

# FCC REPORT

**Applicant:** SHENZHEN FCAR TECHNOLOGY CO.,LTD

**Address of Applicant:** 8th floor, Chuangyi Building, No. 3025 Nanhai Ave., Nanshan, Shenzhen, Guangdong, Shenzhen 518060, China

**Manufacturer/Factory:** SHENZHEN FCAR TECHNOLOGY CO.,LTD

**Address of Manufacturer/Factory:** 8th floor, Chuangyi Building, No. 3025 Nanhai Ave., Nanshan, Shenzhen, Guangdong, Shenzhen 518060, China

**Equipment Under Test (EUT)**

Product Name: AUTO DIAGNOSTIC SYSTEM

Model No.: F7S-W, F7S-D, F7S-G, F7S-E, F7S-R, F7S-M, F7S-P, F7S-N

Trade Mark: FCAR

**FCC ID:** 2AJDD-IDIAGSF7SX

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart E Section 15.407

**Date of sample receipt:** March 01, 2018

**Date of Test:** March 02, 2018-April 02, 2018

**Date of report issued:** April 03, 2018

**Test Result :** PASS \*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



The stamp is circular with 'GTS' in the center, 'TELECOMMUNICATIONS SERVICES CO., LTD.' around the perimeter, and 'LABORATORY TESTING' at the bottom. The date '2018' is also visible.

**Robinson Lo**

**Laboratory Manager**

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

## 2 Version

| Version No. | Date           | Description |
|-------------|----------------|-------------|
| 00          | April 03, 2018 | Original    |
|             |                |             |
|             |                |             |
|             |                |             |
|             |                |             |

Prepared By:

*Bill. Yuan*

Project Engineer

Date:

April 03, 2018

Check By:

*Andy. Wu*

Reviewer

Date:

April 03, 2018

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## 4 Test Summary

| Test Item                        | Section in CFR 47          | Result |
|----------------------------------|----------------------------|--------|
| Antenna requirement              | 15.203                     | Pass   |
| AC Power Line Conducted Emission | 15.207                     | Pass   |
| Conducted Peak Output Power      | 15.407(a)(3)               | Pass   |
| Channel Bandwidth                | 15.407(e)                  | Pass   |
| Power Spectral Density           | 15.407(a)(3)               | Pass   |
| Band Edge                        | 15.407(b)(4)               | Pass   |
| Spurious Emission                | 15.205/15.209/15.407(b)(4) | Pass   |
| Frequency Stability              | 15.407(g)                  | PASS   |

Pass: The EUT complies with the essential requirements in the standard.

Remark: Test according to ANSI C63.10:2013 and ANSI C63.4:2014.

### 4.1 Measurement Uncertainty

| Test Item                                                                                             | Frequency Range | Measurement Uncertainty | Notes |
|-------------------------------------------------------------------------------------------------------|-----------------|-------------------------|-------|
| Radiated Emission                                                                                     | 9kHz ~ 30MHz    | $\pm 4.34\text{dB}$     | (1)   |
| Radiated Emission                                                                                     | 30MHz ~ 1000MHz | $\pm 4.24\text{dB}$     | (1)   |
| Radiated Emission                                                                                     | 1GHz ~ 40GHz    | $\pm 4.68\text{dB}$     | (1)   |
| AC Power Line Conducted Emission                                                                      | 0.15MHz ~ 30MHz | $\pm 3.45\text{dB}$     | (1)   |
| Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%. |                 |                         |       |

## 5 General Information

### 5.1 General Description of EUT

|                                                                                                                                                                                 |                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:                                                                                                                                                                   | AUTO DIAGNOSTIC SYSTEM                                                                                                                                        |
| Model No.:                                                                                                                                                                      | F7S-W, F7S-D, F7S-G, F7S-E, F7S-R, F7S-M, F7S-P, F7S-N                                                                                                        |
| Test Model No:                                                                                                                                                                  | F7S-W                                                                                                                                                         |
| <i>Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The only differences software version for commercial purpose.</i> |                                                                                                                                                               |
| Serial No.:                                                                                                                                                                     | EC47-1407-4530-0003                                                                                                                                           |
| Test sample(s) ID:                                                                                                                                                              | GTS201803000169-1                                                                                                                                             |
| Sample(s) Status:                                                                                                                                                               | Engineer sample                                                                                                                                               |
| Hardware:                                                                                                                                                                       | V1.2                                                                                                                                                          |
| Software:                                                                                                                                                                       | V1.2                                                                                                                                                          |
| Operation Frequency:                                                                                                                                                            | 802.11a/802.11n(HT20)/802.11ac(HT20) @5.8G Band: 5745MHz ~ 5825MHz<br>802.11n(HT40)/ 802.11ac(HT40) @ 5.8G Band: 5755MHz ~ 5795MHz<br>802.11ac(HT80): 5775MHz |
| Channel numbers:                                                                                                                                                                | 802.11a/802.11n(HT20)/802.11ac(HT20) @5.8G Band: 5<br>802.11n(HT40)/ 802.11ac(HT40) @ 5.8G Band: 2<br>802.11ac(HT80): 1                                       |
| Channel bandwidth:                                                                                                                                                              | 802.11a/802.11n(HT20)/802.11ac(HT20) : 20MHz<br>802.11n(HT40)/802.11ac(HT40) : 40MHz<br>802.11ac(HT80): 80MHz                                                 |
| Modulation technology:                                                                                                                                                          | 802.11a/802.11n(H20)/802.11n(H40)/802.11ac(HT20)/802.11ac(HT40) /802.11ac(HT80):<br>Orthogonal Frequency Division Multiplexing (OFDM)                         |
| Antenna Type:                                                                                                                                                                   | Integral antenna                                                                                                                                              |
| Antenna gain:                                                                                                                                                                   | 2.0 dBi(Declared by Applicant)                                                                                                                                |
| Power supply:                                                                                                                                                                   | Adapter:<br>Model: GME24A-120200FXR<br>Input: AC 100-240V, 50/60Hz, 0.8A<br>Output: DC 12V, 2A<br>DC 3.7V, 10000mAh, 37Wh Li-ion battery                      |

| Operation Frequency each of channel @ 5.8G Band |           |         |           |         |           |         |           |
|-------------------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel                                         | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 149                                             | 5745MHz   | 153     | 5765MHz   | 155     | 5775MHz   | 157     | 5785MHz   |
| 161                                             | 5805MHz   | 165     | 5825MHz   |         |           |         |           |

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Test channel    | Frequency (MHz)          |               |                |
|-----------------|--------------------------|---------------|----------------|
|                 | 5.8G Band                |               |                |
|                 | 802.11a<br>802.11n(HT20) | 802.11n(HT40) | 802.11ac(HT80) |
| Lowest channel  | 5745                     | 5755          |                |
| Middle channel  | 5785                     |               | 5775           |
| Highest channel | 5825                     | 5795          |                |

## 5.2 Test mode

|                                                                                                                                                                                                                                              |                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Transmitting mode                                                                                                                                                                                                                            | Keep the EUT in continuously transmitting mode |
| <i>Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.</i> |                                                |

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

| Mode           | Data rate |
|----------------|-----------|
| 802.11a        | 6Mbps     |
| 802.11n(HT20)  | 6.5Mbps   |
| 802.11n(HT40)  | 13Mbps    |
| 802.11ac(HT20) | 6.5Mbps   |
| 802.11ac(HT40) | 13.5Mbps  |
| 802.11ac(HT80) | 29.3Mbps  |

## 5.3 Description of Support Units

None.

