer | Model No.                | Serial No.   | Characteristics | Calibration Date | Test Date    | Due Date      | Remark                |
|-----------------------------------|--------------|--------------------------|--------------|-----------------|------------------|--------------|---------------|-----------------------|
| Spectrum Analyzer                 | R&S          | FSV40                    | 101078       | 10Hz~40GHz      | Apr. 18, 2019    | May 30, 2019 | Apr. 17, 2020 | Conducted (TH01-SZ)   |
| Pulse Power Sensor                | Anritsu      | MA2411B                  | 1207253      | 30MHz~40GHz     | Dec. 22, 2018    | May 30, 2019 | Dec. 21, 2019 | Conducted (TH01-SZ)   |
| Power Meter                       | Anritsu      | ML2495A                  | 1218010      | 50MHz Bandwidth | Dec. 22, 2018    | May 30, 2019 | Dec. 21, 2019 | Conducted (TH01-SZ)   |
| EMI Test Receiver&SA              | Agilent      | N9038A                   | MY52260185   | 20Hz~26.5GHz    | Aug. 30, 2018    | May 30, 2019 | Aug. 29, 2019 | Radiation (03CH01-SZ) |
| Loop Antenna                      | R&S          | HFH2-Z2                  | 100354       | 9kHz~30MHz      | May 28, 2019     | May 30, 2019 | May 27, 2020  | Radiation (03CH01-SZ) |
| Bilog Antenna                     | TeseQ        | CBL6112D                 | 35407        | 30MHz-2GHz      | Jun. 05, 2018    | May 30, 2019 | Jun. 04, 2019 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna         | ETS Lindgren | 3117                     | 119436       | 1GHz~18GHz      | Jun. 28, 2018    | May 30, 2019 | Jun. 27, 2019 | Radiation (03CH01-SZ) |
| SHF-EHF Horn                      | com-power    | AH-840                   | 101071       | 18GHz-40GHz     | Mar. 30, 2019    | May 30, 2019 | Mar. 29, 2020 | Radiation (03CH01-SZ) |
| LF Amplifier                      | Burgeon      | BPA-530                  | 102209       | 0.01~3000Mhz    | Apr. 19, 2019    | May 30, 2019 | Apr. 18, 2020 | Radiation (03CH01-SZ) |
| HF Amplifier                      | MITEQ        | AMF-7D-00101800-30-10P-R | 1707137      | 1GHz~18GHz      | Oct. 19, 2018    | May 30, 2019 | Oct. 18, 2019 | Radiation (03CH01-SZ) |
| HF Amplifier                      | KEYSIGHT     | 83017A                   | MY53270104   | 0.5GHz~26.5GHz  | Dec. 22, 2018    | May 30, 2019 | Dec. 21, 2019 | Radiation (03CH01-SZ) |
| HF Amplifier                      | MITEQ        | TTA1840-35-HG            | 1871923      | 18GHz~40GHz     | Jul. 17, 2018    | May 30, 2019 | Jul. 16, 2019 | Radiation (03CH01-SZ) |
| AC Power Source                   | Chroma       | 61601                    | 616010001985 | N/A             | NCR              | May 30, 2019 | NCR           | Radiation (03CH01-SZ) |
| Turn Table                        | EM           | EM1000                   | N/A          | 0~360 degree    | NCR              | May 30, 2019 | NCR           | Radiation (03CH01-SZ) |
| Antenna Mast                      | EM           | EM1000                   | N/A          | 1 m~4 m         | NCR              | May 30, 2019 | NCR           | Radiation (03CH01-SZ) |
| EMI Receiver                      | R&S          | ESR7                     | 101630       | 9kHz~7GHz;      | Dec. 23, 2018    | May 28, 2019 | Dec. 22, 2019 | Conduction (CO01-SZ)  |
| AC LISN                           | EMCO         | 3816/2SH                 | 00103912     | 9kHz~30MHz      | Oct. 18, 2018    | May 28, 2019 | Oct. 17, 2019 | Conduction (CO01-SZ)  |
| AC LISN (for auxiliary equipment) | EMCO         | 3816/2SH                 | 00103892     | 9kHz~30MHz      | Dec. 23, 2018    | May 28, 2019 | Dec. 22, 2019 | Conduction (CO01-SZ)  |
| AC Power Source                   | Chroma       | 61602                    | 616020000891 | 100Vac~250Vac   | Jul. 18, 2018    | May 28, 2019 | Jul. 17, 2019 | Conduction (CO01-SZ)  |

NCR: No Calibration Required

## 5 Uncertainty of Evaluation

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

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

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 2.6dB |
|-------------------------------------------------------------------------|-------|

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

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

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

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

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

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



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

Report Number : FR932820-01E

|                |           |                    |       |    |
|----------------|-----------|--------------------|-------|----|
| Test Engineer: | Jensen Wu | Temperature:       | 24~26 | °C |
| Test Date:     | 2019/5/30 | Relative Humidity: | 50~53 | %  |

**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    | 6Mbps     | 1   | 36  | 5180        | 17.58               | 20.83                 | -                                  | 22.45                             |  |  |
| 11a    | 6Mbps     | 1   | 44  | 5220        | 17.68               | 20.73                 | -                                  | 22.48                             |  |  |
| 11a    | 6Mbps     | 1   | 48  | 5240        | 17.63               | 20.73                 | -                                  | 22.46                             |  |  |
| HT20   | MCS0      | 1   | 36  | 5180        | 18.33               | 21.28                 | -                                  | 22.63                             |  |  |
| HT20   | MCS0      | 1   | 44  | 5220        | 18.38               | 21.33                 | -                                  | 22.64                             |  |  |
| HT20   | MCS0      | 1   | 48  | 5240        | 18.38               | 21.43                 | -                                  | 22.64                             |  |  |
| HT40   | MCS0      | 1   | 38  | 5190        | 36.26               | 39.83                 | -                                  | 23.01                             |  |  |
| HT40   | MCS0      | 1   | 46  | 5230        | 36.26               | 39.92                 | -                                  | 23.01                             |  |  |
| VHT80  | MCS0      | 1   | 42  | 5210        | 74.93               | 80.72                 | -                                  | 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        | 6Mbps     | 1   | 36  | 5180        | 0.11             | 14.33                         | 24.00                           | 1.00     |  | Pass      |
| 11a        | 6Mbps     | 1   | 44  | 5220        | 0.11             | 14.61                         | 24.00                           | 1.00     |  | Pass      |
| 11a        | 6Mbps     | 1   | 48  | 5240        | 0.11             | 14.72                         | 24.00                           | 1.00     |  | Pass      |
| HT20       | MCS0      | 1   | 36  | 5180        | 0.07             | 13.32                         | 24.00                           | 1.00     |  | Pass      |
| HT20       | MCS0      | 1   | 44  | 5220        | 0.07             | 13.61                         | 24.00                           | 1.00     |  | Pass      |
| HT20       | MCS0      | 1   | 48  | 5240        | 0.07             | 13.69                         | 24.00                           | 1.00     |  | Pass      |
| HT40       | MCS0      | 1   | 38  | 5190        | 0.17             | 13.00                         | 24.00                           | 1.00     |  | Pass      |
| HT40       | MCS0      | 1   | 46  | 5230        | 0.17             | 13.13                         | 24.00                           | 1.00     |  | Pass      |
| VHT20      | MCS0      | 1   | 36  | 5180        | 0.06             | 13.17                         | 24.00                           | 1.00     |  | Pass      |
| VHT20      | MCS0      | 1   | 44  | 5220        | 0.06             | 13.40                         | 24.00                           | 1.00     |  | Pass      |
| VHT20      | MCS0      | 1   | 48  | 5240        | 0.06             | 13.56                         | 24.00                           | 1.00     |  | Pass      |
| VHT40      | MCS0      | 1   | 38  | 5190        | 0.09             | 12.95                         | 24.00                           | 1.00     |  | Pass      |
| VHT40      | MCS0      | 1   | 46  | 5230        | 0.09             | 13.04                         | 24.00                           | 1.00     |  | Pass      |
| VHT80      | MCS0      | 1   | 42  | 5210        | 0.16             | 10.66                         | 24.00                           | 1.00     |  | Pass      |

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

| FCC Band I |           |     |     |             |                  |                                 |                             |          |   |           |
|------------|-----------|-----|-----|-------------|------------------|---------------------------------|-----------------------------|----------|---|-----------|
| Mod.       | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) | - | Pass/Fail |
| 11a        | 6Mbps     | 1   | 36  | 5180        | 0.11             | 3.45                            | 11.00                       | 1.00     |   | Pass      |
| 11a        | 6Mbps     | 1   | 44  | 5220        | 0.11             | 3.45                            | 11.00                       | 1.00     |   | Pass      |
| 11a        | 6Mbps     | 1   | 48  | 5240        | 0.11             | 3.25                            | 11.00                       | 1.00     |   | Pass      |
| HT20       | MCS0      | 1   | 36  | 5180        | 0.07             | 1.70                            | 11.00                       | 1.00     |   | Pass      |
| HT20       | MCS0      | 1   | 44  | 5220        | 0.07             | 1.69                            | 11.00                       | 1.00     |   | Pass      |
| HT20       | MCS0      | 1   | 48  | 5240        | 0.07             | 1.80                            | 11.00                       | 1.00     |   | Pass      |
| HT40       | MCS0      | 1   | 38  | 5190        | 0.17             | -2.78                           | 11.00                       | 1.00     |   | Pass      |
| HT40       | MCS0      | 1   | 46  | 5230        | 0.17             | -3.21                           | 11.00                       | 1.00     |   | Pass      |
| VHT80      | MCS0      | 1   | 42  | 5210        | 0.16             | -7.46                           | 11.00                       | 1.00     |   | 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        | 17.58               | 20.78                 | 23.45                              | 29.45                             | 23.98                                |      |
| 11a     | 6M bps    | 1               | 60  | 5300        | 17.53               | 20.78                 | 23.44                              | 29.44                             | 23.98                                |      |
| 11a     | 6M bps    | 1               | 64  | 5320        | 17.58               | 20.78                 | 23.45                              | 29.45                             | 23.98                                |      |
| HT20    | MCS 0     | 1               | 52  | 5260        | 18.33               | 21.28                 | 23.63                              | 29.63                             | 23.98                                |      |
| HT20    | MCS 0     | 1               | 60  | 5300        | 18.43               | 21.43                 | 23.66                              | 29.66                             | 23.98                                |      |
| HT20    | MCS 0     | 1               | 64  | 5320        | 18.33               | 21.38                 | 23.63                              | 29.63                             | 23.98                                |      |
| HT40    | MCS 0     | 1               | 54  | 5270        | 36.06               | 40.01                 | 23.98                              | 30.00                             | 23.98                                |      |
| HT40    | MCS 0     | 1               | 62  | 5310        | 36.06               | 40.01                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80   | MCS 0     | 1               | 58  | 5290        | 74.81               | 80.56                 | 23.98                              | 30.00                             | 23.98                                |      |

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

| FCC Band II |           |     |     |             |                  |                               |                                 |          |                        |           |
|-------------|-----------|-----|-----|-------------|------------------|-------------------------------|---------------------------------|----------|------------------------|-----------|
| Mod.        | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) | EIRP Power Limit (dBm) | Pass/Fail |
| 11a         | 6M bps    | 1   | 52  | 5260        | 0.11             | 14.11                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| 11a         | 6M bps    | 1   | 60  | 5300        | 0.11             | 14.17                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| 11a         | 6M bps    | 1   | 64  | 5320        | 0.11             | 14.14                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT20        | MCS 0     | 1   | 52  | 5260        | 0.07             | 11.96                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT20        | MCS 0     | 1   | 60  | 5300        | 0.07             | 12.41                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT20        | MCS 0     | 1   | 64  | 5320        | 0.07             | 12.59                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT40        | MCS 0     | 1   | 54  | 5270        | 0.17             | 11.61                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT40        | MCS 0     | 1   | 62  | 5310        | 0.17             | 11.83                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT20       | MCS 0     | 1   | 52  | 5260        | 0.06             | 11.86                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT20       | MCS 0     | 1   | 60  | 5300        | 0.06             | 12.36                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT20       | MCS 0     | 1   | 64  | 5320        | 0.06             | 12.54                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT40       | MCS 0     | 1   | 54  | 5270        | 0.09             | 11.46                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT40       | MCS 0     | 1   | 62  | 5310        | 0.09             | 11.75                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT80       | MCS 0     | 1   | 58  | 5290        | 0.16             | 9.04                          | 23.98                           | 1.00     | 26.99                  | Pass      |

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

| Band II |           |     |     |             |                  |                                 |                             |          |  |           |
|---------|-----------|-----|-----|-------------|------------------|---------------------------------|-----------------------------|----------|--|-----------|
| Mod.    | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) |  | Pass/Fail |
| 11a     | 6M bps    | 1   | 52  | 5260        | 0.11             | 1.60                            | 11.00                       | 1.00     |  | Pass      |
| 11a     | 6M bps    | 1   | 60  | 5300        | 0.11             | 2.24                            | 11.00                       | 1.00     |  | Pass      |
| 11a     | 6M bps    | 1   | 64  | 5320        | 0.11             | 2.33                            | 11.00                       | 1.00     |  | Pass      |
| HT20    | MCS 0     | 1   | 52  | 5260        | 0.07             | 0.47                            | 11.00                       | 1.00     |  | Pass      |
| HT20    | MCS 0     | 1   | 60  | 5300        | 0.07             | 0.34                            | 11.00                       | 1.00     |  | Pass      |
| HT20    | MCS 0     | 1   | 64  | 5320        | 0.07             | 0.88                            | 11.00                       | 1.00     |  | Pass      |
| HT40    | MCS 0     | 1   | 54  | 5270        | 0.17             | -4.89                           | 11.00                       | 1.00     |  | Pass      |
| HT40    | MCS 0     | 1   | 62  | 5310        | 0.17             | -4.43                           | 11.00                       | 1.00     |  | Pass      |
| VHT80   | MCS 0     | 1   | 58  | 5290        | 0.16             | -8.84                           | 11.00                       | 1.00     |  | Pass      |

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

| Band III |           |     |     |             |                     |                       |                                    |                                   |                                      |      |
|----------|-----------|-----|-----|-------------|---------------------|-----------------------|------------------------------------|-----------------------------------|--------------------------------------|------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 26 dB Bandwidth (MHz) | IC 99% Bandwidth Power Limit (dBm) | IC 99% Bandwidth EIRP Limit (dBm) | FCC 26dB Bandwidth Power Limit (dBm) | Note |
| 11a      | 6M bps    | 1   | 100 | 5500        | 17.53               | 20.73                 | 23.44                              | 29.44                             | 23.98                                |      |
| 11a      | 6M bps    | 1   | 116 | 5580        | 17.43               | 20.68                 | 23.41                              | 29.41                             | 23.98                                |      |
| 11a      | 6M bps    | 1   | 140 | 5700        | 17.58               | 20.68                 | 23.45                              | 29.45                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 100 | 5500        | 18.33               | 21.38                 | 23.63                              | 29.63                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 116 | 5580        | 18.33               | 21.43                 | 23.63                              | 29.63                             | 23.98                                |      |
| HT20     | MCS 0     | 1   | 140 | 5700        | 18.38               | 21.48                 | 23.64                              | 29.64                             | 23.98                                |      |
| HT40     | MCS 0     | 1   | 102 | 5510        | 36.06               | 40.19                 | 23.98                              | 30.00                             | 23.98                                |      |
| HT40     | MCS 0     | 1   | 110 | 5550        | 36.16               | 40.10                 | 23.98                              | 30.00                             | 23.98                                |      |
| HT40     | MCS 0     | 1   | 134 | 5670        | 36.16               | 40.01                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1   | 106 | 5530        | 74.81               | 80.56                 | 23.98                              | 30.00                             | 23.98                                |      |
| VHT80    | MCS 0     | 1   | 122 | 5610        | 74.81               | 80.72                 | 23.98                              | 30.00                             | 23.98                                |      |

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

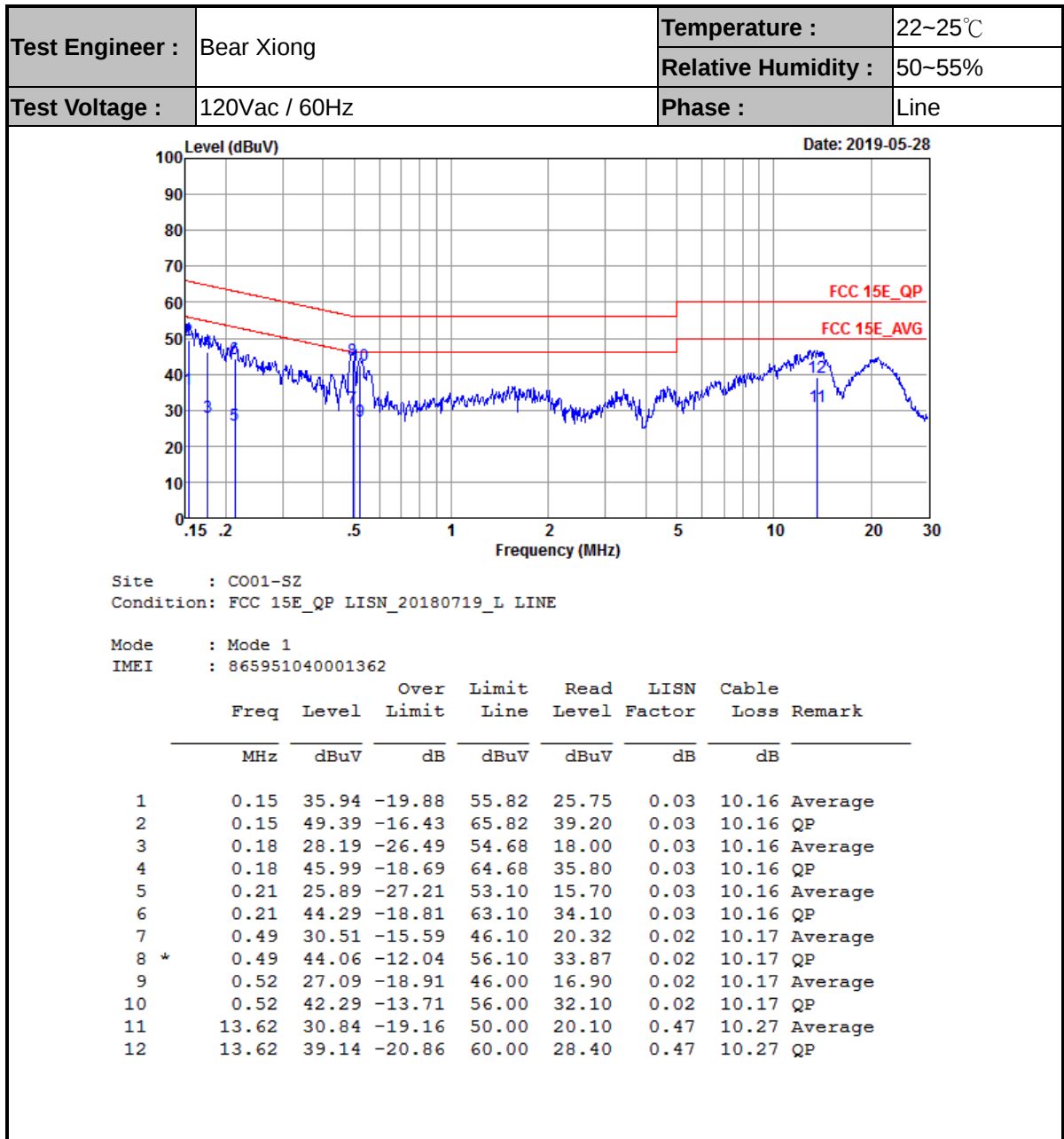
| FCC Band III |           |     |     |             |                  |                               |                                 |          |                        |           |
|--------------|-----------|-----|-----|-------------|------------------|-------------------------------|---------------------------------|----------|------------------------|-----------|
| Mod.         | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Conducted Power (dBm) | FCC Conducted Power Limit (dBm) | DG (dBi) | EIRP Power Limit (dBm) | Pass/Fail |
| 11a          | 6M bps    | 1   | 100 | 5500        | 0.11             | 14.16                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| 11a          | 6M bps    | 1   | 116 | 5580        | 0.11             | 14.15                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| 11a          | 6M bps    | 1   | 140 | 5700        | 0.11             | 14.22                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT20         | MCS 0     | 1   | 100 | 5500        | 0.07             | 12.78                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT20         | MCS 0     | 1   | 116 | 5580        | 0.07             | 13.15                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT20         | MCS 0     | 1   | 140 | 5700        | 0.07             | 12.70                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT40         | MCS 0     | 1   | 102 | 5510        | 0.17             | 12.50                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT40         | MCS 0     | 1   | 110 | 5550        | 0.17             | 12.77                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| HT40         | MCS 0     | 1   | 134 | 5670        | 0.17             | 12.32                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT20        | MCS 0     | 1   | 100 | 5500        | 0.06             | 12.71                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT20        | MCS 0     | 1   | 116 | 5580        | 0.06             | 13.07                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT20        | MCS 0     | 1   | 140 | 5700        | 0.06             | 12.63                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT40        | MCS 0     | 1   | 102 | 5510        | 0.09             | 12.41                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT40        | MCS 0     | 1   | 110 | 5550        | 0.09             | 12.65                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT40        | MCS 0     | 1   | 134 | 5670        | 0.09             | 12.21                         | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT80        | MCS 0     | 1   | 106 | 5530        | 0.16             | 9.77                          | 23.98                           | 1.00     | 26.99                  | Pass      |
| VHT80        | MCS 0     | 1   | 122 | 5610        | 0.16             | 9.53                          | 23.98                           | 1.00     | 26.99                  | Pass      |

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

| Band III |           |     |     |             |                  |                                 |                             |          |  |           |
|----------|-----------|-----|-----|-------------|------------------|---------------------------------|-----------------------------|----------|--|-----------|
| Mod.     | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | Average Power Density (dBm/MHz) | Average PSD Limit (dBm/MHz) | DG (dBi) |  | Pass/Fail |
| 11a      | 6M bps    | 1   | 100 | 5500        | 0.11             | 2.15                            | 11.00                       | 1.00     |  | Pass      |
| 11a      | 6M bps    | 1   | 116 | 5580        | 0.11             | 2.75                            | 11.00                       | 1.00     |  | Pass      |
| 11a      | 6M bps    | 1   | 140 | 5700        | 0.11             | 2.49                            | 11.00                       | 1.00     |  | Pass      |
| HT20     | MCS 0     | 1   | 100 | 5500        | 0.07             | 0.76                            | 11.00                       | 1.00     |  | Pass      |
| HT20     | MCS 0     | 1   | 116 | 5580        | 0.07             | 1.17                            | 11.00                       | 1.00     |  | Pass      |
| HT20     | MCS 0     | 1   | 140 | 5700        | 0.07             | 1.03                            | 11.00                       | 1.00     |  | Pass      |
| HT40     | MCS 0     | 1   | 102 | 5510        | 0.17             | -2.06                           | 11.00                       | 1.00     |  | Pass      |
| HT40     | MCS 0     | 1   | 110 | 5550        | 0.17             | -2.21                           | 11.00                       | 1.00     |  | Pass      |
| HT40     | MCS 0     | 1   | 134 | 5670        | 0.17             | -2.88                           | 11.00                       | 1.00     |  | Pass      |
| VHT80    | MCS 0     | 1   | 106 | 5530        | 0.16             | -8.05                           | 11.00                       | 1.00     |  | Pass      |
| VHT80    | MCS 0     | 1   | 122 | 5610        | 0.16             | -8.29                           | 11.00                       | 1.00     |  | Pass      |

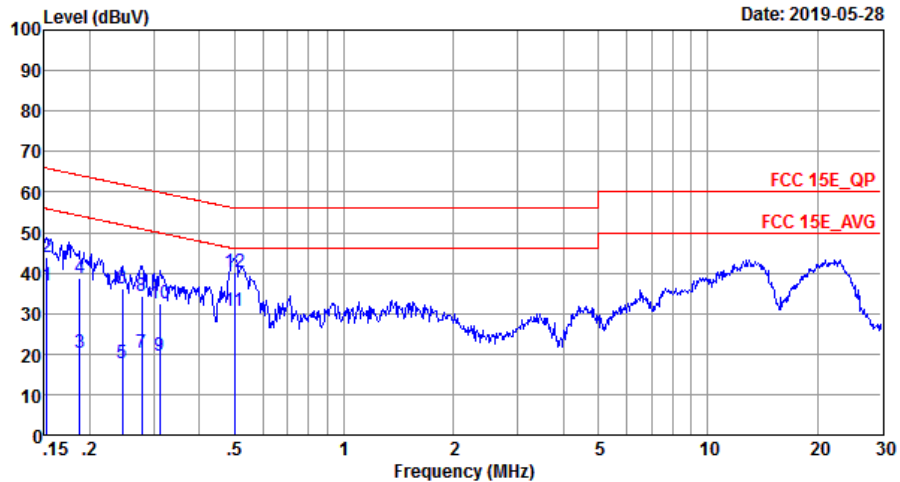


## Appendix B. AC Conducted Emission Test Results





|                        |               |                            |         |
|------------------------|---------------|----------------------------|---------|
| <b>Test Engineer :</b> | Bear Xiong    | <b>Temperature :</b>       | 22~25℃  |
|                        |               | <b>Relative Humidity :</b> | 50~55%  |
| <b>Test Voltage :</b>  | 120Vac / 60Hz | <b>Phase :</b>             | Neutral |



Site : CO01-SZ  
Condition: FCC 15E\_QP LISN\_20180719\_N NEUTRAL

Mode : Mode 1  
IMEI : 865951040001362

|      | Freq | Level | Over   | Limit | Read  | LISN   | Cable |         |
|------|------|-------|--------|-------|-------|--------|-------|---------|
|      | MHz  | dBuV  | Limit  | Line  | Level | Factor | Loss  | Remark  |
|      |      |       | dB     | dBuV  | dBuV  | dB     | dB    |         |
| 1    | 0.15 | 36.74 | -19.13 | 55.87 | 26.55 | 0.03   | 10.16 | Average |
| 2    | 0.15 | 44.09 | -21.78 | 65.87 | 33.90 | 0.03   | 10.16 | QP      |
| 3    | 0.19 | 20.29 | -33.86 | 54.15 | 10.10 | 0.03   | 10.16 | Average |
| 4    | 0.19 | 38.89 | -25.26 | 64.15 | 28.70 | 0.03   | 10.16 | QP      |
| 5    | 0.25 | 17.64 | -34.27 | 51.91 | 7.44  | 0.03   | 10.17 | Average |
| 6    | 0.25 | 36.30 | -25.61 | 61.91 | 26.10 | 0.03   | 10.17 | QP      |
| 7    | 0.28 | 20.30 | -30.60 | 50.90 | 10.10 | 0.03   | 10.17 | Average |
| 8    | 0.28 | 34.30 | -26.60 | 60.90 | 24.10 | 0.03   | 10.17 | QP      |
| 9    | 0.31 | 19.60 | -30.33 | 49.93 | 9.40  | 0.03   | 10.17 | Average |
| 10   | 0.31 | 32.60 | -27.33 | 59.93 | 22.40 | 0.03   | 10.17 | QP      |
| 11 * | 0.50 | 30.77 | -15.24 | 46.01 | 20.58 | 0.02   | 10.17 | Average |
| 12   | 0.50 | 40.19 | -15.82 | 56.01 | 30.00 | 0.02   | 10.17 | QP      |



## Appendix C. Radiated Spurious Emission

|                 |           |                     |         |
|-----------------|-----------|---------------------|---------|
| Test Engineer : | Fuquan Wu | Temperature :       | 24~25°C |
|                 |           | Relative Humidity : | 48~49%  |



## 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 |      | 5117.26   | 53.03      | -20.97 | 74         | 38.62    | 33.83    | 13.68  | 33.1   | 102    | 142     | P       | H       |
|                             |      | 5149.5    | 43.9       | -10.1  | 54         | 29.45    | 33.87    | 13.68  | 33.1   | 102    | 142     | A       | H       |
|                             | *    | 5180      | 105.03     | -      | -          | 90.44    | 33.92    | 13.77  | 33.1   | 102    | 142     | P       | H       |
|                             |      | 5180      | 97.01      | -      | -          | 82.42    | 33.92    | 13.77  | 33.1   | 102    | 142     | A       | H       |
|                             |      | 5124.02   | 52.35      | -21.65 | 74         | 37.92    | 33.85    | 13.68  | 33.1   | 376    | 235     | P       | V       |
|                             |      | 5144.56   | 43.57      | -10.43 | 54         | 29.12    | 33.87    | 13.68  | 33.1   | 376    | 235     | A       | V       |
|                             | *    | 5180      | 100.1      | -      | -          | 85.51    | 33.92    | 13.77  | 33.1   | 376    | 235     | P       | V       |
|                             |      | 5180      | 92.91      | -      | -          | 78.32    | 33.92    | 13.77  | 33.1   | 376    | 235     | A       | V       |
| 802.11a<br>CH 44<br>5220MHz |      | 5130.52   | 52.88      | -21.12 | 74         | 38.45    | 33.85    | 13.68  | 33.1   | 125    | 143     | P       | H       |
|                             |      | 5116.22   | 43.36      | -10.64 | 54         | 28.95    | 33.83    | 13.68  | 33.1   | 125    | 143     | A       | H       |
|                             | *    | 5220      | 105.1      | -      | -          | 90.38    | 33.96    | 13.86  | 33.1   | 125    | 143     | P       | H       |
|                             |      | 5220      | 97.5       | -      | -          | 82.78    | 33.96    | 13.86  | 33.1   | 125    | 143     | A       | H       |
|                             |      | 5392.56   | 53.3       | -20.7  | 74         | 38.06    | 34.18    | 14.16  | 33.1   | 125    | 143     | P       | H       |
|                             |      | 5455.2    | 43.93      | -10.07 | 54         | 28.5     | 34.26    | 14.27  | 33.1   | 125    | 143     | A       | H       |
|                             |      | 5117.78   | 52.51      | -21.49 | 74         | 38.1     | 33.83    | 13.68  | 33.1   | 376    | 235     | P       | V       |
|                             |      | 5143      | 43.35      | -10.65 | 54         | 28.9     | 33.87    | 13.68  | 33.1   | 376    | 235     | A       | V       |
|                             | *    | 5220      | 99.29      | -      | -          | 84.57    | 33.96    | 13.86  | 33.1   | 376    | 235     | P       | V       |
|                             |      | 5220      | 92.84      | -      | -          | 78.12    | 33.96    | 13.86  | 33.1   | 376    | 235     | A       | V       |
|                             |      | 5416.32   | 52.9       | -21.1  | 74         | 37.62    | 34.22    | 14.16  | 33.1   | 376    | 235     | P       | V       |
|                             |      | 5431.44   | 43.74      | -10.26 | 54         | 28.33    | 34.24    | 14.27  | 33.1   | 376    | 235     | A       | V       |



|                             |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-----------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| 802.11a<br>CH 48<br>5240MHz |                                                                                             | 5088.66 | 53.26  | -20.74 | 74 | 38.95 | 33.81 | 13.6  | 33.1 | 113 | 143 | P | H |
|                             |                                                                                             | 5147.42 | 43.37  | -10.63 | 54 | 28.92 | 33.87 | 13.68 | 33.1 | 113 | 143 | A | H |
|                             | *                                                                                           | 5240    | 105.27 | -      | -  | 90.47 | 33.98 | 13.92 | 33.1 | 113 | 143 | P | H |
|                             |                                                                                             | 5240    | 97.76  | -      | -  | 82.96 | 33.98 | 13.92 | 33.1 | 113 | 143 | A | H |
|                             |                                                                                             | 5442    | 53.42  | -20.58 | 74 | 38.01 | 34.24 | 14.27 | 33.1 | 113 | 143 | P | H |
|                             |                                                                                             | 5406.48 | 44.01  | -9.99  | 54 | 28.75 | 34.2  | 14.16 | 33.1 | 113 | 143 | A | H |
|                             |                                                                                             | 5078    | 52.35  | -21.65 | 74 | 38.06 | 33.79 | 13.6  | 33.1 | 376 | 234 | P | V |
|                             |                                                                                             | 5140.4  | 43.33  | -10.67 | 54 | 28.88 | 33.87 | 13.68 | 33.1 | 376 | 234 | A | V |
|                             | *                                                                                           | 5240    | 99.49  | -      | -  | 84.69 | 33.98 | 13.92 | 33.1 | 376 | 234 | P | V |
|                             |                                                                                             | 5240    | 93.16  | -      | -  | 78.36 | 33.98 | 13.92 | 33.1 | 376 | 234 | A | V |
|                             |                                                                                             | 5448.96 | 53.42  | -20.58 | 74 | 37.99 | 34.26 | 14.27 | 33.1 | 376 | 234 | P | V |
|                             |                                                                                             | 5429.04 | 43.74  | -10.26 | 54 | 28.33 | 34.24 | 14.27 | 33.1 | 376 | 234 | 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                | 45.83               | -22.37                  | 68.2                        | 48.15                   | 37.02                         | 19.65                   | 58.99                      | 152                  | 260                     | P                     | H             |
|                             |                                                                                             | 15540                | 45.93               | -28.07                  | 74                          | 41.73                   | 40.78                         | 22.35                   | 58.93                      | 161                  | 0                       | P                     | H             |
|                             |                                                                                             | 10360                | 44.78               | -23.42                  | 68.2                        | 47.1                    | 37.02                         | 19.65                   | 58.99                      | 152                  | 260                     | P                     | V             |
|                             |                                                                                             | 15540                | 47.08               | -26.92                  | 74                          | 42.88                   | 40.78                         | 22.35                   | 58.93                      | 161                  | 196                     | P                     | V             |
| 802.11a<br>CH 44<br>5220MHz |                                                                                             | 10440                | 45.9                | -22.3                   | 68.2                        | 48.07                   | 37.06                         | 19.69                   | 58.92                      | 150                  | 230                     | P                     | H             |
|                             |                                                                                             | 15660                | 46.89               | -27.11                  | 74                          | 42.46                   | 41.07                         | 22.42                   | 59.06                      | 160                  | 225                     | P                     | H             |
|                             |                                                                                             | 10440                | 46.44               | -21.76                  | 68.2                        | 48.61                   | 37.06                         | 19.69                   | 58.92                      | 185                  | 230                     | P                     | V             |
|                             |                                                                                             | 15660                | 46                  | -28                     | 74                          | 41.57                   | 41.07                         | 22.42                   | 59.06                      | 160                  | 59                      | P                     | V             |
| 802.11a<br>CH 48<br>5240MHz |                                                                                             | 10480                | 45.64               | -22.56                  | 68.2                        | 47.7                    | 37.09                         | 19.71                   | 58.86                      | 150                  | 289                     | P                     | H             |
|                             |                                                                                             | 15720                | 47.07               | -26.93                  | 74                          | 42.5                    | 41.24                         | 22.45                   | 59.12                      | 150                  | 291                     | P                     | H             |
|                             |                                                                                             | 10480                | 45.44               | -22.76                  | 68.2                        | 47.5                    | 37.09                         | 19.71                   | 58.86                      | 126                  | 238                     | P                     | V             |
|                             |                                                                                             | 15720                | 47.12               | -26.88                  | 74                          | 42.55                   | 41.24                         | 22.45                   | 59.12                      | 186                  | 329                     | 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 |      | 5149.24              | 54.8                | -19.2                   | 74                          | 40.35                     | 33.87                         | 13.68                   | 33.1                       | 110                  | 142                     | P                       | H               |
|                                     |      | 5149.5               | 45.1                | -8.9                    | 54                          | 30.65                     | 33.87                         | 13.68                   | 33.1                       | 110                  | 142                     | A                       | H               |
|                                     | *    | 5180                 | 103.83              | -                       | -                           | 89.24                     | 33.92                         | 13.77                   | 33.1                       | 110                  | 142                     | P                       | H               |
|                                     |      | 5180                 | 98.01               | -                       | -                           | 83.42                     | 33.92                         | 13.77                   | 33.1                       | 110                  | 142                     | A                       | H               |
|                                     |      | 5149.76              | 53.94               | -20.06                  | 74                          | 39.49                     | 33.87                         | 13.68                   | 33.1                       | 386                  | 242                     | P                       | V               |
|                                     |      | 5149.76              | 45.45               | -8.55                   | 54                          | 31                        | 33.87                         | 13.68                   | 33.1                       | 386                  | 242                     | A                       | V               |
|                                     | *    | 5180                 | 100.41              | -                       | -                           | 85.82                     | 33.92                         | 13.77                   | 33.1                       | 386                  | 242                     | P                       | V               |
|                                     |      | 5180                 | 92.48               | -                       | -                           | 77.89                     | 33.92                         | 13.77                   | 33.1                       | 386                  | 242                     | A                       | V               |
| 802.11n<br>HT20<br>CH 44<br>5220MHz |      | 5103.48              | 52.68               | -21.32                  | 74                          | 38.37                     | 33.81                         | 13.6                    | 33.1                       | 114                  | 143                     | P                       | H               |
|                                     |      | 5147.16              | 43.69               | -10.31                  | 54                          | 29.24                     | 33.87                         | 13.68                   | 33.1                       | 114                  | 143                     | A                       | H               |
|                                     | *    | 5220                 | 104.79              | -                       | -                           | 90.07                     | 33.96                         | 13.86                   | 33.1                       | 114                  | 143                     | P                       | H               |
|                                     |      | 5220                 | 97.88               | -                       | -                           | 83.16                     | 33.96                         | 13.86                   | 33.1                       | 114                  | 143                     | A                       | H               |
|                                     |      | 5369.56              | 52.77               | -21.23                  | 74                          | 37.62                     | 34.15                         | 14.1                    | 33.1                       | 114                  | 143                     | P                       | H               |
|                                     |      | 5425.84              | 43.98               | -10.02                  | 54                          | 28.7                      | 34.22                         | 14.16                   | 33.1                       | 114                  | 143                     | A                       | H               |
|                                     |      | 5110.76              | 52.37               | -21.63                  | 74                          | 38.04                     | 33.83                         | 13.6                    | 33.1                       | 374                  | 223                     | P                       | V               |
|                                     |      | 5120.64              | 43.27               | -10.73                  | 54                          | 28.86                     | 33.83                         | 13.68                   | 33.1                       | 374                  | 223                     | A                       | V               |
|                                     | *    | 5220                 | 102.22              | -                       | -                           | 87.5                      | 33.96                         | 13.86                   | 33.1                       | 374                  | 223                     | P                       | V               |
|                                     |      | 5220                 | 95.45               | -                       | -                           | 80.73                     | 33.96                         | 13.86                   | 33.1                       | 374                  | 223                     | A                       | V               |
|                                     |      | 5355                 | 53.67               | -20.33                  | 74                          | 38.54                     | 34.13                         | 14.1                    | 33.1                       | 374                  | 223                     | P                       | V               |
|                                     |      | 5395.04              | 43.72               | -10.28                  | 54                          | 28.46                     | 34.2                          | 14.16                   | 33.1                       | 374                  | 223                     | A                       | V               |