## 5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.:381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383, January 08, 2018.

- **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, August 15, 2016.

## 5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone,

Xixiang Road, Baoan District, Shenzhen, Guangdong, China

Tel: 0755-27798480

Fax: 0755-27798960

## 5.6 Additional Instructions

EUT Software Settings:

|                    |                                                                                                                                                                        |                 |                    |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|
| Mode               | Special software is used.<br>The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually. |                 |                    |
| Test Software Name | Ampak RFTTestTool,VER:5.5                                                                                                                                              |                 |                    |
| Mode               | Channel                                                                                                                                                                | Frequency (MHz) | Soft Set           |
| OFDM               | CH149                                                                                                                                                                  | 5745            | TX level : default |
|                    | CH151                                                                                                                                                                  | 5755            |                    |
|                    | CH155                                                                                                                                                                  | 5775            |                    |
|                    | CH157                                                                                                                                                                  | 5785            |                    |
|                    | CH159                                                                                                                                                                  | 5795            |                    |
|                    | CH165                                                                                                                                                                  | 5825            |                    |

## 6 Test Instruments list

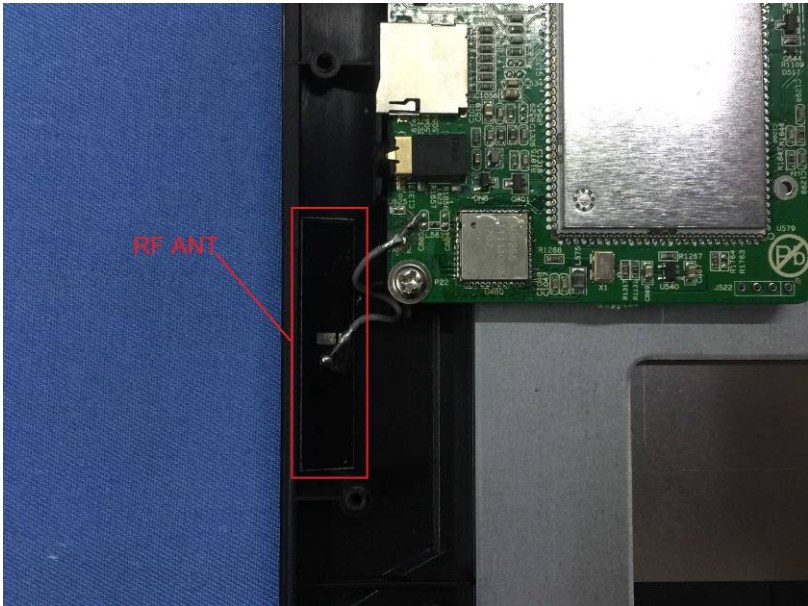
| Radiated Emission: |                               |                                |                             |               |                     |                         |
|--------------------|-------------------------------|--------------------------------|-----------------------------|---------------|---------------------|-------------------------|
| Item               | Test Equipment                | Manufacturer                   | Model No.                   | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1                  | 3m Semi- Anechoic Chamber     | ZhongYu Electron               | 9.2(L)*6.2(W)* 6.4(H)       | GTS250        | July 03 2015        | July 02 2020            |
| 2                  | Control Room                  | ZhongYu Electron               | 6.2(L)*2.5(W)* 2.4(H)       | GTS251        | N/A                 | N/A                     |
| 3                  | Spectrum Analyzer             | Agilent                        | E4440A                      | GTS533        | June 28 2017        | June 27 2018            |
| 4                  | EMI Test Receiver             | Rohde & Schwarz                | ESU26                       | GTS203        | June 28 2017        | June 27 2018            |
| 5                  | BiConiLog Antenna             | SCHWARZBECK<br>MESS-ELEKTRONIK | VULB9163                    | GTS214        | June 28 2017        | June 27 2018            |
| 6                  | Double -ridged waveguide horn | SCHWARZBECK<br>MESS-ELEKTRONIK | 9120D-829                   | GTS208        | June 28 2017        | June 27 2018            |
| 7                  | Horn Antenna                  | ETS-LINDGREN                   | 3160                        | GTS217        | June 28 2017        | June 27 2018            |
| 8                  | EMI Test Software             | AUDIX                          | E3                          | N/A           | N/A                 | N/A                     |
| 9                  | Coaxial Cable                 | GTS                            | N/A                         | GTS213        | June 28 2017        | June 27 2018            |
| 10                 | Coaxial Cable                 | GTS                            | N/A                         | GTS211        | June 28 2017        | June 27 2018            |
| 11                 | Coaxial cable                 | GTS                            | N/A                         | GTS210        | June 28 2017        | June 27 2018            |
| 12                 | Coaxial Cable                 | GTS                            | N/A                         | GTS212        | June 28 2017        | June 27 2018            |
| 13                 | Amplifier(100kHz-3GHz)        | HP                             | 8347A                       | GTS204        | June 28 2017        | June 27 2018            |
| 14                 | Amplifier(2GHz-20GHz)         | HP                             | 8349B                       | GTS206        | June 28 2017        | June 27 2018            |
| 15                 | Amplifier (18-26GHz)          | Rohde & Schwarz                | AFS33-18002<br>650-30-8P-44 | GTS218        | June 28 2017        | June 27 2018            |
| 16                 | Band filter                   | Amindeon                       | 82346                       | GTS219        | June 28 2017        | June 27 2018            |
| 17                 | Power Meter                   | Anritsu                        | ML2495A                     | GTS540        | June 28 2017        | June 27 2018            |
| 18                 | Power Sensor                  | Anritsu                        | MA2411B                     | GTS541        | June 28 2017        | June 27 2018            |

| Conducted Emission: |                   |                                |                      |               |                     |                         |
|---------------------|-------------------|--------------------------------|----------------------|---------------|---------------------|-------------------------|
| Item                | Test Equipment    | Manufacturer                   | Model No.            | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1                   | Shielding Room    | ZhongYu Electron               | 7.0(L)x3.0(W)x3.0(H) | GTS264        | May.16 2014         | May.15 2019             |
| 2                   | EMI Test Receiver | Rohde & Schwarz                | ESCS30               | GTS223        | June 28 2017        | June 27 2018            |
| 3                   | 10dB Pulse Limita | Rohde & Schwarz                | N/A                  | GTS224        | June 28 2017        | June 27 2018            |
| 4                   | Coaxial Switch    | ANRITSU CORP                   | MP59B                | GTS225        | June 28 2017        | June 27 2018            |
| 5                   | LISN              | SCHWARZBECK<br>MESS-ELEKTRONIK | NSLK 8127            | GTS226        | June 28 2017        | June 27 2018            |
| 6                   | Coaxial Cable     | GTS                            | N/A                  | GTS227        | June 28 2017        | June 27 2018            |
| 7                   | EMI Test Software | AUDIX                          | E3                   | N/A           | N/A                 | N/A                     |

| General used equipment: |                |              |           |               |                     |                         |
|-------------------------|----------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item                    | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1                       | Barometer      | ChangChun    | DYM3      | GTS257        | June 28 2017        | June 27 2018            |