|                                                                             |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n</b><br><br><b>HT20</b><br><br><b>CH 48</b><br><br><b>5240MHz</b> |                                                                                             | 5145.86 | 52.28  | -21.72 | 74 | 37.83 | 33.87 | 13.68 | 33.1 | 115 | 143 | P | H |
|                                                                             |                                                                                             | 5139.1  | 43.62  | -10.38 | 54 | 29.19 | 33.85 | 13.68 | 33.1 | 115 | 143 | A | H |
|                                                                             | *                                                                                           | 5240    | 104.29 | -      | -  | 89.49 | 33.98 | 13.92 | 33.1 | 115 | 143 | P | H |
|                                                                             |                                                                                             | 5240    | 96.76  | -      | -  | 81.96 | 33.98 | 13.92 | 33.1 | 115 | 143 | A | H |
|                                                                             |                                                                                             | 5394.2  | 52.61  | -21.39 | 74 | 37.37 | 34.18 | 14.16 | 33.1 | 115 | 143 | P | H |
|                                                                             |                                                                                             | 5432.56 | 43.88  | -10.12 | 54 | 28.47 | 34.24 | 14.27 | 33.1 | 115 | 143 | A | H |
|                                                                             |                                                                                             | 5062.92 | 52.41  | -21.59 | 74 | 38.24 | 33.76 | 13.51 | 33.1 | 370 | 234 | P | V |
|                                                                             |                                                                                             | 5119.6  | 43.35  | -10.65 | 54 | 28.94 | 33.83 | 13.68 | 33.1 | 370 | 234 | A | V |
|                                                                             | *                                                                                           | 5240    | 102.1  | -      | -  | 87.3  | 33.98 | 13.92 | 33.1 | 370 | 234 | P | V |
|                                                                             |                                                                                             | 5240    | 95.15  | -      | -  | 80.35 | 33.98 | 13.92 | 33.1 | 370 | 234 | A | V |
|                                                                             |                                                                                             | 5446.84 | 53.7   | -20.3  | 74 | 38.27 | 34.26 | 14.27 | 33.1 | 370 | 234 | P | V |
|                                                                             |                                                                                             | 5447.68 | 43.86  | -10.14 | 54 | 28.43 | 34.26 | 14.27 | 33.1 | 370 | 234 | A | V |
| <b>Remark</b>                                                               | 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           |                                                                                             | 10360                | 45.41               | -22.79                  | 68.2                        | 47.73                   | 37.02                         | 19.65                   | 58.99                      | 152                  | 260                     | P                     | H             |
| HT20              |                                                                                             | 15540                | 46.22               | -27.78                  | 74                          | 42.02                   | 40.78                         | 22.35                   | 58.93                      | 189                  | 238                     | P                     | H             |
| CH 36             |                                                                                             | 10360                | 44.26               | -23.94                  | 68.2                        | 46.58                   | 37.02                         | 19.65                   | 58.99                      | 241                  | 260                     | P                     | V             |
| 5180MHz           |                                                                                             | 15540                | 46.52               | -27.48                  | 74                          | 42.32                   | 40.78                         | 22.35                   | 58.93                      | 189                  | 184                     | P                     | V             |
| 802.11n           |                                                                                             | 10440                | 46.65               | -21.55                  | 68.2                        | 48.82                   | 37.06                         | 19.69                   | 58.92                      | 185                  | 230                     | P                     | H             |
| HT20              |                                                                                             | 15660                | 47.53               | -26.47                  | 74                          | 43.1                    | 41.07                         | 22.42                   | 59.06                      | 160                  | 59                      | P                     | H             |
| CH 44             |                                                                                             | 10440                | 47.29               | -20.91                  | 68.2                        | 49.46                   | 37.06                         | 19.69                   | 58.92                      | 150                  | 230                     | P                     | V             |
| 5220MHz           |                                                                                             | 15660                | 46.26               | -27.74                  | 74                          | 41.83                   | 41.07                         | 22.42                   | 59.06                      | 160                  | 225                     | P                     | V             |
| 802.11n           |                                                                                             | 10480                | 45.64               | -22.56                  | 68.2                        | 47.7                    | 37.09                         | 19.71                   | 58.86                      | 150                  | 289                     | P                     | H             |
| HT20              |                                                                                             | 15720                | 47.07               | -26.93                  | 74                          | 42.5                    | 41.24                         | 22.45                   | 59.12                      | 150                  | 291                     | P                     | H             |
| CH 48             |                                                                                             | 10480                | 45.44               | -22.76                  | 68.2                        | 47.5                    | 37.09                         | 19.71                   | 58.86                      | 126                  | 238                     | P                     | V             |
| 5240MHz           |                                                                                             | 15720                | 47.12               | -26.88                  | 74                          | 42.55                   | 41.24                         | 22.45                   | 59.12                      | 186                  | 329                     | 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 |                                                                                             | 5148.98              | 60.78               | -13.22                  | 74                          | 46.33                     | 33.87                         | 13.68                   | 33.1                       | 104                  | 138                     | P                       | H               |
|                                     |                                                                                             | 5149.76              | 51.14               | -2.86                   | 54                          | 36.69                     | 33.87                         | 13.68                   | 33.1                       | 104                  | 138                     | A                       | H               |
|                                     | *                                                                                           | 5190                 | 99.17               | -                       | -                           | 84.58                     | 33.92                         | 13.77                   | 33.1                       | 104                  | 138                     | P                       | H               |
|                                     |                                                                                             | 5190                 | 92.11               | -                       | -                           | 77.52                     | 33.92                         | 13.77                   | 33.1                       | 104                  | 138                     | A                       | H               |
|                                     |                                                                                             | 5423.04              | 53.01               | -20.99                  | 74                          | 37.73                     | 34.22                         | 14.16                   | 33.1                       | 104                  | 138                     | P                       | H               |
|                                     |                                                                                             | 5459.16              | 43.68               | -10.32                  | 54                          | 28.25                     | 34.26                         | 14.27                   | 33.1                       | 104                  | 138                     | A                       | H               |
|                                     |                                                                                             | 5149.99              | 59.52               | -14.48                  | 74                          | 45.07                     | 33.87                         | 13.68                   | 33.1                       | 352                  | 231                     | P                       | V               |
|                                     |                                                                                             | 5150                 | 48.8                | -5.2                    | 54                          | 34.35                     | 33.87                         | 13.68                   | 33.1                       | 352                  | 231                     | A                       | V               |
|                                     | *                                                                                           | 5190                 | 96.84               | -                       | -                           | 82.25                     | 33.92                         | 13.77                   | 33.1                       | 352                  | 231                     | P                       | V               |
|                                     |                                                                                             | 5190                 | 89.95               | -                       | -                           | 75.36                     | 33.92                         | 13.77                   | 33.1                       | 352                  | 231                     | A                       | V               |
|                                     |                                                                                             | 5377.12              | 53.1                | -20.9                   | 74                          | 37.95                     | 34.15                         | 14.1                    | 33.1                       | 352                  | 231                     | P                       | V               |
|                                     |                                                                                             | 5431.44              | 43.68               | -10.32                  | 54                          | 28.27                     | 34.24                         | 14.27                   | 33.1                       | 352                  | 231                     | A                       | V               |
| 802.11n<br>HT40<br>CH 46<br>5230MHz |                                                                                             | 5035.88              | 52.53               | -21.47                  | 74                          | 38.49                     | 33.72                         | 13.42                   | 33.1                       | 111                  | 139                     | P                       | H               |
|                                     |                                                                                             | 5138.84              | 43.62               | -10.38                  | 54                          | 29.19                     | 33.85                         | 13.68                   | 33.1                       | 111                  | 139                     | A                       | H               |
|                                     | *                                                                                           | 5230                 | 100.11              | -                       | -                           | 85.37                     | 33.98                         | 13.86                   | 33.1                       | 111                  | 139                     | P                       | H               |
|                                     |                                                                                             | 5230                 | 93.54               | -                       | -                           | 78.8                      | 33.98                         | 13.86                   | 33.1                       | 111                  | 139                     | A                       | H               |
|                                     |                                                                                             | 5423.88              | 52.37               | -21.63                  | 74                          | 37.09                     | 34.22                         | 14.16                   | 33.1                       | 111                  | 139                     | P                       | H               |
|                                     |                                                                                             | 5457.48              | 43.89               | -10.11                  | 54                          | 28.46                     | 34.26                         | 14.27                   | 33.1                       | 111                  | 139                     | A                       | H               |
|                                     |                                                                                             | 5127.66              | 52.26               | -21.74                  | 74                          | 37.83                     | 33.85                         | 13.68                   | 33.1                       | 392                  | 236                     | P                       | V               |
|                                     |                                                                                             | 5095.94              | 43.25               | -10.75                  | 54                          | 28.94                     | 33.81                         | 13.6                    | 33.1                       | 392                  | 236                     | A                       | V               |
|                                     | *                                                                                           | 5230                 | 97.68               | -                       | -                           | 82.94                     | 33.98                         | 13.86                   | 33.1                       | 392                  | 236                     | P                       | V               |
|                                     |                                                                                             | 5230                 | 90.22               | -                       | -                           | 75.48                     | 33.98                         | 13.86                   | 33.1                       | 392                  | 236                     | A                       | V               |
|                                     |                                                                                             | 5441.24              | 52.9                | -21.1                   | 74                          | 37.49                     | 34.24                         | 14.27                   | 33.1                       | 392                  | 236                     | P                       | V               |
|                                     |                                                                                             | 5456.92              | 43.74               | -10.26                  | 54                          | 28.31                     | 34.26                         | 14.27                   | 33.1                       | 392                  | 236                     | 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           |                                                                                             | 10380                | 45.88               | -22.32                  | 68.2                        | 48.15                   | 37.03                         | 19.67                   | 58.97                      | 150                  | 360                     | P                     | H             |
| HT40              |                                                                                             | 15570                | 46.03               | -27.97                  | 74                          | 41.76                   | 40.87                         | 22.37                   | 58.97                      | 155                  | 360                     | P                     | H             |
| CH 38             |                                                                                             | 10380                | 45.68               | -22.52                  | 68.2                        | 47.95                   | 37.03                         | 19.67                   | 58.97                      | 128                  | 346                     | P                     | V             |
| 5190MHz           |                                                                                             | 15570                | 46.33               | -27.67                  | 74                          | 42.06                   | 40.87                         | 22.37                   | 58.97                      | 139                  | 294                     | P                     | V             |
| 802.11n           |                                                                                             | 10460                | 47.65               | -20.55                  | 68.2                        | 49.77                   | 37.07                         | 19.71                   | 58.9                       | 150                  | 360                     | P                     | H             |
| HT40              |                                                                                             | 15690                | 46.42               | -27.58                  | 74                          | 41.9                    | 41.16                         | 22.45                   | 59.09                      | 150                  | 225                     | P                     | H             |
| CH 46             |                                                                                             | 10460                | 46.92               | -21.28                  | 68.2                        | 49.04                   | 37.07                         | 19.71                   | 58.9                       | 166                  | 278                     | P                     | V             |
| 5230MHz           |                                                                                             | 15690                | 45.24               | -28.76                  | 74                          | 40.72                   | 41.16                         | 22.45                   | 59.09                      | 126                  | 337                     | 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 VHT20 (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>VHT20<br>CH 36<br>5180MHz |      | 5103.48              | 52.84               | -21.16                  | 74                          | 38.53                     | 33.81                         | 13.6                    | 33.1                       | 112                  | 139                     | P                       | H               |
|                                       |      | 5148.72              | 44                  | -10                     | 54                          | 29.55                     | 33.87                         | 13.68                   | 33.1                       | 112                  | 139                     | A                       | H               |
|                                       | *    | 5180                 | 103.35              | -                       | -                           | 88.76                     | 33.92                         | 13.77                   | 33.1                       | 112                  | 139                     | P                       | H               |
|                                       |      | 5180                 | 95.15               | -                       | -                           | 80.56                     | 33.92                         | 13.77                   | 33.1                       | 112                  | 139                     | A                       | H               |
|                                       |      | 5148.2               | 51.99               | -22.01                  | 74                          | 37.54                     | 33.87                         | 13.68                   | 33.1                       | 381                  | 233                     | P                       | V               |
|                                       |      | 5149.5               | 43.98               | -10.02                  | 54                          | 29.53                     | 33.87                         | 13.68                   | 33.1                       | 381                  | 233                     | A                       | V               |
|                                       | *    | 5180                 | 100.44              | -                       | -                           | 85.85                     | 33.92                         | 13.77                   | 33.1                       | 381                  | 233                     | P                       | V               |
|                                       |      | 5180                 | 94.44               | -                       | -                           | 79.85                     | 33.92                         | 13.77                   | 33.1                       | 381                  | 233                     | A                       | V               |
| 802.11ac<br>VHT20<br>CH 44<br>5220MHz |      | 5149.24              | 53.16               | -20.84                  | 74                          | 38.71                     | 33.87                         | 13.68                   | 33.1                       | 112                  | 138                     | P                       | H               |
|                                       |      | 5138.58              | 43.11               | -10.89                  | 54                          | 28.68                     | 33.85                         | 13.68                   | 33.1                       | 112                  | 138                     | A                       | H               |
|                                       | *    | 5220                 | 104.27              | -                       | -                           | 89.55                     | 33.96                         | 13.86                   | 33.1                       | 112                  | 138                     | P                       | H               |
|                                       |      | 5220                 | 97.04               | -                       | -                           | 82.32                     | 33.96                         | 13.86                   | 33.1                       | 112                  | 138                     | A                       | H               |
|                                       |      | 5454.48              | 53.53               | -20.47                  | 74                          | 38.1                      | 34.26                         | 14.27                   | 33.1                       | 112                  | 138                     | P                       | H               |
|                                       |      | 5436.48              | 43.9                | -10.1                   | 54                          | 28.49                     | 34.24                         | 14.27                   | 33.1                       | 112                  | 138                     | A                       | H               |
|                                       |      | 5147.94              | 52.6                | -21.4                   | 74                          | 38.15                     | 33.87                         | 13.68                   | 33.1                       | 393                  | 234                     | P                       | V               |
|                                       |      | 5139.62              | 43.21               | -10.79                  | 54                          | 28.76                     | 33.87                         | 13.68                   | 33.1                       | 393                  | 234                     | A                       | V               |
|                                       | *    | 5220                 | 101.58              | -                       | -                           | 86.86                     | 33.96                         | 13.86                   | 33.1                       | 393                  | 234                     | P                       | V               |
|                                       |      | 5220                 | 94.95               | -                       | -                           | 80.23                     | 33.96                         | 13.86                   | 33.1                       | 393                  | 234                     | A                       | V               |
|                                       |      | 5427.6               | 53.21               | -20.79                  | 74                          | 37.82                     | 34.22                         | 14.27                   | 33.1                       | 393                  | 234                     | P                       | V               |
|                                       |      | 5454.96              | 43.67               | -10.33                  | 54                          | 28.24                     | 34.26                         | 14.27                   | 33.1                       | 393                  | 234                     | A                       | V               |



|                                                                               |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11ac</b><br><br><b>VHT20</b><br><br><b>CH 48</b><br><br><b>5240MHz</b> |                                                                                             | 5046.8  | 51.87  | -22.13 | 74 | 37.72 | 33.74 | 13.51 | 33.1 | 108 | 138 | P | H |
|                                                                               |                                                                                             | 5134.94 | 43.4   | -10.6  | 54 | 28.97 | 33.85 | 13.68 | 33.1 | 108 | 138 | A | H |
|                                                                               | *                                                                                           | 5240    | 103.39 | -      | -  | 88.59 | 33.98 | 13.92 | 33.1 | 108 | 138 | P | H |
|                                                                               |                                                                                             | 5240    | 96.03  | -      | -  | 81.23 | 33.98 | 13.92 | 33.1 | 108 | 138 | A | H |
|                                                                               |                                                                                             | 5440.08 | 52.96  | -21.04 | 74 | 37.55 | 34.24 | 14.27 | 33.1 | 108 | 138 | P | H |
|                                                                               |                                                                                             | 5444.4  | 43.89  | -10.11 | 54 | 28.48 | 34.24 | 14.27 | 33.1 | 108 | 138 | A | H |
|                                                                               |                                                                                             | 5107.12 | 52.55  | -21.45 | 74 | 38.22 | 33.83 | 13.6  | 33.1 | 381 | 231 | P | V |
|                                                                               |                                                                                             | 5147.94 | 43.19  | -10.81 | 54 | 28.74 | 33.87 | 13.68 | 33.1 | 381 | 231 | A | V |
|                                                                               | *                                                                                           | 5240    | 99.29  | -      | -  | 84.49 | 33.98 | 13.92 | 33.1 | 381 | 231 | P | V |
|                                                                               |                                                                                             | 5240    | 93.16  | -      | -  | 78.36 | 33.98 | 13.92 | 33.1 | 381 | 231 | A | V |
|                                                                               |                                                                                             | 5385.12 | 52.72  | -21.28 | 74 | 37.54 | 34.18 | 14.1  | 33.1 | 381 | 231 | P | V |
|                                                                               |                                                                                             | 5456.4  | 43.82  | -10.18 | 54 | 28.39 | 34.26 | 14.27 | 33.1 | 381 | 231 | A | V |
| <b>Remark</b>                                                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |      |     |     |   |   |



## Band 1 5150~5250MHz

## WIFI 802.11ac VHT20 (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          |                                                                                             | 10360                | 45.27               | -22.93                  | 68.2                        | 47.59                   | 37.02                         | 19.65                   | 58.99                      | 152                  | 260                     | P                     | H             |
| VHT20             |                                                                                             | 15540                | 45.55               | -28.45                  | 74                          | 41.35                   | 40.78                         | 22.35                   | 58.93                      | 189                  | 238                     | P                     | H             |
| CH 36             |                                                                                             | 10360                | 45.4                | -22.8                   | 68.2                        | 47.72                   | 37.02                         | 19.65                   | 58.99                      | 241                  | 260                     | P                     | V             |
| 5180MHz           |                                                                                             | 15540                | 47.68               | -26.32                  | 74                          | 43.48                   | 40.78                         | 22.35                   | 58.93                      | 189                  | 184                     | P                     | V             |
| 802.11ac          |                                                                                             | 10440                | 45.59               | -22.61                  | 68.2                        | 47.76                   | 37.06                         | 19.69                   | 58.92                      | 150                  | 230                     | P                     | H             |
| VHT20             |                                                                                             | 15660                | 47.03               | -26.97                  | 74                          | 42.6                    | 41.07                         | 22.42                   | 59.06                      | 160                  | 225                     | P                     | H             |
| CH 44             |                                                                                             | 10440                | 46.49               | -21.71                  | 68.2                        | 48.66                   | 37.06                         | 19.69                   | 58.92                      | 185                  | 230                     | P                     | V             |
| 5220MHz           |                                                                                             | 15660                | 47.24               | -26.76                  | 74                          | 42.81                   | 41.07                         | 22.42                   | 59.06                      | 160                  | 59                      | P                     | V             |
| 802.11ac          |                                                                                             | 10480                | 44.72               | -23.48                  | 68.2                        | 46.78                   | 37.09                         | 19.71                   | 58.86                      | 150                  | 289                     | P                     | H             |
| VHT20             |                                                                                             | 15720                | 46.62               | -27.38                  | 74                          | 42.05                   | 41.24                         | 22.45                   | 59.12                      | 150                  | 291                     | P                     | H             |
| CH 48             |                                                                                             | 10480                | 44.87               | -23.33                  | 68.2                        | 46.93                   | 37.09                         | 19.71                   | 58.86                      | 126                  | 238                     | P                     | V             |
| 5240MHz           |                                                                                             | 15720                | 47.91               | -26.09                  | 74                          | 43.34                   | 41.24                         | 22.45                   | 59.12                      | 186                  | 329                     | 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 VHT40 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 38<br>5190MHz |                                                                                             | 5141.44              | 57.05               | -16.95                  | 74                          | 42.6                      | 33.87                         | 13.68                   | 33.1                       | 105                  | 143                     | P                       | H               |
|                                       |                                                                                             | 5150                 | 50.22               | -3.78                   | 54                          | 35.77                     | 33.87                         | 13.68                   | 33.1                       | 105                  | 143                     | A                       | H               |
|                                       | *                                                                                           | 5190                 | 98.68               | -                       | -                           | 84.09                     | 33.92                         | 13.77                   | 33.1                       | 105                  | 143                     | P                       | H               |
|                                       |                                                                                             | 5190                 | 91.57               | -                       | -                           | 76.98                     | 33.92                         | 13.77                   | 33.1                       | 105                  | 143                     | A                       | H               |
|                                       |                                                                                             | 5379.64              | 52.75               | -21.25                  | 74                          | 37.57                     | 34.18                         | 14.1                    | 33.1                       | 105                  | 143                     | P                       | H               |
|                                       |                                                                                             | 5447.12              | 43.75               | -10.25                  | 54                          | 28.32                     | 34.26                         | 14.27                   | 33.1                       | 105                  | 143                     | A                       | H               |
|                                       |                                                                                             | 5148.2               | 58.54               | -15.46                  | 74                          | 44.09                     | 33.87                         | 13.68                   | 33.1                       | 385                  | 227                     | P                       | V               |
|                                       |                                                                                             | 5149.76              | 48.77               | -5.23                   | 54                          | 34.32                     | 33.87                         | 13.68                   | 33.1                       | 385                  | 227                     | A                       | V               |
|                                       | *                                                                                           | 5190                 | 95.75               | -                       | -                           | 81.16                     | 33.92                         | 13.77                   | 33.1                       | 385                  | 227                     | P                       | V               |
|                                       |                                                                                             | 5190                 | 89.45               | -                       | -                           | 74.86                     | 33.92                         | 13.77                   | 33.1                       | 385                  | 227                     | A                       | V               |
|                                       |                                                                                             | 5358.36              | 53.17               | -20.83                  | 74                          | 38.04                     | 34.13                         | 14.1                    | 33.1                       | 385                  | 227                     | P                       | V               |
|                                       |                                                                                             | 5451.32              | 43.56               | -10.44                  | 54                          | 28.13                     | 34.26                         | 14.27                   | 33.1                       | 385                  | 227                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 46<br>5230MHz |                                                                                             | 5145.08              | 51.93               | -22.07                  | 74                          | 37.48                     | 33.87                         | 13.68                   | 33.1                       | 104                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5139.88              | 43.21               | -10.79                  | 54                          | 28.76                     | 33.87                         | 13.68                   | 33.1                       | 104                  | 144                     | A                       | H               |
|                                       | *                                                                                           | 5230                 | 98.38               | -                       | -                           | 83.64                     | 33.98                         | 13.86                   | 33.1                       | 104                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5230                 | 91.7                | -                       | -                           | 76.96                     | 33.98                         | 13.86                   | 33.1                       | 104                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5444.16              | 53.79               | -20.21                  | 74                          | 38.38                     | 34.24                         | 14.27                   | 33.1                       | 104                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5355.36              | 43.66               | -10.34                  | 54                          | 28.53                     | 34.13                         | 14.1                    | 33.1                       | 104                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5083.46              | 51.78               | -22.22                  | 74                          | 37.49                     | 33.79                         | 13.6                    | 33.1                       | 385                  | 227                     | P                       | V               |
|                                       |                                                                                             | 5149.76              | 43.2                | -10.8                   | 54                          | 28.75                     | 33.87                         | 13.68                   | 33.1                       | 385                  | 227                     | A                       | V               |
|                                       | *                                                                                           | 5230                 | 95.61               | -                       | -                           | 80.87                     | 33.98                         | 13.86                   | 33.1                       | 385                  | 227                     | P                       | V               |
|                                       |                                                                                             | 5230                 | 89.13               | -                       | -                           | 74.39                     | 33.98                         | 13.86                   | 33.1                       | 385                  | 227                     | A                       | V               |
|                                       |                                                                                             | 5367.36              | 53.07               | -20.93                  | 74                          | 37.92                     | 34.15                         | 14.1                    | 33.1                       | 385                  | 227                     | P                       | V               |
|                                       |                                                                                             | 5431.92              | 43.58               | -10.42                  | 54                          | 28.17                     | 34.24                         | 14.27                   | 33.1                       | 385                  | 227                     | 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 VHT40 (Harmonic @ 3m)

| WIFI Ant. 1 | Note                                                                                        | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamplifier Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|-------------|---------------------------------------------------------------------------------------------|-------------------|------------------|-------------------|-----------------------|-------------------|-------------------------|-------------------|----------------------------|----------------|-------------------|-----------------|------------|
| 802.11ac    |                                                                                             | 10380             | 44.26            | -23.94            | 68.2                  | 46.53             | 37.03                   | 19.67             | 58.97                      | 150            | 360               | P               | H          |
| VHT40       |                                                                                             | 15570             | 46.75            | -27.25            | 74                    | 42.48             | 40.87                   | 22.37             | 58.97                      | 155            | 360               | P               | H          |
| CH 38       |                                                                                             | 10380             | 45.5             | -22.7             | 68.2                  | 47.77             | 37.03                   | 19.67             | 58.97                      | 128            | 346               | P               | V          |
| 5190MHz     |                                                                                             | 15570             | 44.98            | -29.02            | 74                    | 40.71             | 40.87                   | 22.37             | 58.97                      | 139            | 294               | P               | V          |
| 802.11ac    |                                                                                             | 10460             | 44.62            | -23.58            | 68.2                  | 46.74             | 37.07                   | 19.71             | 58.9                       | 166            | 278               | P               | H          |
| VHT40       |                                                                                             | 15690             | 46.44            | -27.56            | 74                    | 41.92             | 41.16                   | 22.45             | 59.09                      | 126            | 337               | P               | H          |
| CH 46       |                                                                                             | 10460             | 45.65            | -22.55            | 68.2                  | 47.77             | 37.07                   | 19.71             | 58.9                       | 150            | 360               | P               | V          |
| 5230MHz     |                                                                                             | 15690             | 46.58            | -27.42            | 74                    | 42.06             | 41.16                   | 22.45             | 59.09                      | 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 |                                                                                             | 5140.66              | 55.13               | -18.87                  | 74                          | 40.68                     | 33.87                         | 13.68                   | 33.1                       | 110                  | 143                     | P                       | H               |
|                                       |                                                                                             | 5150                 | 47.54               | -6.46                   | 54                          | 33.09                     | 33.87                         | 13.68                   | 33.1                       | 110                  | 143                     | A                       | H               |
|                                       | *                                                                                           | 5210                 | 92.82               | -                       | -                           | 78.1                      | 33.96                         | 13.86                   | 33.1                       | 110                  | 143                     | P                       | H               |
|                                       |                                                                                             | 5210                 | 86.2                | -                       | -                           | 71.48                     | 33.96                         | 13.86                   | 33.1                       | 110                  | 143                     | A                       | H               |
|                                       |                                                                                             | 5358                 | 53.76               | -20.24                  | 74                          | 38.63                     | 34.13                         | 14.1                    | 33.1                       | 110                  | 143                     | P                       | H               |
|                                       |                                                                                             | 5446.56              | 43.74               | -10.26                  | 54                          | 28.31                     | 34.26                         | 14.27                   | 33.1                       | 110                  | 143                     | A                       | H               |
|                                       |                                                                                             | 5072.02              | 52.74               | -21.26                  | 74                          | 38.54                     | 33.79                         | 13.51                   | 33.1                       | 400                  | 230                     | P                       | V               |
|                                       |                                                                                             | 5149.24              | 44.04               | -9.96                   | 54                          | 29.59                     | 33.87                         | 13.68                   | 33.1                       | 400                  | 230                     | A                       | V               |
|                                       | *                                                                                           | 5210                 | 86.67               | -                       | -                           | 71.95                     | 33.96                         | 13.86                   | 33.1                       | 400                  | 230                     | P                       | V               |
|                                       |                                                                                             | 5210                 | 79.9                | -                       | -                           | 65.18                     | 33.96                         | 13.86                   | 33.1                       | 400                  | 230                     | A                       | V               |
|                                       |                                                                                             | 5448                 | 52.97               | -21.03                  | 74                          | 37.54                     | 34.26                         | 14.27                   | 33.1                       | 400                  | 230                     | P                       | V               |
|                                       |                                                                                             | 5446.8               | 43.48               | -10.52                  | 54                          | 28.05                     | 34.26                         | 14.27                   | 33.1                       | 400                  | 230                     | 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<br>VHT80<br>CH 42<br>5210MHz |                                                                                             | 10400                | 44.81               | -23.39                  | 68.2                        | 47.05                     | 37.04                         | 19.67                   | 58.95                      | 150                  | 230                     | P                       | H               |
|                                       |                                                                                             | 15600                | 45.54               | -28.46                  | 74                          | 41.22                     | 40.95                         | 22.37                   | 59                         | 160                  | 225                     | P                       | H               |
|                                       |                                                                                             | 10420                | 45.19               | -23.01                  | 68.2                        | 47.38                     | 37.05                         | 19.69                   | 58.93                      | 150                  | 230                     | P                       | V               |
|                                       |                                                                                             | 15630                | 46.07               | -27.93                  | 74                          | 41.68                     | 41.03                         | 22.4                    | 59.04                      | 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 |      | 5141.44   | 52.08      | -21.92 | 74         | 37.63    | 33.87    | 13.68  | 33.1   | 128    | 144     | P       | H       |
|                             |      | 5145.34   | 43.23      | -10.77 | 54         | 28.78    | 33.87    | 13.68  | 33.1   | 128    | 144     | A       | H       |
|                             | *    | 5260      | 105.18     | -      | -          | 90.34    | 34.02    | 13.92  | 33.1   | 128    | 144     | P       | H       |
|                             |      | 5260      | 97.36      | -      | -          | 82.52    | 34.02    | 13.92  | 33.1   | 128    | 144     | A       | H       |
|                             |      | 5410.32   | 53.53      | -20.47 | 74         | 38.27    | 34.2     | 14.16  | 33.1   | 128    | 144     | P       | H       |
|                             |      | 5412.72   | 44.12      | -9.88  | 54         | 28.84    | 34.22    | 14.16  | 33.1   | 128    | 144     | A       | H       |
|                             |      | 5098.02   | 52.41      | -21.59 | 74         | 38.1     | 33.81    | 13.6   | 33.1   | 376    | 234     | P       | V       |
|                             |      | 5136.76   | 43.13      | -10.87 | 54         | 28.7     | 33.85    | 13.68  | 33.1   | 376    | 234     | A       | V       |
|                             | *    | 5260      | 98.52      | -      | -          | 83.68    | 34.02    | 13.92  | 33.1   | 376    | 234     | P       | V       |
|                             |      | 5260      | 92.89      | -      | -          | 78.05    | 34.02    | 13.92  | 33.1   | 376    | 234     | A       | V       |
|                             |      | 5442.72   | 52.48      | -21.52 | 74         | 37.07    | 34.24    | 14.27  | 33.1   | 376    | 234     | P       | V       |
|                             |      | 5410.32   | 43.71      | -10.29 | 54         | 28.45    | 34.2     | 14.16  | 33.1   | 376    | 234     | A       | V       |
| 802.11a<br>CH 60<br>5300MHz |      | 5064.75   | 52.59      | -21.41 | 74         | 38.42    | 33.76    | 13.51  | 33.1   | 128    | 143     | P       | H       |
|                             |      | 5149.8    | 43.36      | -10.64 | 54         | 28.91    | 33.87    | 13.68  | 33.1   | 128    | 143     | A       | H       |
|                             | *    | 5300      | 105.08     | -      | -          | 90.13    | 34.07    | 13.98  | 33.1   | 128    | 143     | P       | H       |
|                             |      | 5300      | 97.31      | -      | -          | 82.36    | 34.07    | 13.98  | 33.1   | 128    | 143     | A       | H       |
|                             |      | 5454.24   | 52.86      | -21.14 | 74         | 37.43    | 34.26    | 14.27  | 33.1   | 128    | 143     | P       | H       |
|                             |      | 5457.36   | 44.05      | -9.95  | 54         | 28.62    | 34.26    | 14.27  | 33.1   | 128    | 143     | A       | H       |
|                             |      | 5063      | 51.69      | -22.31 | 74         | 37.52    | 33.76    | 13.51  | 33.1   | 376    | 234     | P       | V       |
|                             |      | 5149.1    | 43.46      | -10.54 | 54         | 29.01    | 33.87    | 13.68  | 33.1   | 376    | 234     | A       | V       |
|                             | *    | 5300      | 100.06     | -      | -          | 85.11    | 34.07    | 13.98  | 33.1   | 376    | 234     | P       | V       |
|                             |      | 5300      | 93.58      | -      | -          | 78.63    | 34.07    | 13.98  | 33.1   | 376    | 234     | A       | V       |
|                             |      | 5415.6    | 53.43      | -20.57 | 74         | 38.15    | 34.22    | 14.16  | 33.1   | 376    | 234     | P       | V       |
|                             |      | 5442.96   | 43.98      | -10.02 | 54         | 28.57    | 34.24    | 14.27  | 33.1   | 376    | 234     | A       | V       |



|                                                  |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|--------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11a</b><br><b>CH 64</b><br><b>5320MHz</b> | *                                                                                           | 5320    | 105.27 | -      | -  | 90.24 | 34.09 | 14.04 | 33.1 | 110 | 146 | P | H |
|                                                  |                                                                                             | 5320    | 98.43  | -      | -  | 83.4  | 34.09 | 14.04 | 33.1 | 110 | 146 | A | H |
|                                                  |                                                                                             | 5421.6  | 53.12  | -20.88 | 74 | 37.84 | 34.22 | 14.16 | 33.1 | 110 | 146 | P | H |
|                                                  |                                                                                             | 5357.28 | 44.17  | -9.83  | 54 | 29.04 | 34.13 | 14.1  | 33.1 | 110 | 146 | A | H |
|                                                  | *                                                                                           | 5320    | 100.04 | -      | -  | 85.01 | 34.09 | 14.04 | 33.1 | 376 | 234 | P | V |
|                                                  |                                                                                             | 5320    | 93.51  | -      | -  | 78.48 | 34.09 | 14.04 | 33.1 | 376 | 234 | A | V |
|                                                  |                                                                                             | 5383.52 | 53.42  | -20.58 | 74 | 38.24 | 34.18 | 14.1  | 33.1 | 376 | 234 | P | V |
|                                                  |                                                                                             | 5437.44 | 43.89  | -10.11 | 54 | 28.48 | 34.24 | 14.27 | 33.1 | 376 | 234 | 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                | 46.86               | -21.34                  | 68.2                        | 48.85                   | 37.11                         | 19.72                   | 58.82                      | 129                  | 266                     | P                     | H             |
|                             |                                                                                             | 15780                | 47.01               | -26.99                  | 74                          | 42.33                   | 41.36                         | 22.5                    | 59.18                      | 146                  | 275                     | P                     | H             |
|                             |                                                                                             | 10520                | 45.77               | -22.43                  | 68.2                        | 47.76                   | 37.11                         | 19.72                   | 58.82                      | 129                  | 266                     | P                     | V             |
|                             |                                                                                             | 15780                | 47.24               | -26.76                  | 74                          | 42.56                   | 41.36                         | 22.5                    | 59.18                      | 146                  | 275                     | P                     | V             |
| 802.11a<br>CH 60<br>5300MHz |                                                                                             | 10600                | 45.58               | -28.42                  | 74                          | 47.39                   | 37.16                         | 19.76                   | 58.73                      | 189                  | 235                     | P                     | H             |
|                             |                                                                                             | 15900                | 46.78               | -27.22                  | 74                          | 41.86                   | 41.65                         | 22.57                   | 59.3                       | 136                  | 145                     | P                     | H             |
|                             |                                                                                             | 10600                | 45.97               | -28.03                  | 74                          | 47.78                   | 37.16                         | 19.76                   | 58.73                      | 185                  | 215                     | P                     | V             |
|                             |                                                                                             | 15900                | 47.17               | -26.83                  | 74                          | 42.25                   | 41.65                         | 22.57                   | 59.3                       | 196                  | 190                     | P                     | V             |
| 802.11a<br>CH 64<br>5320MHz |                                                                                             | 10640                | 45.81               | -28.19                  | 74                          | 47.54                   | 37.18                         | 19.78                   | 58.69                      | 196                  | 153                     | P                     | H             |
|                             |                                                                                             | 15960                | 46.59               | -27.41                  | 74                          | 41.52                   | 41.82                         | 22.62                   | 59.37                      | 157                  | 269                     | P                     | H             |
|                             |                                                                                             | 10640                | 46.65               | -27.35                  | 74                          | 48.38                   | 37.18                         | 19.78                   | 58.69                      | 152                  | 135                     | P                     | V             |
|                             |                                                                                             | 15960                | 47.49               | -26.51                  | 74                          | 42.42                   | 41.82                         | 22.62                   | 59.37                      | 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 |      | 5133.35              | 52.38               | -21.62                  | 74                          | 37.95                     | 33.85                         | 13.68                   | 33.1                       | 118                  | 140                     | P                       | H               |
|                                     |      | 5132.65              | 43.42               | -10.58                  | 54                          | 28.99                     | 33.85                         | 13.68                   | 33.1                       | 118                  | 140                     | A                       | H               |
|                                     | *    | 5260                 | 103.77              | -                       | -                           | 88.93                     | 34.02                         | 13.92                   | 33.1                       | 118                  | 140                     | P                       | H               |
|                                     |      | 5260                 | 95.63               | -                       | -                           | 80.79                     | 34.02                         | 13.92                   | 33.1                       | 118                  | 140                     | A                       | H               |
|                                     |      | 5452.8               | 52.96               | -21.04                  | 74                          | 37.53                     | 34.26                         | 14.27                   | 33.1                       | 118                  | 140                     | P                       | H               |
|                                     |      | 5451.6               | 44.23               | -9.77                   | 54                          | 28.8                      | 34.26                         | 14.27                   | 33.1                       | 118                  | 140                     | A                       | H               |
|                                     |      | 5019.95              | 51.8                | -22.2                   | 74                          | 37.78                     | 33.7                          | 13.42                   | 33.1                       | 369                  | 235                     | P                       | V               |
|                                     |      | 5148.75              | 43.44               | -10.56                  | 54                          | 28.99                     | 33.87                         | 13.68                   | 33.1                       | 369                  | 235                     | A                       | V               |
|                                     | *    | 5260                 | 103.97              | -                       | -                           | 89.13                     | 34.02                         | 13.92                   | 33.1                       | 369                  | 235                     | P                       | V               |
|                                     |      | 5260                 | 96.6                | -                       | -                           | 81.76                     | 34.02                         | 13.92                   | 33.1                       | 369                  | 235                     | A                       | V               |
|                                     |      | 5407.2               | 53.34               | -20.66                  | 74                          | 38.08                     | 34.2                          | 14.16                   | 33.1                       | 369                  | 235                     | P                       | V               |
|                                     |      | 5440.08              | 44.24               | -9.76                   | 54                          | 28.83                     | 34.24                         | 14.27                   | 33.1                       | 369                  | 235                     | A                       | V               |
| 802.11n<br>HT20<br>CH 60<br>5300MHz |      | 5119.35              | 51.88               | -22.12                  | 74                          | 37.47                     | 33.83                         | 13.68                   | 33.1                       | 114                  | 143                     | P                       | H               |
|                                     |      | 5143.85              | 43.42               | -10.58                  | 54                          | 28.97                     | 33.87                         | 13.68                   | 33.1                       | 114                  | 143                     | A                       | H               |
|                                     | *    | 5300                 | 104.85              | -                       | -                           | 89.9                      | 34.07                         | 13.98                   | 33.1                       | 114                  | 143                     | P                       | H               |
|                                     |      | 5300                 | 97.12               | -                       | -                           | 82.17                     | 34.07                         | 13.98                   | 33.1                       | 114                  | 143                     | A                       | H               |
|                                     |      | 5440.8               | 53.56               | -20.44                  | 74                          | 38.15                     | 34.24                         | 14.27                   | 33.1                       | 114                  | 143                     | P                       | H               |
|                                     |      | 5455.2               | 44.16               | -9.84                   | 54                          | 28.73                     | 34.26                         | 14.27                   | 33.1                       | 114                  | 143                     | A                       | H               |
|                                     |      | 5068.6               | 53.05               | -20.95                  | 74                          | 38.88                     | 33.76                         | 13.51                   | 33.1                       | 361                  | 234                     | P                       | V               |
|                                     |      | 5124.25              | 43.43               | -10.57                  | 54                          | 29                        | 33.85                         | 13.68                   | 33.1                       | 361                  | 234                     | A                       | V               |
|                                     | *    | 5300                 | 103.93              | -                       | -                           | 88.98                     | 34.07                         | 13.98                   | 33.1                       | 361                  | 234                     | P                       | V               |
|                                     |      | 5300                 | 95.91               | -                       | -                           | 80.96                     | 34.07                         | 13.98                   | 33.1                       | 361                  | 234                     | A                       | V               |
|                                     |      | 5411.76              | 53.09               | -20.91                  | 74                          | 37.81                     | 34.22                         | 14.16                   | 33.1                       | 361                  | 234                     | P                       | V               |
|                                     |      | 5434.08              | 44.08               | -9.92                   | 54                          | 28.67                     | 34.24                         | 14.27                   | 33.1                       | 361                  | 234                     | A                       | V               |