## 7 Test results and Measurement Data

### 7.1 Antenna requirement

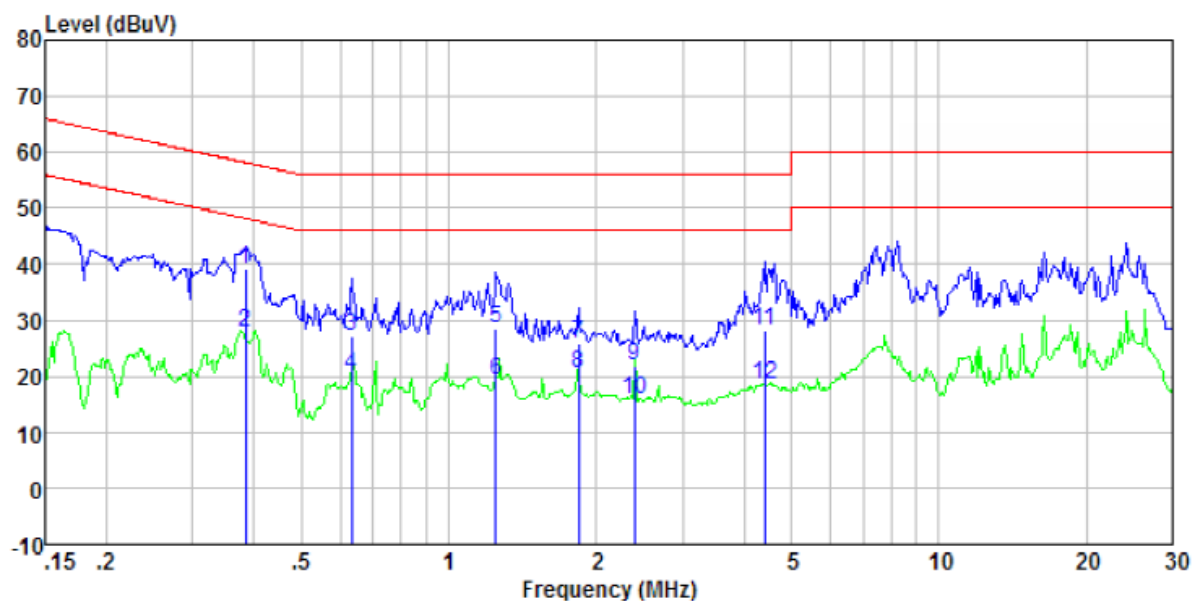
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <b>Standard requirement:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | FCC Part15 C Section 15.203 |
| <p><i>15.203 requirement:</i></p> <p><i>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</i></p> |                             |
| <b>E.U.T Antenna:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |
| <p><i>The antenna is integral antenna. The best case gain of the antenna is 2.0dBi.</i></p>                                                                                                                                                                                                                                                                                                                     |                             |

## 7.2 Conducted Emissions

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |           |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------|
| Test Requirement:                                | FCC Part15 C Section 15.207                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |           |
| Test Method:                                     | ANSI C63.10:2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |           |
| Test Frequency Range:                            | 150KHz to 30MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |           |
| Class / Severity:                                | Class B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |           |
| Receiver setup:                                  | RBW=9KHz, VBW=30KHz, Sweep time=auto                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |           |
| Limit:                                           | Frequency range (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Limit (dBuV) |           |
|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |           |
| Test setup:                                      | <div><p style="text-align: center;"><b>Reference Plane</b></p><p style="text-align: center;">Test table/Insulation plane</p><p><i>Remark:<br/>E.U.T: Equipment Under Test<br/>LISN: Line Impedance Stabilization Network<br/>Test table height=0.8m</i></p></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |           |
| Test procedure:                                  | <div><div>1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.</div><div>2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</div><div>3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.</div></div> |              |           |
| Test Instruments:                                | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |           |
| Test mode:                                       | Refer to section 5.2 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |           |
| Test results:                                    | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |           |

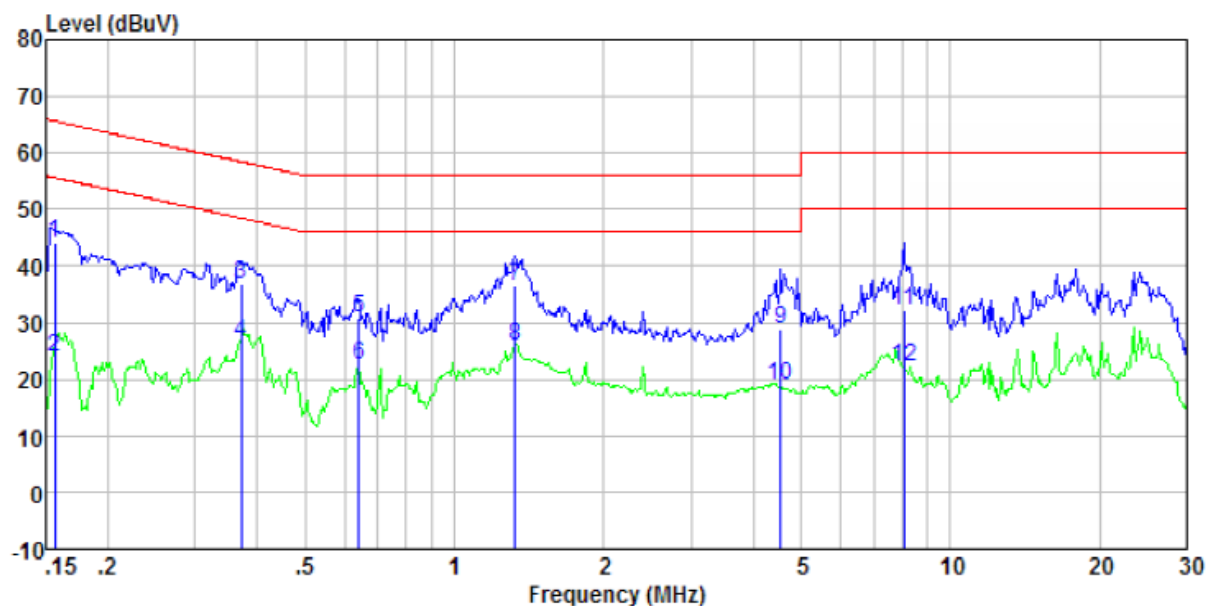
## Measurement data

Line:



| Freq<br>MHz | Reading<br>level<br>dBuV | IISN/ISN<br>factor<br>dB | Cable<br>loss<br>dB | level<br>dBuV | Limit<br>level<br>dBuV | Over<br>limit<br>dB | Remark  |
|-------------|--------------------------|--------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.385       | 38.75                    | 0.36                     | 0.10                | 39.21         | 58.17                  | -18.96              | QP      |
| 0.385       | 27.56                    | 0.36                     | 0.10                | 28.02         | 48.17                  | -20.15              | Average |
| 0.634       | 26.85                    | 0.28                     | 0.12                | 27.25         | 56.00                  | -28.75              | QP      |
| 0.634       | 19.79                    | 0.28                     | 0.12                | 20.19         | 46.00                  | -25.81              | Average |
| 1.249       | 28.28                    | 0.20                     | 0.16                | 28.64         | 56.00                  | -27.36              | QP      |
| 1.249       | 19.02                    | 0.20                     | 0.16                | 19.38         | 46.00                  | -26.62              | Average |
| 1.839       | 25.35                    | 0.20                     | 0.17                | 25.72         | 56.00                  | -30.28              | QP      |
| 1.839       | 20.33                    | 0.20                     | 0.17                | 20.70         | 46.00                  | -25.30              | Average |
| 2.396       | 21.56                    | 0.20                     | 0.18                | 21.94         | 56.00                  | -34.06              | QP      |
| 2.396       | 15.54                    | 0.20                     | 0.18                | 15.92         | 46.00                  | -30.08              | Average |
| 4.407       | 27.68                    | 0.20                     | 0.17                | 28.05         | 56.00                  | -27.95              | QP      |
| 4.407       | 18.35                    | 0.20                     | 0.17                | 18.72         | 46.00                  | -27.28              | Average |

Neutral:

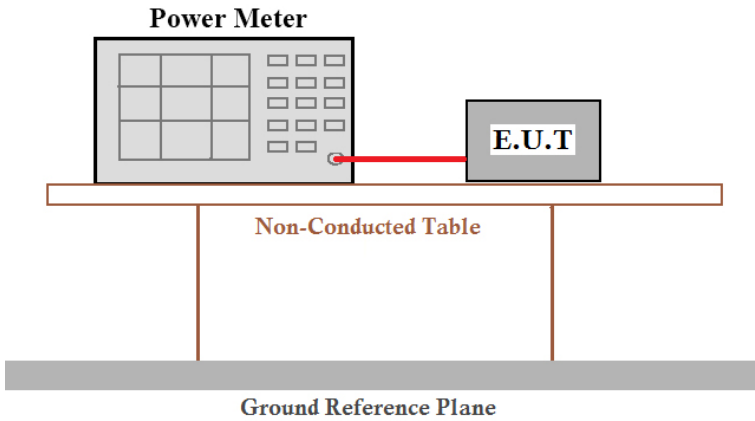


| Freq<br>MHz | Reading<br>level<br>dBuV | LISN/ISN<br>factor<br>dB | Cable<br>loss<br>dB | level<br>dBuV | Limit<br>level<br>dBuV | Over<br>limit<br>dB | Remark  |
|-------------|--------------------------|--------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.156       | 43.66                    | 0.40                     | 0.08                | 44.14         | 65.65                  | -21.51              | QP      |
| 0.156       | 23.55                    | 0.40                     | 0.08                | 24.03         | 55.65                  | -31.62              | Average |
| 0.371       | 36.32                    | 0.36                     | 0.10                | 36.78         | 58.47                  | -21.69              | QP      |
| 0.371       | 26.17                    | 0.36                     | 0.10                | 26.63         | 48.47                  | -21.84              | Average |
| 0.641       | 30.59                    | 0.27                     | 0.12                | 30.98         | 56.00                  | -25.02              | QP      |
| 0.641       | 22.13                    | 0.27                     | 0.12                | 22.52         | 46.00                  | -23.48              | Average |
| 1.324       | 36.28                    | 0.20                     | 0.16                | 36.64         | 56.00                  | -19.36              | QP      |
| 1.324       | 25.59                    | 0.20                     | 0.16                | 25.95         | 46.00                  | -20.05              | Average |
| 4.549       | 28.44                    | 0.20                     | 0.17                | 28.81         | 56.00                  | -27.19              | QP      |
| 4.549       | 18.64                    | 0.20                     | 0.17                | 19.01         | 46.00                  | -26.99              | Average |
| 8.062       | 31.69                    | 0.20                     | 0.19                | 32.08         | 60.00                  | -27.92              | QP      |
| 8.062       | 21.94                    | 0.20                     | 0.19                | 22.33         | 50.00                  | -27.67              | Average |

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both *limits and measurement with the average detector receiver is unnecessary.*

## 7.3 Conducted Peak Output Power

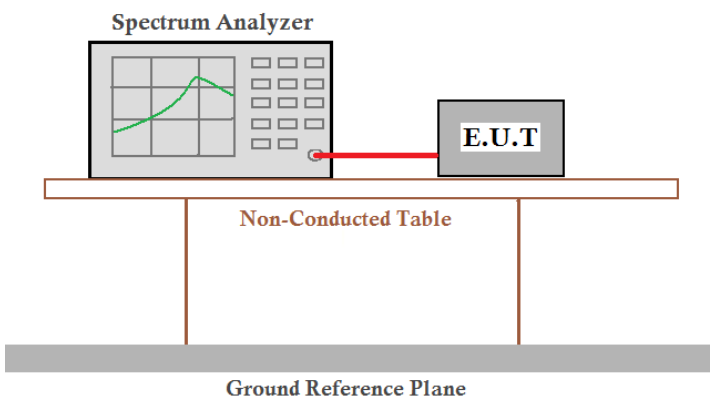
|                   |                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part15 E Section 15.407(a)(3)                                                                                                                                                                                                                                                                                                               |
| Test Method:      | ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01                                                                                                                                                                                                                                                              |
| Limit:            | 30dBm                                                                                                                                                                                                                                                                                                                                           |
| Test setup:       |  <p>The diagram illustrates the test setup. A Power Meter is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Power Meter and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                |
| Test mode:        | Refer to section 5.2 for details                                                                                                                                                                                                                                                                                                                |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                                            |

### Measurement Data

| Test CH | Peak Output Power (dBm) |                |                 |                |                 |                 | Limit(dBm) | Result |
|---------|-------------------------|----------------|-----------------|----------------|-----------------|-----------------|------------|--------|
|         | 802.11a                 | 802.11n (HT20) | 802.11ac (HT20) | 802.11n (HT40) | 802.11ac (HT40) | 802.11ac (HT80) |            |        |
| Lowest  | 12.85                   | 12.59          | 10.84           | 9.49           | 9.67            | ---             | 30.00      | Pass   |
| Middle  | 13.20                   | 12.70          | 10.09           | ---            | ---             | 9.22            |            |        |
| Highest | 13.11                   | 13.19          | 9.72            | 9.01           | 9.04            | ---             |            |        |