|                                                                             |                                                                                             |         |        |        |    |       |       |       |      |     |     |   |   |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n</b><br><br><b>HT20</b><br><br><b>CH 64</b><br><br><b>5320MHz</b> | *                                                                                           | 5320    | 105.37 | -      | -  | 90.34 | 34.09 | 14.04 | 33.1 | 100 | 146 | P | H |
|                                                                             |                                                                                             | 5320    | 97.49  | -      | -  | 82.46 | 34.09 | 14.04 | 33.1 | 100 | 146 | A | H |
|                                                                             |                                                                                             | 5368.48 | 53.43  | -20.57 | 74 | 38.28 | 34.15 | 14.1  | 33.1 | 100 | 146 | P | H |
|                                                                             |                                                                                             | 5350.08 | 44.93  | -9.07  | 54 | 29.8  | 34.13 | 14.1  | 33.1 | 100 | 146 | A | H |
|                                                                             | *                                                                                           | 5320    | 103.52 | -      | -  | 88.49 | 34.09 | 14.04 | 33.1 | 364 | 235 | P | V |
|                                                                             |                                                                                             | 5320    | 96.49  | -      | -  | 81.46 | 34.09 | 14.04 | 33.1 | 364 | 235 | A | V |
|                                                                             |                                                                                             | 5354.24 | 55.03  | -18.97 | 74 | 39.9  | 34.13 | 14.1  | 33.1 | 364 | 235 | P | V |
|                                                                             |                                                                                             | 5351.04 | 45.27  | -8.73  | 54 | 30.14 | 34.13 | 14.1  | 33.1 | 364 | 235 | 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           |                                                                                             | 10520                | 46.76               | -21.44                  | 68.2                        | 48.75                   | 37.11                         | 19.72                   | 58.82                      | 129                  | 266                     | P                     | H             |
| HT20              |                                                                                             | 15780                | 47.83               | -26.17                  | 74                          | 43.15                   | 41.36                         | 22.5                    | 59.18                      | 146                  | 275                     | P                     | H             |
| CH 52             |                                                                                             | 10520                | 45.41               | -22.79                  | 68.2                        | 47.4                    | 37.11                         | 19.72                   | 58.82                      | 150                  | 220                     | P                     | V             |
| 5260MHz           |                                                                                             | 15780                | 47.1                | -26.9                   | 74                          | 42.42                   | 41.36                         | 22.5                    | 59.18                      | 159                  | 345                     | P                     | V             |
| 802.11n           |                                                                                             | 10600                | 45.71               | -28.29                  | 74                          | 47.52                   | 37.16                         | 19.76                   | 58.73                      | 189                  | 235                     | P                     | H             |
| HT20              |                                                                                             | 15900                | 45.24               | -28.76                  | 74                          | 40.32                   | 41.65                         | 22.57                   | 59.3                       | 136                  | 145                     | P                     | H             |
| CH 60             |                                                                                             | 10600                | 44.86               | -29.14                  | 74                          | 46.67                   | 37.16                         | 19.76                   | 58.73                      | 185                  | 215                     | P                     | V             |
| 5300MHz           |                                                                                             | 15900                | 46.65               | -27.35                  | 74                          | 41.73                   | 41.65                         | 22.57                   | 59.3                       | 196                  | 190                     | P                     | V             |
| 802.11n           |                                                                                             | 10640                | 47.23               | -26.77                  | 74                          | 48.96                   | 37.18                         | 19.78                   | 58.69                      | 196                  | 153                     | P                     | H             |
| HT20              |                                                                                             | 15960                | 45.35               | -28.65                  | 74                          | 40.28                   | 41.82                         | 22.62                   | 59.37                      | 157                  | 269                     | P                     | H             |
| CH 64             |                                                                                             | 10640                | 47.65               | -26.35                  | 74                          | 49.38                   | 37.18                         | 19.78                   | 58.69                      | 152                  | 135                     | P                     | V             |
| 5320MHz           |                                                                                             | 15960                | 47.49               | -26.51                  | 74                          | 42.42                   | 41.82                         | 22.62                   | 59.37                      | 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 |                                                                                             | 5019.25              | 51.78               | -22.22                  | 74                          | 37.76                     | 33.7                          | 13.42                   | 33.1                       | 125                  | 144                     | P                       | H               |
|                                     |                                                                                             | 5148.75              | 43.35               | -10.65                  | 54                          | 28.9                      | 33.87                         | 13.68                   | 33.1                       | 125                  | 144                     | A                       | H               |
|                                     | *                                                                                           | 5270                 | 99.8                | -                       | -                           | 84.96                     | 34.02                         | 13.92                   | 33.1                       | 125                  | 144                     | P                       | H               |
|                                     |                                                                                             | 5270                 | 91.33               | -                       | -                           | 76.49                     | 34.02                         | 13.92                   | 33.1                       | 125                  | 144                     | A                       | H               |
|                                     |                                                                                             | 5388.96              | 53.55               | -20.45                  | 74                          | 38.31                     | 34.18                         | 14.16                   | 33.1                       | 125                  | 144                     | P                       | H               |
|                                     |                                                                                             | 5415.36              | 44.17               | -9.83                   | 54                          | 28.89                     | 34.22                         | 14.16                   | 33.1                       | 125                  | 144                     | A                       | H               |
|                                     |                                                                                             | 5125.3               | 52.31               | -21.69                  | 74                          | 37.88                     | 33.85                         | 13.68                   | 33.1                       | 388                  | 232                     | P                       | V               |
|                                     |                                                                                             | 5147.7               | 43.22               | -10.78                  | 54                          | 28.77                     | 33.87                         | 13.68                   | 33.1                       | 388                  | 232                     | A                       | V               |
|                                     | *                                                                                           | 5270                 | 98.06               | -                       | -                           | 83.22                     | 34.02                         | 13.92                   | 33.1                       | 388                  | 232                     | P                       | V               |
|                                     |                                                                                             | 5270                 | 91.94               | -                       | -                           | 77.1                      | 34.02                         | 13.92                   | 33.1                       | 388                  | 232                     | A                       | V               |
|                                     |                                                                                             | 5447.52              | 52.84               | -21.16                  | 74                          | 37.41                     | 34.26                         | 14.27                   | 33.1                       | 388                  | 232                     | P                       | V               |
|                                     |                                                                                             | 5425.92              | 43.99               | -10.01                  | 54                          | 28.71                     | 34.22                         | 14.16                   | 33.1                       | 388                  | 232                     | A                       | V               |
| 802.11n<br>HT40<br>CH 62<br>5310MHz |                                                                                             | 5072.1               | 51.65               | -22.35                  | 74                          | 37.45                     | 33.79                         | 13.51                   | 33.1                       | 111                  | 145                     | P                       | H               |
|                                     |                                                                                             | 5145.25              | 43.34               | -10.66                  | 54                          | 28.89                     | 33.87                         | 13.68                   | 33.1                       | 111                  | 145                     | A                       | H               |
|                                     | *                                                                                           | 5310                 | 98.58               | -                       | -                           | 83.55                     | 34.09                         | 14.04                   | 33.1                       | 111                  | 145                     | P                       | H               |
|                                     |                                                                                             | 5310                 | 92.21               | -                       | -                           | 77.18                     | 34.09                         | 14.04                   | 33.1                       | 111                  | 145                     | A                       | H               |
|                                     |                                                                                             | 5352.96              | 55.67               | -18.33                  | 74                          | 40.54                     | 34.13                         | 14.1                    | 33.1                       | 111                  | 145                     | P                       | H               |
|                                     |                                                                                             | 5350.8               | 47.85               | -6.15                   | 54                          | 32.72                     | 34.13                         | 14.1                    | 33.1                       | 111                  | 145                     | A                       | H               |
|                                     |                                                                                             | 5098.7               | 52.19               | -21.81                  | 74                          | 37.88                     | 33.81                         | 13.6                    | 33.1                       | 352                  | 231                     | P                       | V               |
|                                     |                                                                                             | 5145.25              | 43.33               | -10.67                  | 54                          | 28.88                     | 33.87                         | 13.68                   | 33.1                       | 352                  | 231                     | A                       | V               |
|                                     | *                                                                                           | 5310                 | 95.77               | -                       | -                           | 80.74                     | 34.09                         | 14.04                   | 33.1                       | 352                  | 231                     | P                       | V               |
|                                     |                                                                                             | 5310                 | 90.15               | -                       | -                           | 75.12                     | 34.09                         | 14.04                   | 33.1                       | 352                  | 231                     | A                       | V               |
|                                     |                                                                                             | 5350.8               | 54.29               | -19.71                  | 74                          | 39.16                     | 34.13                         | 14.1                    | 33.1                       | 352                  | 231                     | P                       | V               |
|                                     |                                                                                             | 5350.08              | 46.55               | -7.45                   | 54                          | 31.42                     | 34.13                         | 14.1                    | 33.1                       | 352                  | 231                     | 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           |                                                                                             | 10540                | 47.66               | -20.54                  | 68.2                        | 49.6                    | 37.12                         | 19.74                   | 58.8                       | 139                  | 242                     | P                     | H             |
| HT40              |                                                                                             | 15810                | 46.64               | -27.36                  | 74                          | 41.89                   | 41.44                         | 22.52                   | 59.21                      | 152                  | 296                     | P                     | H             |
| CH 54             |                                                                                             | 10540                | 47.93               | -20.27                  | 68.2                        | 49.87                   | 37.12                         | 19.74                   | 58.8                       | 150                  | 220                     | P                     | V             |
| 5270MHz           |                                                                                             | 15810                | 46.3                | -27.7                   | 74                          | 41.55                   | 41.44                         | 22.52                   | 59.21                      | 168                  | 345                     | P                     | V             |
| 802.11n           |                                                                                             | 10620                | 47.4                | -26.6                   | 74                          | 49.16                   | 37.17                         | 19.78                   | 58.71                      | 148                  | 269                     | P                     | H             |
| HT40              |                                                                                             | 15930                | 46.43               | -27.57                  | 74                          | 41.43                   | 41.73                         | 22.6                    | 59.33                      | 187                  | 241                     | P                     | H             |
| CH 62             |                                                                                             | 10620                | 46.76               | -27.24                  | 74                          | 48.52                   | 37.17                         | 19.78                   | 58.71                      | 150                  | 220                     | P                     | V             |
| 5310MHz           |                                                                                             | 15930                | 46.53               | -27.47                  | 74                          | 41.53                   | 41.73                         | 22.6                    | 59.33                      | 160                  | 100                     | 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 802.11ac VHT20 (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>VHT20<br>CH 52<br>5260MHz |      | 5141.44              | 53.28               | -20.72                  | 74                          | 38.83                     | 33.87                         | 13.68                   | 33.1                       | 107                  | 136                     | P                       | H               |
|                                       |      | 5142.48              | 43.16               | -10.84                  | 54                          | 28.71                     | 33.87                         | 13.68                   | 33.1                       | 107                  | 136                     | A                       | H               |
|                                       | *    | 5260                 | 103.76              | -                       | -                           | 88.92                     | 34.02                         | 13.92                   | 33.1                       | 107                  | 136                     | P                       | H               |
|                                       |      | 5260                 | 96.49               | -                       | -                           | 81.65                     | 34.02                         | 13.92                   | 33.1                       | 107                  | 136                     | A                       | H               |
|                                       |      | 5407.92              | 53.91               | -20.09                  | 74                          | 38.65                     | 34.2                          | 14.16                   | 33.1                       | 107                  | 136                     | P                       | H               |
|                                       |      | 5447.04              | 43.62               | -10.38                  | 54                          | 28.19                     | 34.26                         | 14.27                   | 33.1                       | 107                  | 136                     | A                       | H               |
|                                       |      | 5109.72              | 51.98               | -22.02                  | 74                          | 37.65                     | 33.83                         | 13.6                    | 33.1                       | 381                  | 231                     | P                       | V               |
|                                       |      | 5145.08              | 43.14               | -10.86                  | 54                          | 28.69                     | 33.87                         | 13.68                   | 33.1                       | 381                  | 231                     | A                       | V               |
|                                       | *    | 5260                 | 98.94               | -                       | -                           | 84.1                      | 34.02                         | 13.92                   | 33.1                       | 381                  | 231                     | P                       | V               |
|                                       |      | 5260                 | 93.47               | -                       | -                           | 78.63                     | 34.02                         | 13.92                   | 33.1                       | 381                  | 231                     | A                       | V               |
|                                       |      | 5416.8               | 52.71               | -21.29                  | 74                          | 37.43                     | 34.22                         | 14.16                   | 33.1                       | 381                  | 231                     | P                       | V               |
|                                       |      | 5452.32              | 43.66               | -10.34                  | 54                          | 28.23                     | 34.26                         | 14.27                   | 33.1                       | 381                  | 231                     | A                       | V               |
| 802.11ac<br>VHT20<br>CH 60<br>5300MHz |      | 5052.5               | 51.53               | -22.47                  | 74                          | 37.38                     | 33.74                         | 13.51                   | 33.1                       | 107                  | 137                     | P                       | H               |
|                                       |      | 5141.4               | 43.16               | -10.84                  | 54                          | 28.71                     | 33.87                         | 13.68                   | 33.1                       | 107                  | 137                     | A                       | H               |
|                                       | *    | 5300                 | 103.89              | -                       | -                           | 88.94                     | 34.07                         | 13.98                   | 33.1                       | 107                  | 137                     | P                       | H               |
|                                       |      | 5300                 | 96.34               | -                       | -                           | 81.39                     | 34.07                         | 13.98                   | 33.1                       | 107                  | 137                     | A                       | H               |
|                                       |      | 5439.12              | 53.84               | -20.16                  | 74                          | 38.43                     | 34.24                         | 14.27                   | 33.1                       | 107                  | 137                     | P                       | H               |
|                                       |      | 5440.32              | 43.91               | -10.09                  | 54                          | 28.5                      | 34.24                         | 14.27                   | 33.1                       | 107                  | 137                     | A                       | H               |
|                                       |      | 5101.5               | 51.75               | -22.25                  | 74                          | 37.44                     | 33.81                         | 13.6                    | 33.1                       | 381                  | 231                     | P                       | V               |
|                                       |      | 5143.15              | 43.26               | -10.74                  | 54                          | 28.81                     | 33.87                         | 13.68                   | 33.1                       | 381                  | 231                     | A                       | V               |
|                                       | *    | 5300                 | 99.82               | -                       | -                           | 84.87                     | 34.07                         | 13.98                   | 33.1                       | 381                  | 231                     | P                       | V               |
|                                       |      | 5300                 | 93.16               | -                       | -                           | 78.21                     | 34.07                         | 13.98                   | 33.1                       | 381                  | 231                     | A                       | V               |
|                                       |      | 5422.32              | 53.32               | -20.68                  | 74                          | 38.04                     | 34.22                         | 14.16                   | 33.1                       | 381                  | 231                     | P                       | V               |
|                                       |      | 5444.4               | 43.78               | -10.22                  | 54                          | 28.37                     | 34.24                         | 14.27                   | 33.1                       | 381                  | 231                     | A                       | V               |



|                                                                   |                                                                                             |         |       |        |    |       |       |       |      |     |     |   |   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|-------|--------|----|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11ac</b><br><b>VHT20</b><br><b>CH 64</b><br><b>5320MHz</b> | *                                                                                           | 5320    | 103.7 | -      | -  | 88.67 | 34.09 | 14.04 | 33.1 | 102 | 144 | P | H |
|                                                                   |                                                                                             | 5320    | 96.26 | -      | -  | 81.23 | 34.09 | 14.04 | 33.1 | 102 | 144 | A | H |
|                                                                   |                                                                                             | 5372.16 | 52.94 | -21.06 | 74 | 37.79 | 34.15 | 14.1  | 33.1 | 102 | 144 | P | H |
|                                                                   |                                                                                             | 5450.24 | 43.8  | -10.2  | 54 | 28.37 | 34.26 | 14.27 | 33.1 | 102 | 144 | A | H |
|                                                                   | *                                                                                           | 5320    | 98.97 | -      | -  | 83.94 | 34.09 | 14.04 | 33.1 | 381 | 232 | P | V |
|                                                                   |                                                                                             | 5320    | 92.88 | -      | -  | 77.85 | 34.09 | 14.04 | 33.1 | 381 | 232 | A | V |
|                                                                   |                                                                                             | 5382.56 | 53.34 | -20.66 | 74 | 38.16 | 34.18 | 14.1  | 33.1 | 381 | 232 | P | V |
|                                                                   |                                                                                             | 5418.88 | 43.74 | -10.26 | 54 | 28.46 | 34.22 | 14.16 | 33.1 | 381 | 232 | 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 VHT20 (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          |                                                                                             | 10520                | 45.71               | -22.49                  | 68.2                        | 47.7                      | 37.11                         | 19.72                   | 58.82                      | 150                  | 220                     | P                       | H               |
| VHT20             |                                                                                             | 15780                | 47.29               | -26.71                  | 74                          | 42.61                     | 41.36                         | 22.5                    | 59.18                      | 159                  | 345                     | P                       | H               |
| CH 52             |                                                                                             | 10520                | 45.86               | -22.34                  | 68.2                        | 47.85                     | 37.11                         | 19.72                   | 58.82                      | 129                  | 266                     | P                       | V               |
| 5260MHz           |                                                                                             | 15780                | 45.65               | -28.35                  | 74                          | 40.97                     | 41.36                         | 22.5                    | 59.18                      | 161                  | 0                       | P                       | V               |
| 802.11ac          |                                                                                             | 10600                | 44.55               | -29.45                  | 74                          | 46.36                     | 37.16                         | 19.76                   | 58.73                      | 185                  | 215                     | P                       | H               |
| VHT20             |                                                                                             | 15900                | 47.23               | -26.77                  | 74                          | 42.31                     | 41.65                         | 22.57                   | 59.3                       | 196                  | 190                     | P                       | H               |
| CH 60             |                                                                                             | 10600                | 44.58               | -29.42                  | 74                          | 46.39                     | 37.16                         | 19.76                   | 58.73                      | 185                  | 215                     | P                       | V               |
| 5300MHz           |                                                                                             | 15900                | 47.5                | -26.5                   | 74                          | 42.58                     | 41.65                         | 22.57                   | 59.3                       | 196                  | 190                     | P                       | V               |
| 802.11ac          |                                                                                             | 10640                | 44.96               | -29.04                  | 74                          | 46.69                     | 37.18                         | 19.78                   | 58.69                      | 152                  | 135                     | P                       | H               |
| VHT20             |                                                                                             | 15960                | 46.76               | -27.24                  | 74                          | 41.69                     | 41.82                         | 22.62                   | 59.37                      | 173                  | 245                     | P                       | H               |
| CH 64             |                                                                                             | 10640                | 44.88               | -29.12                  | 74                          | 46.61                     | 37.18                         | 19.78                   | 58.69                      | 196                  | 153                     | P                       | V               |
| 5320MHz           |                                                                                             | 15960                | 46.77               | -27.23                  | 74                          | 41.7                      | 41.82                         | 22.62                   | 59.37                      | 157                  | 269                     | 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 802.11ac VHT40 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 54<br>5270MHz |                                                                                             | 5102.7               | 53.73               | -20.27                  | 74                          | 39.42                     | 33.81                         | 13.6                    | 33.1                       | 104                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5145.6               | 43.15               | -10.85                  | 54                          | 28.7                      | 33.87                         | 13.68                   | 33.1                       | 104                  | 144                     | A                       | H               |
|                                       | *                                                                                           | 5270                 | 98.02               | -                       | -                           | 83.18                     | 34.02                         | 13.92                   | 33.1                       | 104                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5270                 | 91.7                | -                       | -                           | 76.86                     | 34.02                         | 13.92                   | 33.1                       | 104                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5427.36              | 52.52               | -21.48                  | 74                          | 37.13                     | 34.22                         | 14.27                   | 33.1                       | 104                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5439.84              | 43.91               | -10.09                  | 54                          | 28.5                      | 34.24                         | 14.27                   | 33.1                       | 104                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5086.06              | 52.9                | -21.1                   | 74                          | 38.61                     | 33.79                         | 13.6                    | 33.1                       | 385                  | 228                     | P                       | V               |
|                                       |                                                                                             | 5135.2               | 43.06               | -10.94                  | 54                          | 28.63                     | 33.85                         | 13.68                   | 33.1                       | 385                  | 228                     | A                       | V               |
|                                       | *                                                                                           | 5270                 | 95.65               | -                       | -                           | 80.81                     | 34.02                         | 13.92                   | 33.1                       | 385                  | 228                     | P                       | V               |
|                                       |                                                                                             | 5270                 | 89.05               | -                       | -                           | 74.21                     | 34.02                         | 13.92                   | 33.1                       | 385                  | 228                     | A                       | V               |
|                                       |                                                                                             | 5434.32              | 53.07               | -20.93                  | 74                          | 37.66                     | 34.24                         | 14.27                   | 33.1                       | 385                  | 228                     | P                       | V               |
|                                       |                                                                                             | 5430.24              | 43.81               | -10.19                  | 54                          | 28.4                      | 34.24                         | 14.27                   | 33.1                       | 385                  | 228                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 62<br>5310MHz |                                                                                             | 5081.9               | 52.62               | -21.38                  | 74                          | 38.33                     | 33.79                         | 13.6                    | 33.1                       | 102                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5123.2               | 43.58               | -10.42                  | 54                          | 29.15                     | 33.85                         | 13.68                   | 33.1                       | 102                  | 144                     | A                       | H               |
|                                       | *                                                                                           | 5310                 | 99.15               | -                       | -                           | 84.12                     | 34.09                         | 14.04                   | 33.1                       | 102                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5310                 | 92.52               | -                       | -                           | 77.49                     | 34.09                         | 14.04                   | 33.1                       | 102                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5350.32              | 56.2                | -17.8                   | 74                          | 41.07                     | 34.13                         | 14.1                    | 33.1                       | 102                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5350.08              | 47.7                | -6.3                    | 54                          | 32.57                     | 34.13                         | 14.1                    | 33.1                       | 102                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5096.95              | 51.69               | -22.31                  | 74                          | 37.38                     | 33.81                         | 13.6                    | 33.1                       | 341                  | 225                     | P                       | V               |
|                                       |                                                                                             | 5113.75              | 43.16               | -10.84                  | 54                          | 28.83                     | 33.83                         | 13.6                    | 33.1                       | 341                  | 225                     | A                       | V               |
|                                       | *                                                                                           | 5310                 | 95.52               | -                       | -                           | 80.49                     | 34.09                         | 14.04                   | 33.1                       | 341                  | 225                     | P                       | V               |
|                                       |                                                                                             | 5310                 | 88.52               | -                       | -                           | 73.49                     | 34.09                         | 14.04                   | 33.1                       | 341                  | 225                     | A                       | V               |
|                                       |                                                                                             | 5451.6               | 53.44               | -20.56                  | 74                          | 38.01                     | 34.26                         | 14.27                   | 33.1                       | 341                  | 225                     | P                       | V               |
|                                       |                                                                                             | 5350.56              | 44.92               | -9.08                   | 54                          | 29.79                     | 34.13                         | 14.1                    | 33.1                       | 341                  | 225                     | 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 802.11ac VHT40 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11ac          |                                                                                             | 10540                | 44.43               | -23.77                  | 68.2                        | 46.37                   | 37.12                         | 19.74                   | 58.8                       | 150                  | 220                     | P                     | H             |
| VHT40             |                                                                                             | 15810                | 47.51               | -26.49                  | 74                          | 42.76                   | 41.44                         | 22.52                   | 59.21                      | 168                  | 345                     | P                     | H             |
| CH 54             |                                                                                             | 10540                | 44.67               | -23.53                  | 68.2                        | 46.61                   | 37.12                         | 19.74                   | 58.8                       | 139                  | 242                     | P                     | V             |
| 5270MHz           |                                                                                             | 15810                | 46.9                | -27.1                   | 74                          | 42.15                   | 41.44                         | 22.52                   | 59.21                      | 152                  | 296                     | P                     | V             |
| 802.11ac          |                                                                                             | 10620                | 45.01               | -28.99                  | 74                          | 46.77                   | 37.17                         | 19.78                   | 58.71                      | 148                  | 269                     | P                     | H             |
| VHT40             |                                                                                             | 15930                | 47.9                | -26.1                   | 74                          | 42.9                    | 41.73                         | 22.6                    | 59.33                      | 187                  | 241                     | P                     | H             |
| CH 62             |                                                                                             | 10620                | 45.25               | -28.75                  | 74                          | 47.01                   | 37.17                         | 19.78                   | 58.71                      | 150                  | 220                     | P                     | V             |
| 5310MHz           |                                                                                             | 15930                | 47.04               | -26.96                  | 74                          | 42.04                   | 41.73                         | 22.6                    | 59.33                      | 160                  | 100                     | 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 802.11ac 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 58<br>5290MHz |                                                                                             | 5125.06              | 52.81               | -21.19                  | 74                          | 38.38                     | 33.85                         | 13.68                   | 33.1                       | 105                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5140.92              | 43.16               | -10.84                  | 54                          | 28.71                     | 33.87                         | 13.68                   | 33.1                       | 105                  | 144                     | A                       | H               |
|                                       | *                                                                                           | 5290                 | 92.09               | -                       | -                           | 77.16                     | 34.05                         | 13.98                   | 33.1                       | 105                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5290                 | 85.39               | -                       | -                           | 70.46                     | 34.05                         | 13.98                   | 33.1                       | 105                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5367.36              | 53.88               | -20.12                  | 74                          | 38.73                     | 34.15                         | 14.1                    | 33.1                       | 105                  | 144                     | P                       | H               |
|                                       |                                                                                             | 5352.72              | 45.27               | -8.73                   | 54                          | 30.14                     | 34.13                         | 14.1                    | 33.1                       | 105                  | 144                     | A                       | H               |
|                                       |                                                                                             | 5084.76              | 52.56               | -21.44                  | 74                          | 38.27                     | 33.79                         | 13.6                    | 33.1                       | 400                  | 231                     | P                       | V               |
|                                       |                                                                                             | 5144.56              | 43.04               | -10.96                  | 54                          | 28.59                     | 33.87                         | 13.68                   | 33.1                       | 400                  | 231                     | A                       | V               |
|                                       | *                                                                                           | 5290                 | 86.42               | -                       | -                           | 71.49                     | 34.05                         | 13.98                   | 33.1                       | 400                  | 231                     | P                       | V               |
|                                       |                                                                                             | 5290                 | 80.35               | -                       | -                           | 65.42                     | 34.05                         | 13.98                   | 33.1                       | 400                  | 231                     | A                       | V               |
|                                       |                                                                                             | 5376.24              | 52.89               | -21.11                  | 74                          | 37.74                     | 34.15                         | 14.1                    | 33.1                       | 400                  | 231                     | P                       | V               |
|                                       |                                                                                             | 5354.16              | 43.6                | -10.4                   | 54                          | 28.47                     | 34.13                         | 14.1                    | 33.1                       | 400                  | 231                     | 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 802.11ac VHT80 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1                     | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT80<br>CH 58<br>5290MHz |                                                                                             | 10580                | 44.63               | -23.57                  | 68.2                        | 46.47                     | 37.15                         | 19.76                   | 58.75                      | 215                  | 196                     | P                       | H               |
|                                       |                                                                                             | 15870                | 46.79               | -27.21                  | 74                          | 41.91                     | 41.61                         | 22.55                   | 59.28                      | 148                  | 315                     | P                       | H               |
|                                       |                                                                                             | 10580                | 43.66               | -24.54                  | 68.2                        | 45.5                      | 37.15                         | 19.76                   | 58.75                      | 150                  | 220                     | P                       | V               |
|                                       |                                                                                             | 15870                | 46.58               | -27.42                  | 74                          | 41.7                      | 41.61                         | 22.55                   | 59.28                      | 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<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 |      | 5452.24              | 53.35               | -20.65                  | 74                          | 37.92                     | 34.26                         | 14.27                   | 33.1                       | 119                  | 136                     | P                       | H               |
|                              |      | 5462.64              | 53.57               | -14.63                  | 68.2                        | 38.12                     | 34.28                         | 14.27                   | 33.1                       | 119                  | 136                     | P                       | H               |
|                              |      | 5460                 | 44.45               | -9.55                   | 54                          | 29.02                     | 34.26                         | 14.27                   | 33.1                       | 119                  | 136                     | A                       | H               |
|                              | *    | 5500                 | 106.62              | -                       | -                           | 91.02                     | 34.33                         | 14.37                   | 33.1                       | 119                  | 136                     | P                       | H               |
|                              |      | 5500                 | 99.56               | -                       | -                           | 83.96                     | 34.33                         | 14.37                   | 33.1                       | 119                  | 136                     | A                       | H               |
|                              |      | 5455.12              | 53.75               | -20.25                  | 74                          | 38.32                     | 34.26                         | 14.27                   | 33.1                       | 376                  | 234                     | P                       | V               |
|                              |      | 5465.04              | 53.06               | -15.14                  | 68.2                        | 37.61                     | 34.28                         | 14.27                   | 33.1                       | 376                  | 234                     | P                       | V               |
|                              |      | 5458.32              | 44.1                | -9.9                    | 54                          | 28.67                     | 34.26                         | 14.27                   | 33.1                       | 376                  | 234                     | A                       | V               |
|                              | *    | 5500                 | 103.76              | -                       | -                           | 88.16                     | 34.33                         | 14.37                   | 33.1                       | 376                  | 234                     | P                       | V               |
|                              |      | 5500                 | 95.72               | -                       | -                           | 80.12                     | 34.33                         | 14.37                   | 33.1                       | 376                  | 234                     | A                       | V               |
| 802.11a<br>CH 116<br>5580MHz |      | 5430.16              | 54.06               | -19.94                  | 74                          | 38.65                     | 34.24                         | 14.27                   | 33.1                       | 101                  | 140                     | P                       | H               |
|                              |      | 5461.12              | 53.26               | -14.94                  | 68.2                        | 37.83                     | 34.26                         | 14.27                   | 33.1                       | 101                  | 140                     | P                       | H               |
|                              |      | 5454.88              | 44.2                | -9.8                    | 54                          | 28.77                     | 34.26                         | 14.27                   | 33.1                       | 101                  | 140                     | A                       | H               |
|                              | *    | 5580                 | 107.11              | -                       | -                           | 91.22                     | 34.41                         | 14.58                   | 33.1                       | 101                  | 140                     | P                       | H               |
|                              |      | 5580                 | 99.52               | -                       | -                           | 83.63                     | 34.41                         | 14.58                   | 33.1                       | 101                  | 140                     | A                       | H               |
|                              |      | 5727.83              | 55.4                | -12.8                   | 68.2                        | 39.07                     | 34.46                         | 14.97                   | 33.1                       | 101                  | 140                     | P                       | H               |
|                              |      | 5363.92              | 53.89               | -20.11                  | 74                          | 38.74                     | 34.15                         | 14.1                    | 33.1                       | 379                  | 228                     | P                       | V               |
|                              |      | 5463.52              | 52.71               | -15.49                  | 68.2                        | 37.26                     | 34.28                         | 14.27                   | 33.1                       | 379                  | 228                     | P                       | V               |
|                              |      | 5457.28              | 44.43               | -9.57                   | 54                          | 29                        | 34.26                         | 14.27                   | 33.1                       | 379                  | 228                     | A                       | V               |
|                              | *    | 5580                 | 103.89              | -                       | -                           | 88                        | 34.41                         | 14.58                   | 33.1                       | 379                  | 228                     | P                       | V               |
|                              |      | 5580                 | 97.13               | -                       | -                           | 81.24                     | 34.41                         | 14.58                   | 33.1                       | 379                  | 228                     | A                       | V               |
|                              |      | 5765                 | 54.34               | -13.86                  | 68.2                        | 37.93                     | 34.45                         | 15.06                   | 33.1                       | 379                  | 228                     | P                       | V               |



|                                       |                                                                                             |         |        |        |      |       |       |       |      |     |     |   |   |
|---------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11a<br/>CH 140<br/>5700MHz</b> | *                                                                                           | 5700    | 106.7  | -      | -    | 90.35 | 34.48 | 14.97 | 33.1 | 101 | 140 | P | H |
|                                       |                                                                                             | 5700    | 99.9   | -      | -    | 83.55 | 34.48 | 14.97 | 33.1 | 101 | 140 | A | H |
|                                       |                                                                                             | 5725.72 | 57.1   | -11.1  | 68.2 | 40.77 | 34.46 | 14.97 | 33.1 | 101 | 140 | P | H |
|                                       | *                                                                                           | 5700    | 104.25 | -      | -    | 87.9  | 34.48 | 14.97 | 33.1 | 341 | 233 | P | V |
|                                       |                                                                                             | 5700    | 97.35  | -      | -    | 81    | 34.48 | 14.97 | 33.1 | 341 | 233 | A | V |
|                                       |                                                                                             | 5727.16 | 54.91  | -13.29 | 68.2 | 38.58 | 34.46 | 14.97 | 33.1 | 341 | 233 | P | 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 |                                                                                             | 11000                | 47.19               | -26.81                  | 74                          | 48.13                   | 37.4                          | 19.96                   | 58.3                       | 148                  | 219                     | P                     | H             |
|                              |                                                                                             | 16500                | 47.69               | -20.51                  | 68.2                        | 40.31                   | 43.27                         | 22.95                   | 58.84                      | 148                  | 232                     | P                     | H             |
|                              |                                                                                             | 11000                | 46.34               | -27.66                  | 74                          | 47.28                   | 37.4                          | 19.96                   | 58.3                       | 163                  | 230                     | P                     | V             |
|                              |                                                                                             | 16500                | 47.77               | -20.43                  | 68.2                        | 40.39                   | 43.27                         | 22.95                   | 58.84                      | 178                  | 296                     | P                     | V             |
| 802.11a<br>CH 116<br>5580MHz |                                                                                             | 11160                | 46.3                | -27.7                   | 74                          | 46.85                   | 37.5                          | 20.06                   | 58.11                      | 170                  | 200                     | P                     | H             |
|                              |                                                                                             | 16740                | 47.59               | -20.61                  | 68.2                        | 39.14                   | 43.91                         | 23.12                   | 58.58                      | 156                  | 350                     | P                     | H             |
|                              |                                                                                             | 11160                | 46.24               | -27.76                  | 74                          | 46.79                   | 37.5                          | 20.06                   | 58.11                      | 148                  | 232                     | P                     | V             |
|                              |                                                                                             | 16740                | 47.66               | -20.54                  | 68.2                        | 39.21                   | 43.91                         | 23.12                   | 58.58                      | 136                  | 342                     | P                     | V             |
| 802.11a<br>CH 140<br>5700MHz |                                                                                             | 11400                | 46.72               | -27.28                  | 74                          | 46.75                   | 37.64                         | 20.18                   | 57.85                      | 157                  | 285                     | P                     | H             |
|                              |                                                                                             | 17100                | 47.79               | -20.41                  | 68.2                        | 38.32                   | 44.29                         | 23.34                   | 58.16                      | 165                  | 246                     | P                     | H             |
|                              |                                                                                             | 11400                | 46.53               | -27.47                  | 74                          | 46.56                   | 37.64                         | 20.18                   | 57.85                      | 136                  | 246                     | P                     | V             |
|                              |                                                                                             | 17100                | 47.41               | -20.79                  | 68.2                        | 37.94                   | 44.29                         | 23.34                   | 58.16                      | 155                  | 196                     | 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 |      | 5383.12              | 53.86               | -20.14                  | 74                          | 38.68                   | 34.18                         | 14.1                    | 33.1                       | 117                  | 149                     | P                     | H             |
|                                      |      | 5467.28              | 54.29               | -13.91                  | 68.2                        | 38.74                   | 34.28                         | 14.37                   | 33.1                       | 117                  | 149                     | P                     | H             |
|                                      |      | 5459.92              | 45.08               | -8.92                   | 54                          | 29.65                   | 34.26                         | 14.27                   | 33.1                       | 117                  | 149                     | A                     | H             |
|                                      | *    | 5500                 | 106.75              | -                       | -                           | 91.15                   | 34.33                         | 14.37                   | 33.1                       | 117                  | 149                     | P                     | H             |
|                                      |      | 5500                 | 99.16               | -                       | -                           | 83.56                   | 34.33                         | 14.37                   | 33.1                       | 117                  | 149                     | A                     | H             |
|                                      |      | 5453.04              | 54.32               | -19.68                  | 74                          | 38.89                   | 34.26                         | 14.27                   | 33.1                       | 358                  | 242                     | P                     | V             |
|                                      |      | 5468.24              | 56.15               | -12.05                  | 68.2                        | 40.6                    | 34.28                         | 14.37                   | 33.1                       | 358                  | 242                     | P                     | V             |
|                                      |      | 5458.16              | 44.84               | -9.16                   | 54                          | 29.41                   | 34.26                         | 14.27                   | 33.1                       | 358                  | 242                     | A                     | V             |
|                                      | *    | 5500                 | 105.4               | -                       | -                           | 89.8                    | 34.33                         | 14.37                   | 33.1                       | 358                  | 242                     | P                     | V             |
|                                      |      | 5500                 | 98.03               | -                       | -                           | 82.43                   | 34.33                         | 14.37                   | 33.1                       | 358                  | 242                     | A                     | V             |
| 802.11n<br>HT20<br>CH 116<br>5580MHz |      | 5448.4               | 53.86               | -20.14                  | 74                          | 38.43                   | 34.26                         | 14.27                   | 33.1                       | 110                  | 151                     | P                     | H             |
|                                      |      | 5464.72              | 52.03               | -16.17                  | 68.2                        | 36.58                   | 34.28                         | 14.27                   | 33.1                       | 110                  | 151                     | P                     | H             |
|                                      |      | 5459.68              | 44.05               | -9.95                   | 54                          | 28.62                   | 34.26                         | 14.27                   | 33.1                       | 110                  | 151                     | A                     | H             |
|                                      | *    | 5580                 | 106.73              | -                       | -                           | 90.84                   | 34.41                         | 14.58                   | 33.1                       | 110                  | 151                     | P                     | H             |
|                                      |      | 5580                 | 98.43               | -                       | -                           | 82.54                   | 34.41                         | 14.58                   | 33.1                       | 110                  | 151                     | A                     | H             |
|                                      |      | 5733.815             | 54.26               | -13.94                  | 68.2                        | 37.93                   | 34.46                         | 14.97                   | 33.1                       | 110                  | 151                     | P                     | H             |
|                                      |      | 5443.36              | 53.1                | -20.9                   | 74                          | 37.69                   | 34.24                         | 14.27                   | 33.1                       | 362                  | 239                     | P                     | V             |
|                                      |      | 5462.08              | 52.83               | -15.37                  | 68.2                        | 37.4                    | 34.26                         | 14.27                   | 33.1                       | 362                  | 239                     | P                     | V             |
|                                      |      | 5459.68              | 44.24               | -9.76                   | 54                          | 28.81                   | 34.26                         | 14.27                   | 33.1                       | 362                  | 239                     | A                     | V             |
|                                      | *    | 5580                 | 105.62              | -                       | -                           | 89.73                   | 34.41                         | 14.58                   | 33.1                       | 362                  | 239                     | P                     | V             |
|                                      |      | 5580                 | 97.36               | -                       | -                           | 81.47                   | 34.41                         | 14.58                   | 33.1                       | 362                  | 239                     | A                     | V             |
|                                      |      | 5758.07              | 54.19               | -14.01                  | 68.2                        | 37.78                   | 34.45                         | 15.06                   | 33.1                       | 362                  | 239                     | P                     | V             |



|                                                                  |                                                                                             |         |        |        |      |       |       |       |      |     |     |   |   |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11n</b><br><b>HT20</b><br><b>CH 140</b><br><b>5700MHz</b> | *                                                                                           | 5700    | 106.58 | -      | -    | 90.23 | 34.48 | 14.97 | 33.1 | 111 | 153 | P | H |
|                                                                  |                                                                                             | 5700    | 99.8   | -      | -    | 83.45 | 34.48 | 14.97 | 33.1 | 111 | 153 | A | H |
|                                                                  |                                                                                             | 5725.08 | 61.96  | -6.24  | 68.2 | 45.63 | 34.46 | 14.97 | 33.1 | 111 | 153 | P | H |
|                                                                  | *                                                                                           | 5700    | 104.78 | -      | -    | 88.43 | 34.48 | 14.97 | 33.1 | 369 | 240 | P | V |
|                                                                  |                                                                                             | 5700    | 98.12  | -      | -    | 81.77 | 34.48 | 14.97 | 33.1 | 369 | 240 | A | V |
|                                                                  |                                                                                             | 5725.16 | 57.78  | -10.42 | 68.2 | 41.45 | 34.46 | 14.97 | 33.1 | 369 | 240 | P | 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           |                                                                                             | 11000                | 47.38               | -26.62                  | 74                          | 48.32                   | 37.4                          | 19.96                   | 58.3                       | 163                  | 230                     | P                     | H             |
| HT20              |                                                                                             | 16500                | 47.6                | -20.6                   | 68.2                        | 40.22                   | 43.27                         | 22.95                   | 58.84                      | 178                  | 296                     | P                     | H             |
| CH 100            |                                                                                             | 11000                | 46.41               | -27.59                  | 74                          | 47.35                   | 37.4                          | 19.96                   | 58.3                       | 148                  | 219                     | P                     | V             |
| 5500MHz           |                                                                                             | 16500                | 47.63               | -20.57                  | 68.2                        | 40.25                   | 43.27                         | 22.95                   | 58.84                      | 148                  | 232                     | P                     | V             |
| 802.11n           |                                                                                             | 11160                | 46.27               | -27.73                  | 74                          | 46.82                   | 37.5                          | 20.06                   | 58.11                      | 170                  | 200                     | P                     | H             |
| HT20              |                                                                                             | 16740                | 47.62               | -20.58                  | 68.2                        | 39.17                   | 43.91                         | 23.12                   | 58.58                      | 156                  | 350                     | P                     | H             |
| CH 116            |                                                                                             | 11160                | 46.74               | -27.26                  | 74                          | 47.29                   | 37.5                          | 20.06                   | 58.11                      | 148                  | 232                     | P                     | V             |
| 5580MHz           |                                                                                             | 16740                | 47.17               | -21.03                  | 68.2                        | 38.72                   | 43.91                         | 23.12                   | 58.58                      | 136                  | 342                     | P                     | V             |
| 802.11n           |                                                                                             | 11400                | 46.97               | -27.03                  | 74                          | 47                      | 37.64                         | 20.18                   | 57.85                      | 157                  | 285                     | P                     | H             |
| HT20              |                                                                                             | 17100                | 46.68               | -21.52                  | 68.2                        | 37.21                   | 44.29                         | 23.34                   | 58.16                      | 165                  | 246                     | P                     | H             |
| CH 140            |                                                                                             | 11400                | 46.65               | -27.35                  | 74                          | 46.68                   | 37.64                         | 20.18                   | 57.85                      | 136                  | 246                     | P                     | V             |
| 5700MHz           |                                                                                             | 17100                | 47.37               | -20.83                  | 68.2                        | 37.9                    | 44.29                         | 23.34                   | 58.16                      | 155                  | 196                     | 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 |      | 5450.08              | 53.43               | -20.57                  | 74                          | 38                        | 34.26                         | 14.27                   | 33.1                       | 118                  | 133                     | P                       | H               |
|                                      |      | 5469.76              | 60.45               | -7.75                   | 68.2                        | 44.9                      | 34.28                         | 14.37                   | 33.1                       | 118                  | 133                     | P                       | H               |
|                                      |      | 5459.44              | 44.71               | -9.29                   | 54                          | 29.28                     | 34.26                         | 14.27                   | 33.1                       | 118                  | 133                     | A                       | H               |
|                                      | *    | 5510                 | 101.15              | -                       | -                           | 85.44                     | 34.33                         | 14.48                   | 33.1                       | 118                  | 133                     | P                       | H               |
|                                      |      | 5510                 | 94.65               | -                       | -                           | 78.94                     | 34.33                         | 14.48                   | 33.1                       | 118                  | 133                     | A                       | H               |
|                                      |      | 5761.22              | 53.58               | -14.62                  | 68.2                        | 37.17                     | 34.45                         | 15.06                   | 33.1                       | 118                  | 133                     | P                       | H               |
|                                      |      | 5452.48              | 53.97               | -20.03                  | 74                          | 38.54                     | 34.26                         | 14.27                   | 33.1                       | 387                  | 234                     | P                       | V               |
|                                      |      | 5469.04              | 58.05               | -10.15                  | 68.2                        | 42.5                      | 34.28                         | 14.37                   | 33.1                       | 387                  | 234                     | P                       | V               |
|                                      |      | 5459.92              | 44.28               | -9.72                   | 54                          | 28.85                     | 34.26                         | 14.27                   | 33.1                       | 387                  | 234                     | A                       | V               |
|                                      | *    | 5510                 | 98.77               | -                       | -                           | 83.06                     | 34.33                         | 14.48                   | 33.1                       | 387                  | 234                     | P                       | V               |
|                                      |      | 5510                 | 92.65               | -                       | -                           | 76.94                     | 34.33                         | 14.48                   | 33.1                       | 387                  | 234                     | A                       | V               |
|                                      |      | 5735.075             | 54.41               | -13.79                  | 68.2                        | 38.09                     | 34.45                         | 14.97                   | 33.1                       | 387                  | 234                     | P                       | V               |
| 802.11n<br>HT40<br>CH 110<br>5550MHz |      | 5450.08              | 53.54               | -20.46                  | 74                          | 38.11                     | 34.26                         | 14.27                   | 33.1                       | 130                  | 140                     | P                       | H               |
|                                      |      | 5461.36              | 52.92               | -15.28                  | 68.2                        | 37.49                     | 34.26                         | 14.27                   | 33.1                       | 130                  | 140                     | P                       | H               |
|                                      |      | 5439.76              | 44.43               | -9.57                   | 54                          | 29.02                     | 34.24                         | 14.27                   | 33.1                       | 130                  | 140                     | A                       | H               |
|                                      | *    | 5550                 | 102.57              | -                       | -                           | 86.7                      | 34.39                         | 14.58                   | 33.1                       | 130                  | 140                     | P                       | H               |
|                                      |      | 5550                 | 95.04               | -                       | -                           | 79.17                     | 34.39                         | 14.58                   | 33.1                       | 130                  | 140                     | A                       | H               |
|                                      |      | 5757.44              | 55.39               | -12.81                  | 68.2                        | 38.98                     | 34.45                         | 15.06                   | 33.1                       | 130                  | 140                     | P                       | H               |
|                                      |      | 5458.72              | 52.49               | -21.51                  | 74                          | 37.06                     | 34.26                         | 14.27                   | 33.1                       | 384                  | 235                     | P                       | V               |
|                                      |      | 5463.76              | 53.33               | -14.87                  | 68.2                        | 37.88                     | 34.28                         | 14.27                   | 33.1                       | 384                  | 235                     | P                       | V               |
|                                      |      | 5440.24              | 43.81               | -10.19                  | 54                          | 28.4                      | 34.24                         | 14.27                   | 33.1                       | 384                  | 235                     | A                       | V               |
|                                      | *    | 5550                 | 98.69               | -                       | -                           | 82.82                     | 34.39                         | 14.58                   | 33.1                       | 384                  | 235                     | P                       | V               |
|                                      |      | 5550                 | 92.23               | -                       | -                           | 76.36                     | 34.39                         | 14.58                   | 33.1                       | 384                  | 235                     | A                       | V               |
|                                      |      | 5761.535             | 53.48               | -14.72                  | 68.2                        | 37.07                     | 34.45                         | 15.06                   | 33.1                       | 384                  | 235                     | P                       | V               |