Remark: “---” is not applicable

## 7.4 Channel Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part15 E Section 15.407(e)                                                                                                                                                                                                                                                                                                                           |
| Test Method:      | ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01                                                                                                                                                                                                                                                                       |
| Limit:            | >500KHz                                                                                                                                                                                                                                                                                                                                                  |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                         |
| Test mode:        | Refer to section 5.2 for details                                                                                                                                                                                                                                                                                                                         |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                                                     |

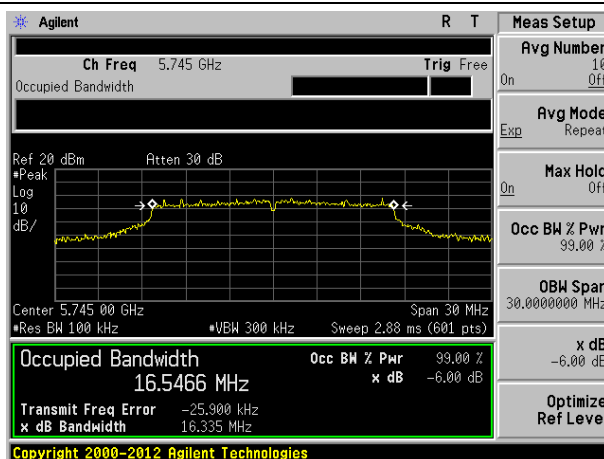
### Measurement Data

| 5.8G Band |                         |                |                |                |                |                |             |        |
|-----------|-------------------------|----------------|----------------|----------------|----------------|----------------|-------------|--------|
| Test CH   | Channel Bandwidth (MHz) |                |                |                |                |                | Limit (KHz) | Result |
|           | 802.11a                 | 802.11n(H T20) | 802.11ac(HT20) | 802.11n(H T40) | 802.11ac(HT40) | 802.11ac(HT80) |             |        |
| Lowest    | 16.335                  | 17.126         | 17.071         | 35.421         | 35.794         | ---            | >500        | Pass   |
| Middle    | 16.112                  | 17.310         | 17.538         | ---            | ---            | 75.526         |             |        |
| Highest   | 16.309                  | 16.563         | 17.309         | 35.352         | 36.001         | ---            |             |        |

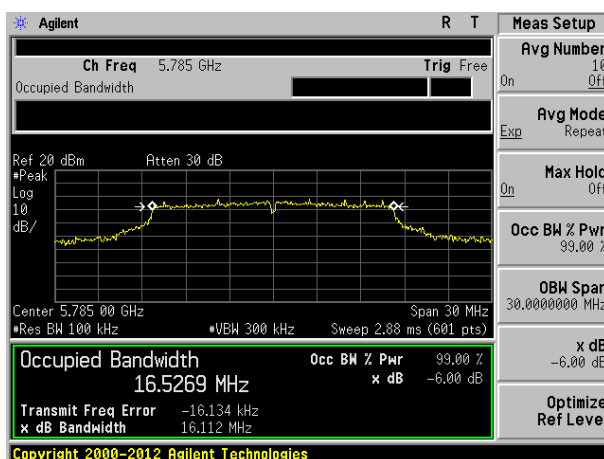
Remark: “---” is not applicable

Test plot as follows:

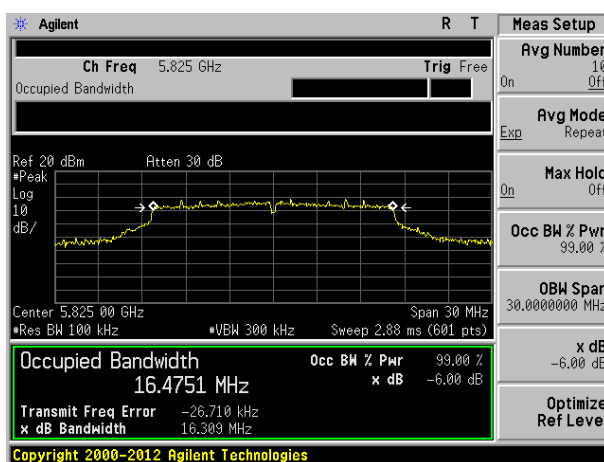
Test mode: 802.11a



Lowest channel

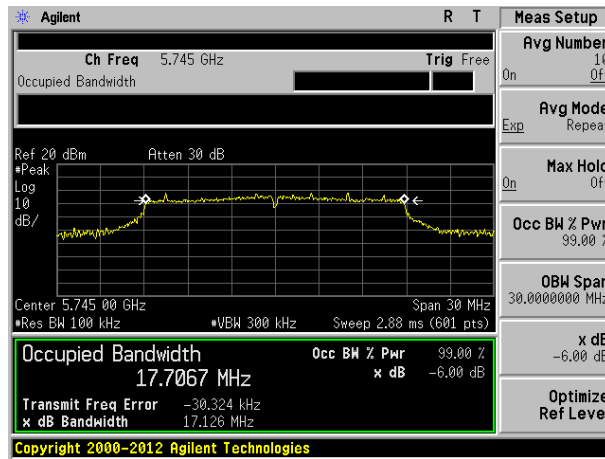


Middle channel

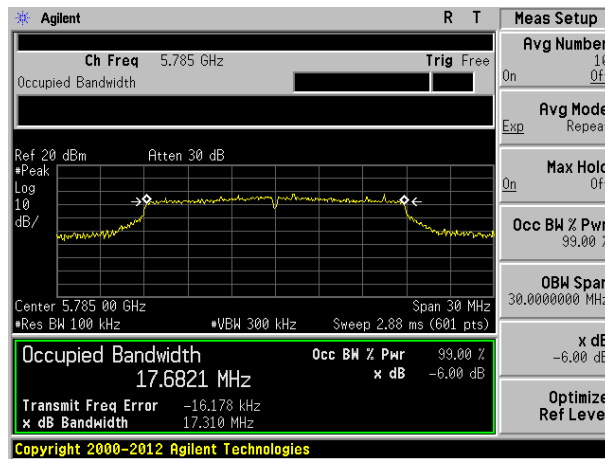


Highest channel

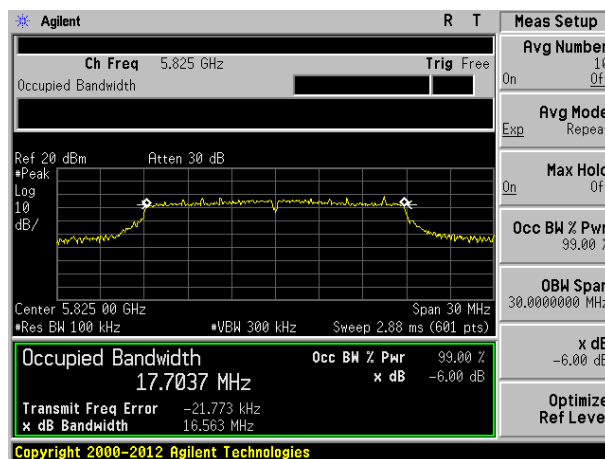
Test mode: 802.11n(HT20) @ 5.8G Band



Lowest channel

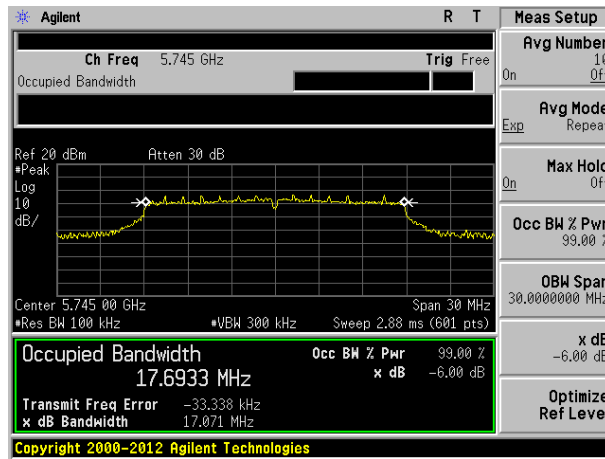


Middle channel

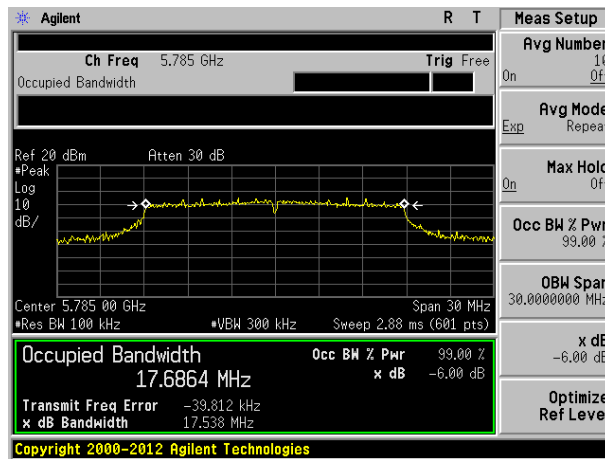


Highest channel

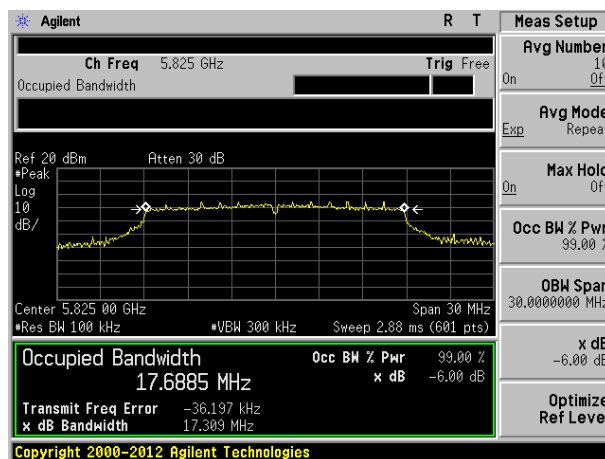
Test mode: 802.11ac(HT20) @ 5.8G Band



Lowest channel

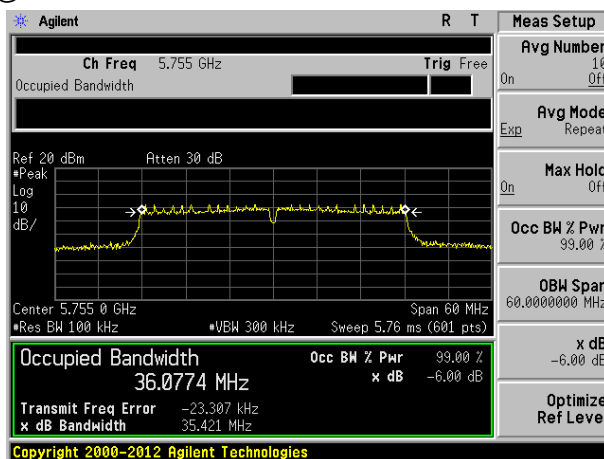


Middle channel

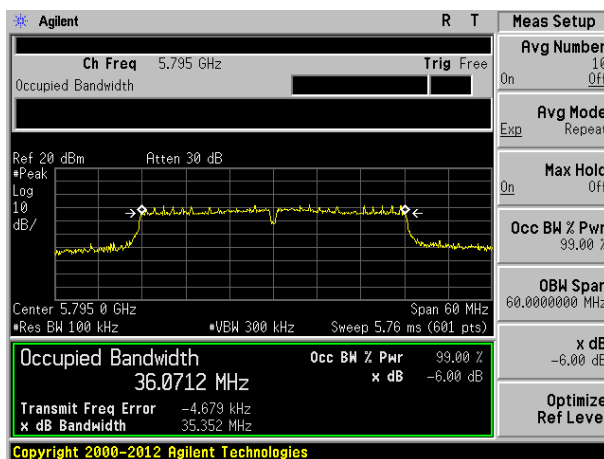


Highest channel

Test mode: 802.11n(HT40) @ 5.8G Band

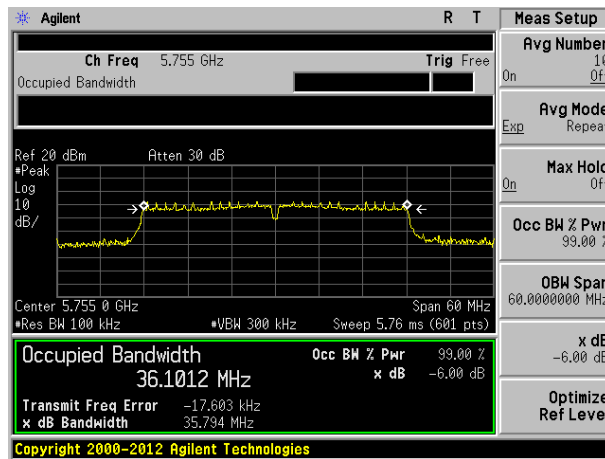


Lowest channel

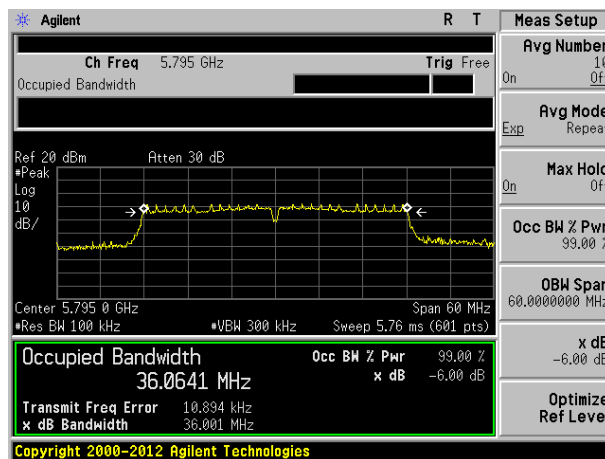


Highest channel

Test mode: 802.11ac(HT40) @ 5.8G Band

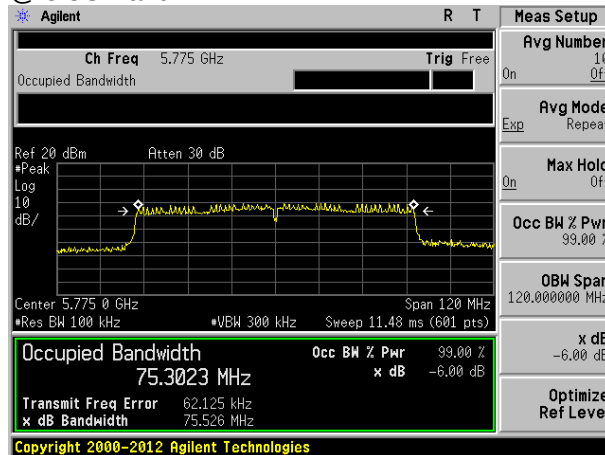


Lowest channel

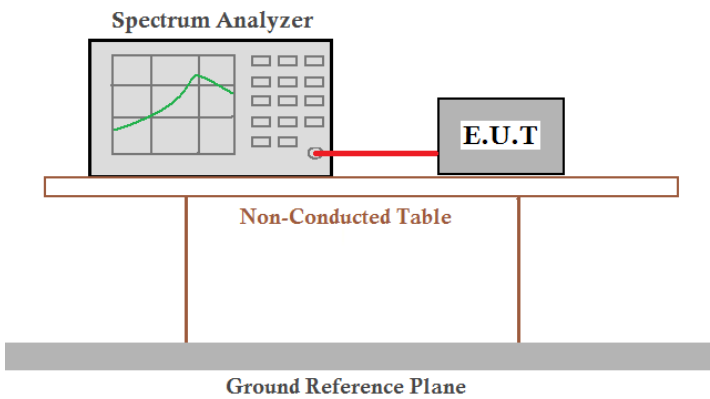


Highest channel

Test mode: 802.11ac(HT80) @ 5.8G Band



## 7.5 Power Spectral Density

|                   |                                                                                     |
|-------------------|-------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part15 E Section 15.407(a)(3)                                                   |
| Test Method:      | ANSI C63.10:2013 and KDB 789033 D02 General U-NII Test Procedures New Rules v02r01  |
| Limit:            | 30dBm                                                                               |
| Test setup:       |  |