|                                      |                                                                                             |         |        |        |      |       |       |       |      |     |     |   |   |
|--------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| 802.11n<br>HT40<br>CH 134<br>5670MHz |                                                                                             | 5458.5  | 53     | -21    | 74   | 37.57 | 34.26 | 14.27 | 33.1 | 100 | 140 | P | H |
|                                      |                                                                                             | 5463.75 | 51.69  | -16.51 | 68.2 | 36.24 | 34.28 | 14.27 | 33.1 | 100 | 140 | P | H |
|                                      |                                                                                             | 5459.55 | 43.98  | -10.02 | 54   | 28.55 | 34.26 | 14.27 | 33.1 | 100 | 140 | A | H |
|                                      | *                                                                                           | 5670    | 102.47 | -      | -    | 86.22 | 34.48 | 14.87 | 33.1 | 100 | 140 | P | H |
|                                      |                                                                                             | 5670    | 94.74  | -      | -    | 78.49 | 34.48 | 14.87 | 33.1 | 100 | 140 | A | H |
|                                      |                                                                                             | 5742.6  | 55.59  | -12.61 | 68.2 | 39.18 | 34.45 | 15.06 | 33.1 | 100 | 140 | P | H |
|                                      |                                                                                             | 5435.4  | 52.67  | -21.33 | 74   | 37.26 | 34.24 | 14.27 | 33.1 | 348 | 238 | P | V |
|                                      |                                                                                             | 5460.6  | 51.71  | -16.49 | 68.2 | 36.28 | 34.26 | 14.27 | 33.1 | 348 | 238 | P | V |
|                                      |                                                                                             | 5440.3  | 43.79  | -10.21 | 54   | 28.38 | 34.24 | 14.27 | 33.1 | 348 | 238 | A | V |
|                                      | *                                                                                           | 5670    | 100.8  | -      | -    | 84.55 | 34.48 | 14.87 | 33.1 | 348 | 238 | P | V |
|                                      |                                                                                             | 5670    | 93.71  | -      | -    | 77.46 | 34.48 | 14.87 | 33.1 | 348 | 238 | A | V |
|                                      |                                                                                             | 5731.4  | 53.85  | -14.35 | 68.2 | 37.52 | 34.46 | 14.97 | 33.1 | 348 | 238 | 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 (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                | 47.77               | -26.23                  | 74                          | 48.66                     | 37.41                         | 19.98                   | 58.28                      | 158                  | 256                     | P                       | H               |
| HT40              |                                                                                             | 16530                | 47.85               | -20.35                  | 68.2                        | 40.32                     | 43.36                         | 22.97                   | 58.8                       | 112                  | 353                     | P                       | H               |
| CH 102            |                                                                                             | 11020                | 47.41               | -26.59                  | 74                          | 48.3                      | 37.41                         | 19.98                   | 58.28                      | 158                  | 256                     | P                       | V               |
| 5510MHz           |                                                                                             | 16530                | 46.7                | -21.5                   | 68.2                        | 39.17                     | 43.36                         | 22.97                   | 58.8                       | 112                  | 353                     | P                       | V               |
| 802.11n           |                                                                                             | 11100                | 47.34               | -26.66                  | 74                          | 48.05                     | 37.46                         | 20.02                   | 58.19                      | 125                  | 246                     | P                       | H               |
| HT40              |                                                                                             | 16650                | 47.57               | -20.63                  | 68.2                        | 39.51                     | 43.68                         | 23.05                   | 58.67                      | 138                  | 347                     | P                       | H               |
| CH 110            |                                                                                             | 11100                | 47.02               | -26.98                  | 74                          | 47.73                     | 37.46                         | 20.02                   | 58.19                      | 125                  | 246                     | P                       | V               |
| 5550MHz           |                                                                                             | 16650                | 47.6                | -20.6                   | 68.2                        | 39.54                     | 43.68                         | 23.05                   | 58.67                      | 138                  | 347                     | P                       | V               |
| 802.11n           |                                                                                             | 11340                | 47.44               | -26.56                  | 74                          | 47.63                     | 37.6                          | 20.14                   | 57.93                      | 200                  | 360                     | P                       | H               |
| HT40              |                                                                                             | 17010                | 47.27               | -20.93                  | 68.2                        | 37.71                     | 44.55                         | 23.29                   | 58.28                      | 200                  | 360                     | P                       | H               |
| CH 134            |                                                                                             | 11340                | 46.32               | -27.68                  | 74                          | 46.51                     | 37.6                          | 20.14                   | 57.93                      | 125                  | 327                     | P                       | V               |
| 5670MHz           |                                                                                             | 17010                | 47.76               | -20.44                  | 68.2                        | 38.2                      | 44.55                         | 23.29                   | 58.28                      | 248                  | 316                     | 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 802.11ac VHT20 (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>VHT20<br>CH 100<br>5500MHz |      | 5459.12              | 54.04               | -19.96                  | 74                          | 38.61                   | 34.26                         | 14.27                   | 33.1                       | 121                  | 137                     | P                     | H             |
|                                        |      | 5462.8               | 53.69               | -14.51                  | 68.2                        | 38.24                   | 34.28                         | 14.27                   | 33.1                       | 121                  | 137                     | P                     | H             |
|                                        |      | 5446.32              | 44.14               | -9.86                   | 54                          | 28.71                   | 34.26                         | 14.27                   | 33.1                       | 121                  | 137                     | A                     | H             |
|                                        | *    | 5500                 | 105.11              | -                       | -                           | 89.51                   | 34.33                         | 14.37                   | 33.1                       | 121                  | 137                     | P                     | H             |
|                                        |      | 5500                 | 97.74               | -                       | -                           | 82.14                   | 34.33                         | 14.37                   | 33.1                       | 121                  | 137                     | A                     | H             |
|                                        |      | 5444.4               | 53.09               | -20.91                  | 74                          | 37.68                   | 34.24                         | 14.27                   | 33.1                       | 381                  | 232                     | P                     | V             |
|                                        |      | 5466.32              | 53.35               | -14.85                  | 68.2                        | 37.8                    | 34.28                         | 14.37                   | 33.1                       | 381                  | 232                     | P                     | V             |
|                                        |      | 5452.56              | 43.93               | -10.07                  | 54                          | 28.5                    | 34.26                         | 14.27                   | 33.1                       | 381                  | 232                     | A                     | V             |
|                                        | *    | 5500                 | 100.37              | -                       | -                           | 84.77                   | 34.33                         | 14.37                   | 33.1                       | 381                  | 232                     | P                     | V             |
|                                        |      | 5500                 | 93.96               | -                       | -                           | 78.36                   | 34.33                         | 14.37                   | 33.1                       | 381                  | 232                     | A                     | V             |
| 802.11ac<br>VHT20<br>CH 116<br>5580MHz |      | 5455.36              | 52.75               | -21.25                  | 74                          | 37.32                   | 34.26                         | 14.27                   | 33.1                       | 102                  | 138                     | P                     | H             |
|                                        |      | 5469.52              | 52.43               | -15.77                  | 68.2                        | 36.88                   | 34.28                         | 14.37                   | 33.1                       | 102                  | 138                     | P                     | H             |
|                                        |      | 5455.6               | 43.9                | -10.1                   | 54                          | 28.47                   | 34.26                         | 14.27                   | 33.1                       | 102                  | 138                     | A                     | H             |
|                                        | *    | 5580                 | 105.81              | -                       | -                           | 89.92                   | 34.41                         | 14.58                   | 33.1                       | 102                  | 138                     | P                     | H             |
|                                        |      | 5580                 | 98.21               | -                       | -                           | 82.32                   | 34.41                         | 14.58                   | 33.1                       | 102                  | 138                     | A                     | H             |
|                                        |      | 5742.635             | 53.43               | -14.77                  | 68.2                        | 37.02                   | 34.45                         | 15.06                   | 33.1                       | 102                  | 138                     | P                     | H             |
|                                        |      | 5452.24              | 53.15               | -20.85                  | 74                          | 37.72                   | 34.26                         | 14.27                   | 33.1                       | 381                  | 231                     | P                     | V             |
|                                        |      | 5468.56              | 54.26               | -13.94                  | 68.2                        | 38.71                   | 34.28                         | 14.37                   | 33.1                       | 381                  | 231                     | P                     | V             |
|                                        |      | 5446.24              | 43.82               | -10.18                  | 54                          | 28.39                   | 34.26                         | 14.27                   | 33.1                       | 381                  | 231                     | A                     | V             |
|                                        | *    | 5580                 | 100.72              | -                       | -                           | 84.83                   | 34.41                         | 14.58                   | 33.1                       | 381                  | 231                     | P                     | V             |
|                                        |      | 5580                 | 94.86               | -                       | -                           | 78.97                   | 34.41                         | 14.58                   | 33.1                       | 381                  | 231                     | A                     | V             |
|                                        |      | 5754.29              | 53.18               | -15.02                  | 68.2                        | 36.77                   | 34.45                         | 15.06                   | 33.1                       | 381                  | 231                     | P                     | V             |



|                                                                    |                                                                                             |         |        |        |      |       |       |       |      |     |     |   |   |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11ac</b><br><b>VHT20</b><br><b>CH 140</b><br><b>5700MHz</b> | *                                                                                           | 5700    | 105.9  | -      | -    | 89.55 | 34.48 | 14.97 | 33.1 | 101 | 139 | P | H |
|                                                                    |                                                                                             | 5700    | 98.2   | -      | -    | 81.85 | 34.48 | 14.97 | 33.1 | 101 | 139 | A | H |
|                                                                    |                                                                                             | 5725.08 | 56.38  | -11.82 | 68.2 | 40.05 | 34.46 | 14.97 | 33.1 | 101 | 139 | P | H |
|                                                                    | *                                                                                           | 5700    | 100.89 | -      | -    | 84.54 | 34.48 | 14.97 | 33.1 | 381 | 231 | P | V |
|                                                                    |                                                                                             | 5700    | 94.46  | -      | -    | 78.11 | 34.48 | 14.97 | 33.1 | 381 | 231 | A | V |
|                                                                    |                                                                                             | 5725.72 | 54.2   | -14    | 68.2 | 37.87 | 34.46 | 14.97 | 33.1 | 381 | 231 | P | 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 802.11ac VHT20 (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          |                                                                                             | 11000                | 45.66               | -28.34                  | 74                          | 46.6                    | 37.4                          | 19.96                   | 58.3                       | 163                  | 230                     | P                     | H             |
| VHT20             |                                                                                             | 16500                | 48.58               | -19.62                  | 68.2                        | 41.2                    | 43.27                         | 22.95                   | 58.84                      | 178                  | 296                     | P                     | H             |
| CH 100            |                                                                                             | 11000                | 44.35               | -29.65                  | 74                          | 45.29                   | 37.4                          | 19.96                   | 58.3                       | 148                  | 219                     | P                     | V             |
| 5500MHz           |                                                                                             | 16500                | 48.13               | -20.07                  | 68.2                        | 40.75                   | 43.27                         | 22.95                   | 58.84                      | 148                  | 98                      | P                     | V             |
| 802.11ac          |                                                                                             | 11160                | 46.27               | -27.73                  | 74                          | 46.82                   | 37.5                          | 20.06                   | 58.11                      | 170                  | 200                     | P                     | H             |
| VHT20             |                                                                                             | 16740                | 46.54               | -21.66                  | 68.2                        | 38.09                   | 43.91                         | 23.12                   | 58.58                      | 156                  | 350                     | P                     | H             |
| CH 116            |                                                                                             | 11160                | 46.17               | -27.83                  | 74                          | 46.72                   | 37.5                          | 20.06                   | 58.11                      | 148                  | 232                     | P                     | V             |
| 5580MHz           |                                                                                             | 16740                | 47.96               | -20.24                  | 68.2                        | 39.51                   | 43.91                         | 23.12                   | 58.58                      | 136                  | 342                     | P                     | V             |
| 802.11ac          |                                                                                             | 11400                | 45.32               | -28.68                  | 74                          | 45.35                   | 37.64                         | 20.18                   | 57.85                      | 136                  | 246                     | P                     | H             |
| VHT20             |                                                                                             | 17100                | 48.17               | -20.03                  | 68.2                        | 38.7                    | 44.29                         | 23.34                   | 58.16                      | 155                  | 196                     | P                     | H             |
| CH 140            |                                                                                             | 11400                | 45.52               | -28.48                  | 74                          | 45.55                   | 37.64                         | 20.18                   | 57.85                      | 157                  | 285                     | P                     | V             |
| 5700MHz           |                                                                                             | 17100                | 48.53               | -19.67                  | 68.2                        | 39.06                   | 44.29                         | 23.34                   | 58.16                      | 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 802.11ac VHT40 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1                      | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 102<br>5510MHz |      | 5438.32              | 53.57               | -20.43                  | 74                          | 38.16                     | 34.24                         | 14.27                   | 33.1                       | 120                  | 146                     | P                       | H               |
|                                        |      | 5464.24              | 58.68               | -9.52                   | 68.2                        | 43.23                     | 34.28                         | 14.27                   | 33.1                       | 120                  | 146                     | P                       | H               |
|                                        |      | 5458.24              | 44.5                | -9.5                    | 54                          | 29.07                     | 34.26                         | 14.27                   | 33.1                       | 120                  | 146                     | A                       | H               |
|                                        | *    | 5510                 | 100.93              | -                       | -                           | 85.22                     | 34.33                         | 14.48                   | 33.1                       | 120                  | 146                     | P                       | H               |
|                                        |      | 5510                 | 93.57               | -                       | -                           | 77.86                     | 34.33                         | 14.48                   | 33.1                       | 120                  | 146                     | A                       | H               |
|                                        |      | 5751.77              | 53.18               | -15.02                  | 68.2                        | 36.77                     | 34.45                         | 15.06                   | 33.1                       | 120                  | 146                     | P                       | H               |
|                                        |      | 5360.8               | 52.47               | -21.53                  | 74                          | 37.32                     | 34.15                         | 14.1                    | 33.1                       | 352                  | 227                     | P                       | V               |
|                                        |      | 5469.28              | 56.13               | -12.07                  | 68.2                        | 40.58                     | 34.28                         | 14.37                   | 33.1                       | 352                  | 227                     | P                       | V               |
|                                        |      | 5459.92              | 43.79               | -10.21                  | 54                          | 28.36                     | 34.26                         | 14.27                   | 33.1                       | 352                  | 227                     | A                       | V               |
|                                        | *    | 5510                 | 98.4                | -                       | -                           | 82.69                     | 34.33                         | 14.48                   | 33.1                       | 352                  | 227                     | P                       | V               |
|                                        |      | 5510                 | 91.17               | -                       | -                           | 75.46                     | 34.33                         | 14.48                   | 33.1                       | 352                  | 227                     | A                       | V               |
|                                        |      | 5730.98              | 54.12               | -14.08                  | 68.2                        | 37.79                     | 34.46                         | 14.97                   | 33.1                       | 352                  | 227                     | P                       | V               |
| 802.11ac<br>VHT40<br>CH 110<br>5550MHz |      | 5437.36              | 53.47               | -20.53                  | 74                          | 38.06                     | 34.24                         | 14.27                   | 33.1                       | 100                  | 139                     | P                       | H               |
|                                        |      | 5460.64              | 53.65               | -14.55                  | 68.2                        | 38.22                     | 34.26                         | 14.27                   | 33.1                       | 100                  | 139                     | P                       | H               |
|                                        |      | 5452.24              | 44.07               | -9.93                   | 54                          | 28.64                     | 34.26                         | 14.27                   | 33.1                       | 100                  | 139                     | A                       | H               |
|                                        | *    | 5550                 | 101.61              | -                       | -                           | 85.74                     | 34.39                         | 14.58                   | 33.1                       | 100                  | 139                     | P                       | H               |
|                                        |      | 5550                 | 93.66               | -                       | -                           | 77.79                     | 34.39                         | 14.58                   | 33.1                       | 100                  | 139                     | A                       | H               |
|                                        |      | 5736.65              | 53.84               | -14.36                  | 68.2                        | 37.52                     | 34.45                         | 14.97                   | 33.1                       | 100                  | 139                     | P                       | H               |
|                                        |      | 5437.36              | 53.01               | -20.99                  | 74                          | 37.6                      | 34.24                         | 14.27                   | 33.1                       | 345                  | 230                     | P                       | V               |
|                                        |      | 5465.92              | 52.08               | -16.12                  | 68.2                        | 36.53                     | 34.28                         | 14.37                   | 33.1                       | 345                  | 230                     | P                       | V               |
|                                        |      | 5453.44              | 43.67               | -10.33                  | 54                          | 28.24                     | 34.26                         | 14.27                   | 33.1                       | 345                  | 230                     | A                       | V               |
|                                        | *    | 5550                 | 97.56               | -                       | -                           | 81.69                     | 34.39                         | 14.58                   | 33.1                       | 345                  | 230                     | P                       | V               |
|                                        |      | 5550                 | 91.34               | -                       | -                           | 75.47                     | 34.39                         | 14.58                   | 33.1                       | 345                  | 230                     | A                       | V               |
|                                        |      | 5742.32              | 53.2                | -15                     | 68.2                        | 36.79                     | 34.45                         | 15.06                   | 33.1                       | 345                  | 230                     | P                       | V               |



|                                                                                |                                                                                             |          |        |        |      |       |       |       |      |     |     |   |   |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------|--------|--------|------|-------|-------|-------|------|-----|-----|---|---|
| <b>802.11ac</b><br><br><b>VHT40</b><br><br><b>CH 134</b><br><br><b>5670MHz</b> |                                                                                             | 5365.05  | 52.37  | -21.63 | 74   | 37.22 | 34.15 | 14.1  | 33.1 | 102 | 132 | P | H |
|                                                                                |                                                                                             | 5467.25  | 51.49  | -16.71 | 68.2 | 35.94 | 34.28 | 14.37 | 33.1 | 102 | 132 | P | H |
|                                                                                |                                                                                             | 5448.35  | 43.83  | -10.17 | 54   | 28.4  | 34.26 | 14.27 | 33.1 | 102 | 132 | A | H |
|                                                                                | *                                                                                           | 5670     | 100.64 | -      | -    | 84.39 | 34.48 | 14.87 | 33.1 | 102 | 132 | P | H |
|                                                                                |                                                                                             | 5670     | 93.87  | -      | -    | 77.62 | 34.48 | 14.87 | 33.1 | 102 | 132 | A | H |
|                                                                                |                                                                                             | 5748.725 | 54.37  | -13.83 | 68.2 | 37.96 | 34.45 | 15.06 | 33.1 | 102 | 132 | P | H |
|                                                                                |                                                                                             | 5396.55  | 52.33  | -21.67 | 74   | 37.07 | 34.2  | 14.16 | 33.1 | 349 | 224 | P | V |
|                                                                                |                                                                                             | 5459.9   | 52.27  | -21.73 | 74   | 36.84 | 34.26 | 14.27 | 33.1 | 349 | 224 | P | V |
|                                                                                |                                                                                             | 5439.25  | 43.6   | -10.4  | 54   | 28.19 | 34.24 | 14.27 | 33.1 | 349 | 224 | A | V |
|                                                                                | *                                                                                           | 5670     | 98.22  | -      | -    | 81.97 | 34.48 | 14.87 | 33.1 | 349 | 224 | P | V |
|                                                                                |                                                                                             | 5670     | 91.15  | -      | -    | 74.9  | 34.48 | 14.87 | 33.1 | 349 | 224 | A | V |
|                                                                                |                                                                                             | 5730.525 | 54.14  | -14.06 | 68.2 | 37.81 | 34.46 | 14.97 | 33.1 | 349 | 224 | P | 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 802.11ac VHT40 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Cable<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|-------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac          |                                                                                             | 11020                | 45.43               | -28.57                  | 74                          | 46.32                     | 37.41                         | 19.98                   | 58.28                      | 170                  | 230                     | P                       | H               |
| VHT40             |                                                                                             | 16530                | 47.62               | -20.58                  | 68.2                        | 40.09                     | 43.36                         | 22.97                   | 58.8                       | 160                  | 300                     | P                       | H               |
| CH 102            |                                                                                             | 11020                | 44.52               | -29.48                  | 74                          | 45.41                     | 37.41                         | 19.98                   | 58.28                      | 158                  | 256                     | P                       | V               |
| 5510MHz           |                                                                                             | 16530                | 47.52               | -20.68                  | 68.2                        | 39.99                     | 43.36                         | 22.97                   | 58.8                       | 112                  | 353                     | P                       | V               |
| 802.11ac          |                                                                                             | 11100                | 44.83               | -29.17                  | 74                          | 45.54                     | 37.46                         | 20.02                   | 58.19                      | 150                  | 200                     | P                       | H               |
| VHT40             |                                                                                             | 16650                | 47.27               | -20.93                  | 68.2                        | 39.21                     | 43.68                         | 23.05                   | 58.67                      | 180                  | 350                     | P                       | H               |
| CH 110            |                                                                                             | 11100                | 45.33               | -28.67                  | 74                          | 46.04                     | 37.46                         | 20.02                   | 58.19                      | 125                  | 246                     | P                       | V               |
| 5550MHz           |                                                                                             | 16650                | 47.48               | -20.72                  | 68.2                        | 39.42                     | 43.68                         | 23.05                   | 58.67                      | 138                  | 347                     | P                       | V               |
| 802.11ac          |                                                                                             | 11340                | 44.15               | -29.85                  | 74                          | 44.34                     | 37.6                          | 20.14                   | 57.93                      | 200                  | 360                     | P                       | H               |
| VHT40             |                                                                                             | 17010                | 47.49               | -20.71                  | 68.2                        | 37.93                     | 44.55                         | 23.29                   | 58.28                      | 200                  | 360                     | P                       | H               |
| CH 134            |                                                                                             | 11340                | 45.2                | -28.8                   | 74                          | 45.39                     | 37.6                          | 20.14                   | 57.93                      | 125                  | 327                     | P                       | V               |
| 5670MHz           |                                                                                             | 17010                | 49.07               | -19.13                  | 68.2                        | 39.51                     | 44.55                         | 23.29                   | 58.28                      | 248                  | 316                     | 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 802.11ac 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 |                                                                                             | 5450.32              | 55.4                | -18.6                   | 74                          | 39.97                     | 34.26                         | 14.27                   | 33.1                       | 106                  | 144                     | P                       | H               |
|                                        |                                                                                             | 5463.76              | 55.76               | -12.44                  | 68.2                        | 40.31                     | 34.28                         | 14.27                   | 33.1                       | 106                  | 144                     | P                       | H               |
|                                        |                                                                                             | 5459.68              | 46.13               | -7.87                   | 54                          | 30.7                      | 34.26                         | 14.27                   | 33.1                       | 106                  | 144                     | A                       | H               |
|                                        | *                                                                                           | 5530                 | 95.24               | -                       | -                           | 79.51                     | 34.35                         | 14.48                   | 33.1                       | 106                  | 144                     | P                       | H               |
|                                        |                                                                                             | 5530                 | 88.62               | -                       | -                           | 72.89                     | 34.35                         | 14.48                   | 33.1                       | 106                  | 144                     | A                       | H               |
|                                        |                                                                                             | 5740.115             | 53.4                | -14.8                   | 68.2                        | 36.99                     | 34.45                         | 15.06                   | 33.1                       | 106                  | 144                     | P                       | H               |
|                                        |                                                                                             | 5370.4               | 53.62               | -20.38                  | 74                          | 38.47                     | 34.15                         | 14.1                    | 33.1                       | 396                  | 226                     | P                       | V               |
|                                        |                                                                                             | 5461.6               | 54.31               | -13.89                  | 68.2                        | 38.88                     | 34.26                         | 14.27                   | 33.1                       | 396                  | 226                     | P                       | V               |
|                                        |                                                                                             | 5457.52              | 44.25               | -9.75                   | 54                          | 28.82                     | 34.26                         | 14.27                   | 33.1                       | 396                  | 226                     | A                       | V               |
|                                        | *                                                                                           | 5530                 | 88.79               | -                       | -                           | 73.06                     | 34.35                         | 14.48                   | 33.1                       | 396                  | 226                     | P                       | V               |
|                                        |                                                                                             | 5530                 | 81.52               | -                       | -                           | 65.79                     | 34.35                         | 14.48                   | 33.1                       | 396                  | 226                     | A                       | V               |
|                                        |                                                                                             | 5749.565             | 53.43               | -14.77                  | 68.2                        | 37.02                     | 34.45                         | 15.06                   | 33.1                       | 396                  | 226                     | P                       | V               |
| 802.11ac<br>VHT80<br>CH 122<br>5610MHz |                                                                                             | 5384.8               | 53.04               | -20.96                  | 74                          | 37.86                     | 34.18                         | 14.1                    | 33.1                       | 103                  | 132                     | P                       | H               |
|                                        |                                                                                             | 5469.52              | 51.95               | -16.25                  | 68.2                        | 36.4                      | 34.28                         | 14.37                   | 33.1                       | 103                  | 132                     | P                       | H               |
|                                        |                                                                                             | 5443.12              | 44.08               | -9.92                   | 54                          | 28.67                     | 34.24                         | 14.27                   | 33.1                       | 103                  | 132                     | A                       | H               |
|                                        | *                                                                                           | 5610                 | 94.86               | -                       | -                           | 78.81                     | 34.46                         | 14.69                   | 33.1                       | 103                  | 132                     | P                       | H               |
|                                        |                                                                                             | 5610                 | 87.85               | -                       | -                           | 71.8                      | 34.46                         | 14.69                   | 33.1                       | 103                  | 132                     | A                       | H               |
|                                        |                                                                                             | 5753.625             | 53.37               | -14.83                  | 68.2                        | 36.96                     | 34.45                         | 15.06                   | 33.1                       | 103                  | 132                     | P                       | H               |
|                                        |                                                                                             | 5426.8               | 53.82               | -20.18                  | 74                          | 38.43                     | 34.22                         | 14.27                   | 33.1                       | 356                  | 228                     | P                       | V               |
|                                        |                                                                                             | 5466.64              | 53.16               | -15.04                  | 68.2                        | 37.61                     | 34.28                         | 14.37                   | 33.1                       | 356                  | 228                     | P                       | V               |
|                                        |                                                                                             | 5456.8               | 43.8                | -10.2                   | 54                          | 28.37                     | 34.26                         | 14.27                   | 33.1                       | 356                  | 228                     | A                       | V               |
|                                        | *                                                                                           | 5610                 | 91.95               | -                       | -                           | 75.9                      | 34.46                         | 14.69                   | 33.1                       | 356                  | 228                     | P                       | V               |
|                                        |                                                                                             | 5610                 | 84.52               | -                       | -                           | 68.47                     | 34.46                         | 14.69                   | 33.1                       | 356                  | 228                     | A                       | V               |
|                                        |                                                                                             | 5746.8               | 53.41               | -14.79                  | 68.2                        | 37                        | 34.45                         | 15.06                   | 33.1                       | 356                  | 228                     | 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 802.11ac 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                | 44.56               | -29.44                  | 74                          | 45.35                   | 37.44                         | 20                      | 58.23                      | 150                  | 200                     | P                     | H             |
| VHT80             |                                                                                             | 16590                | 47.32               | -20.88                  | 68.2                        | 39.55                   | 43.5                          | 23.02                   | 58.75                      | 180                  | 350                     | P                     | H             |
| CH 106            |                                                                                             | 11060                | 44.48               | -29.52                  | 74                          | 45.27                   | 37.44                         | 20                      | 58.23                      | 125                  | 263                     | P                     | V             |
| 5530MHz           |                                                                                             | 16590                | 47.43               | -20.77                  | 68.2                        | 39.66                   | 43.5                          | 23.02                   | 58.75                      | 174                  | 328                     | P                     | V             |
| 802.11ac          |                                                                                             | 11220                | 46.23               | -27.77                  | 74                          | 46.68                   | 37.53                         | 20.08                   | 58.06                      | 200                  | 360                     | P                     | H             |
| VHT80             |                                                                                             | 16830                | 46.08               | -22.12                  | 68.2                        | 37.26                   | 44.14                         | 23.17                   | 58.49                      | 200                  | 360                     | P                     | H             |
| CH 122            |                                                                                             | 11220                | 45.04               | -28.96                  | 74                          | 45.49                   | 37.53                         | 20.08                   | 58.06                      | 125                  | 278                     | P                     | V             |
| 5610MHz           |                                                                                             | 16830                | 46.41               | -21.79                  | 68.2                        | 37.59                   | 44.14                         | 23.17                   | 58.49                      | 162                  | 278                     | P                     | V             |
| Remark            | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                         |                               |                         |                            |                      |                         |                       |               |



## Emission below 1GHz

## WIFI 802.11n HT40 (LF @ 3m)

| WIFI                  | Note                                                                       | Frequency | Level      | Over   | Limit      | Read   | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|-----------------------|----------------------------------------------------------------------------|-----------|------------|--------|------------|--------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                  |                                                                            |           |            | Limit  | Line       | Level  | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                     |                                                                            | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | (dBμV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n<br>HT40<br>LF |                                                                            | 30        | 24.5       | -15.5  | 40         | 30.44  | 24.4     | 0.96   | 31.3   | 100    | 73      | P     | H     |
|                       |                                                                            | 83.35     | 23.86      | -16.14 | 40         | 40.35  | 13.44    | 1.62   | 31.55  | -      | -       | P     | H     |
|                       |                                                                            | 229.82    | 27.97      | -18.03 | 46         | 40.51  | 16.3     | 2.7    | 31.54  | -      | -       | P     | H     |
|                       |                                                                            | 269.59    | 28.02      | -17.98 | 46         | 37.3   | 19.37    | 2.93   | 31.58  | -      | -       | P     | H     |
|                       |                                                                            | 296.75    | 29.99      | -16.01 | 46         | 39.18  | 19.16    | 3.07   | 31.42  | -      | -       | P     | H     |
|                       |                                                                            | 796.3     | 30.34      | -15.66 | 46         | 30.44  | 26.15    | 5.04   | 31.29  | -      | -       | P     | H     |
|                       |                                                                            | 41.64     | 25.64      | -14.36 | 40         | 38.15  | 17.78    | 1.16   | 31.45  | 100    | 176     | P     | V     |
|                       |                                                                            | 119.24    | 25.75      | -17.75 | 43.5       | 37.39  | 17.94    | 1.94   | 31.52  | -      | -       | P     | V     |
|                       |                                                                            | 213.33    | 22.6       | -20.9  | 43.5       | 36.02  | 15.4     | 2.6    | 31.42  | -      | -       | P     | V     |
|                       |                                                                            | 426.73    | 27.99      | -18.01 | 46         | 33.69  | 22.08    | 3.68   | 31.46  | -      | -       | P     | V     |
|                       |                                                                            | 656.62    | 29.71      | -16.29 | 46         | 31.85  | 24.73    | 4.57   | 31.44  | -      | -       | P     | V     |
|                       |                                                                            | 911.73    | 31.09      | -14.91 | 46         | 30.56  | 26.6     | 5.38   | 31.45  | -      | -       | P     | V     |
| Remark                | 1. No other spurious found.<br>2. All results are PASS against limit line. |           |            |        |            |        |          |        |        |        |         |       |       |



**Note symbol**

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



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

| WIFI    | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | 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)

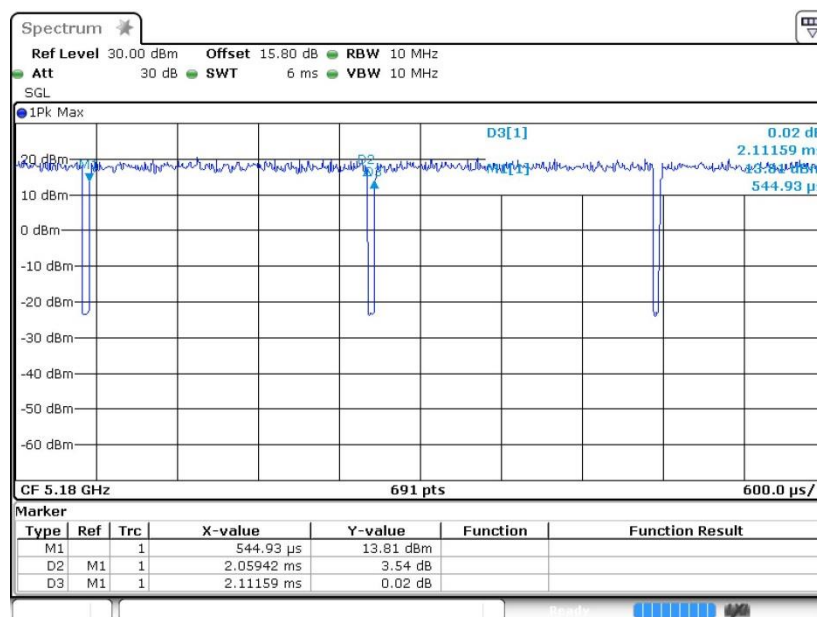
= -10.46(dB)

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

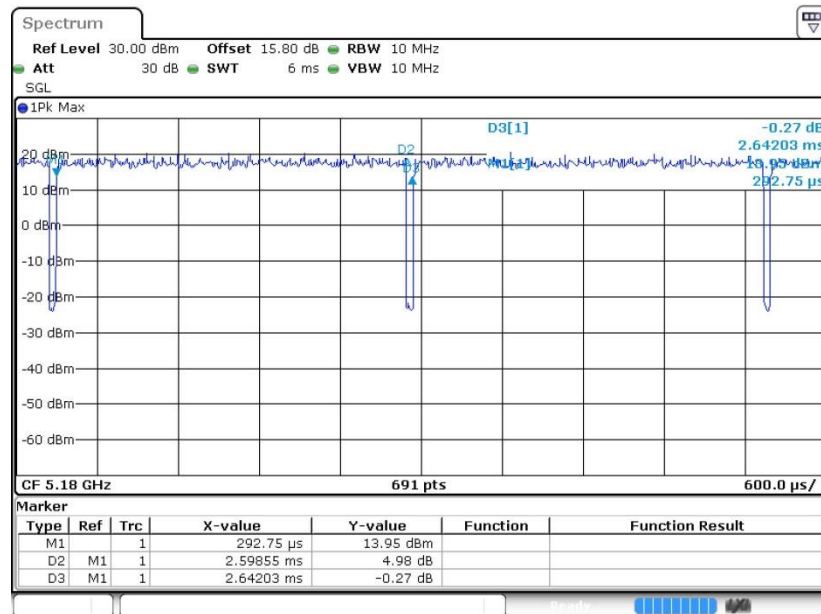
## Appendix D. Duty Cycle Plots

| Band            | Duty Cycle(%) | T(ms) | 1/T(kHz) | VBW Setting |
|-----------------|---------------|-------|----------|-------------|
| 802.11a         | 97.53         | 2.059 | 0.486    | 1KHz        |
| 802.11an HT 20  | 98.35         | -     | -        | 10Hz        |
| 802.11an HT 40  | 96.26         | 1.268 | 0.789    | 1KHz        |
| 802.11ac VHT 20 | 98.60         | -     | -        | 10Hz        |
| 802.11ac VHT 40 | 98.01         | -     | -        | 10Hz        |
| 802.11ac VHT80  | 96.34         | 1.144 | 0.875    | 1KHz        |

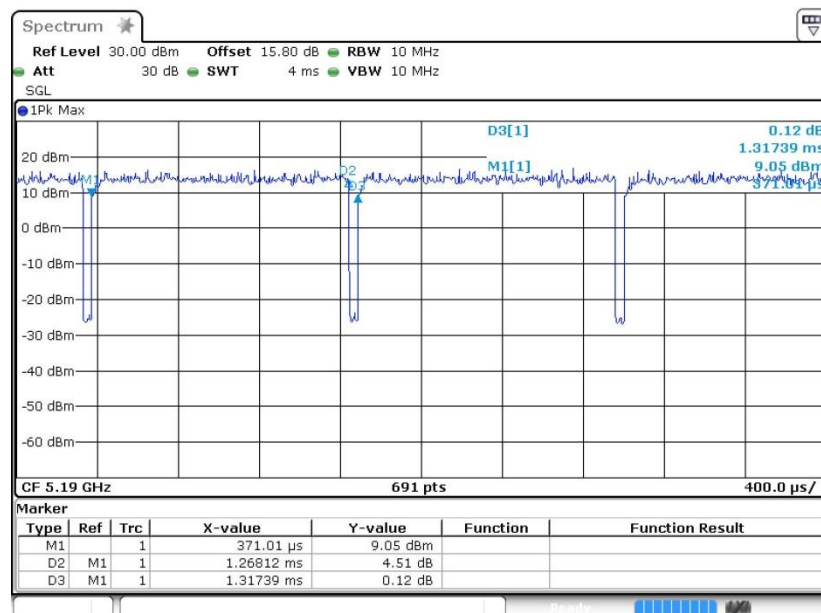
### 802.11a



## 802.11an HT20

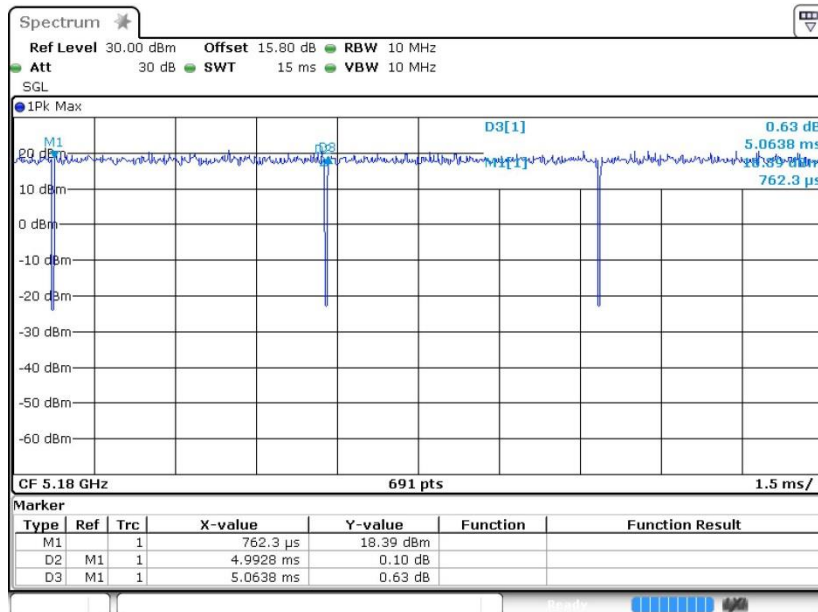


## 802.11an HT40

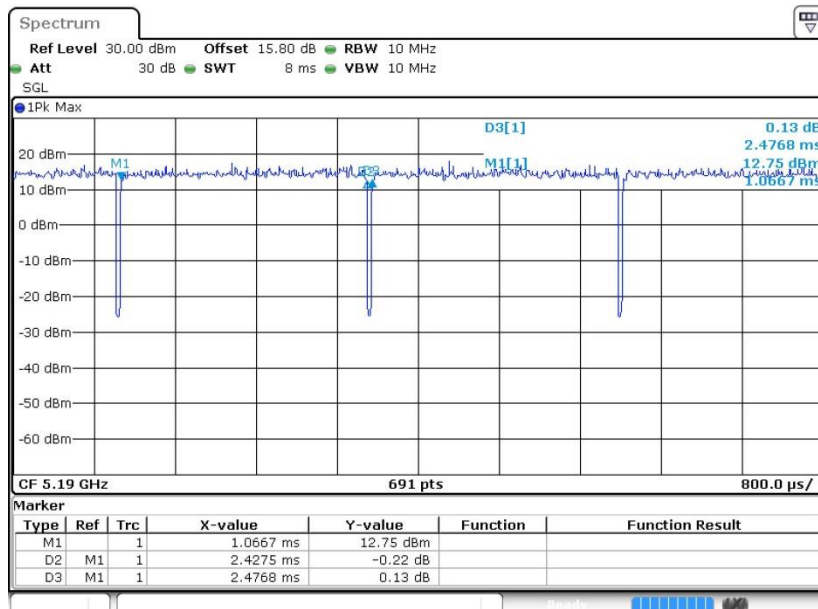




802.11ac VHT20



802.11ac VHT40



802.11ac VHT80