| Test Instruments: | Refer to section 6.0 for details                                                    |
| Test mode:        | Refer to section 5.2 for details                                                    |
| Test results:     | Pass                                                                                |

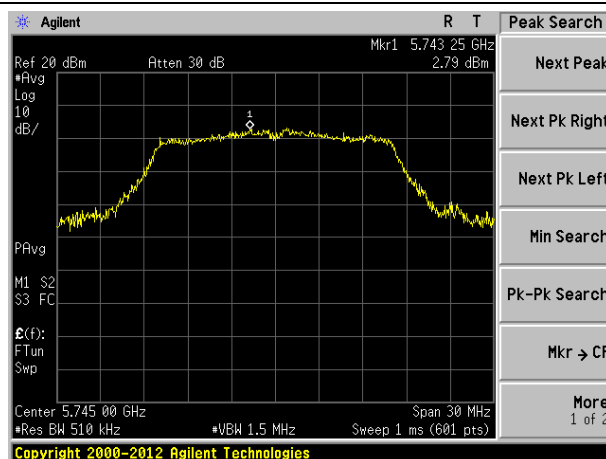
### Measurement Data

| 5.8G Band |                              |                |                 |                |                 |                 |                    |        |
|-----------|------------------------------|----------------|-----------------|----------------|-----------------|-----------------|--------------------|--------|
| Test CH   | Power Spectral Density (dBm) |                |                 |                |                 |                 | Limit (dBm/500kHz) | Result |
|           | 802.11a                      | 802.11n(HT 20) | 802.11ac(H T20) | 802.11n(HT 40) | 802.11ac(H T40) | 802.11ac(H T80) |                    |        |
| Lowest    | 2.79                         | 2.89           | 0.12            | -3.06          | -4.05           | ---             | 30.00              | Pass   |
| Middle    | 2.72                         | 3.25           | -0.29           | ---            | ---             | -8.63           |                    |        |
| Highest   | 3.08                         | 3.56           | -0.41           | -3.98          | -3.77           | ---             |                    |        |

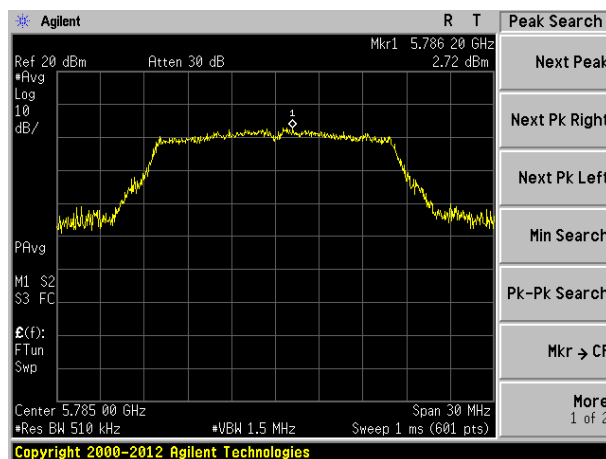
Remark: “---” is not applicable

Test plot as follows:

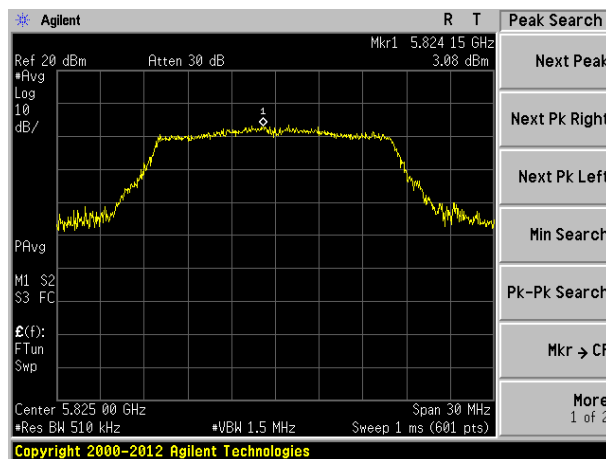
Test mode: 802.11a



Lowest channel

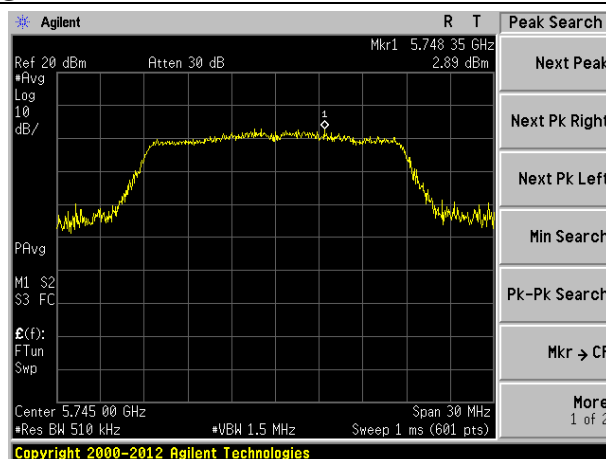


Middle channel

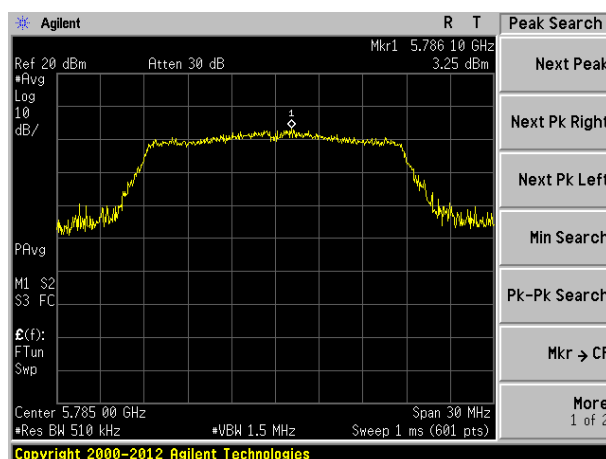


Highest channel

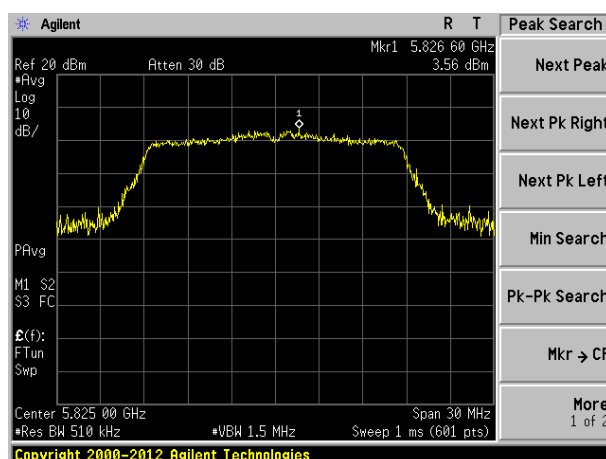
Test mode: 802.11n(HT20) @ 5.8G Band



Lowest channel

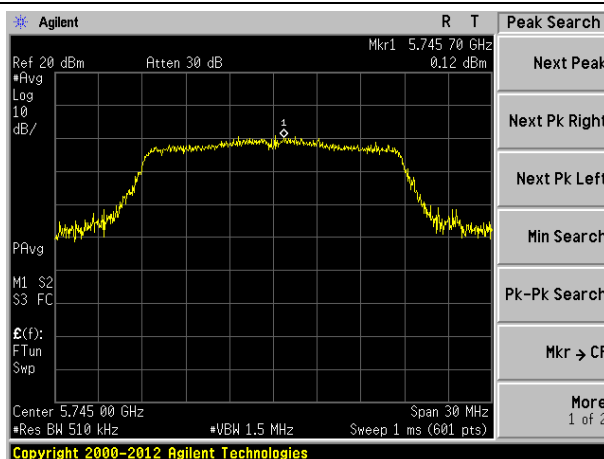


Middle channel

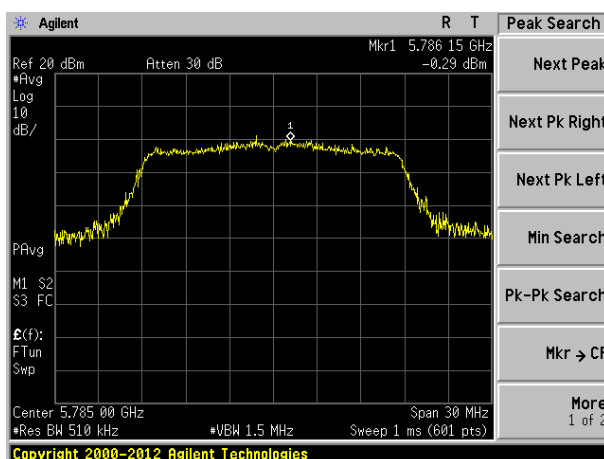


Highest channel

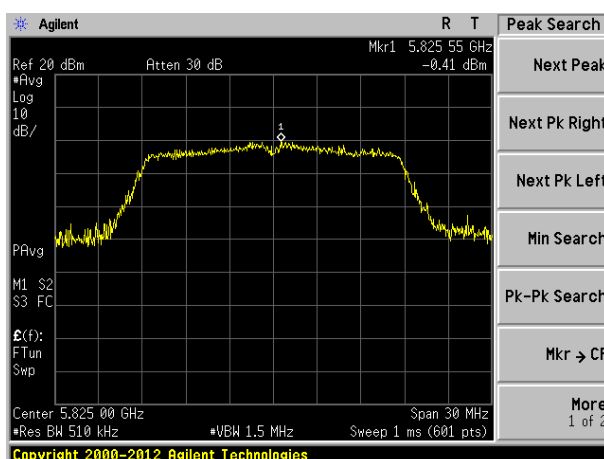
Test mode: 802.11ac(HT20)



Lowest channel

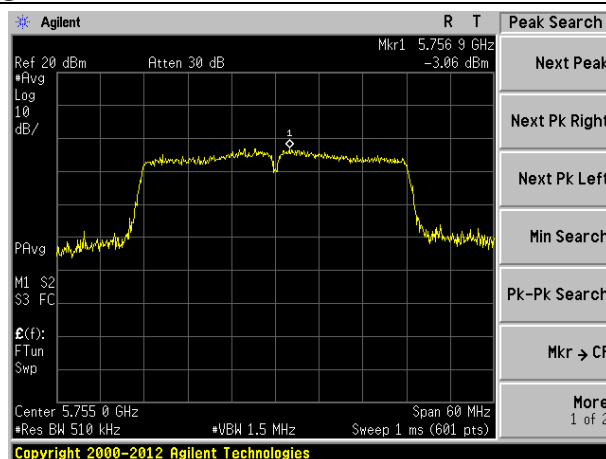


Middle channel

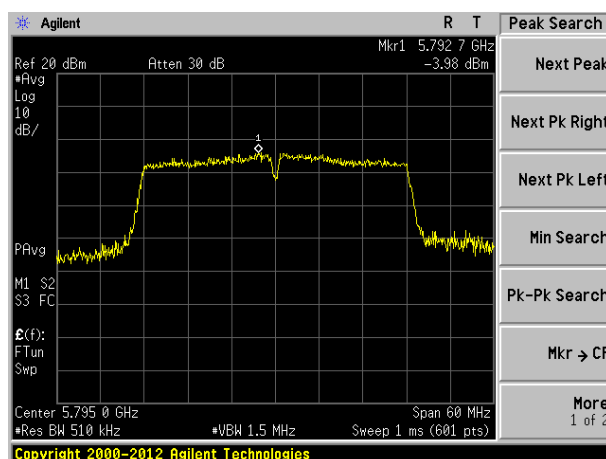


Highest channel

Test mode: 802.11n(HT40) @ 5.8G Band

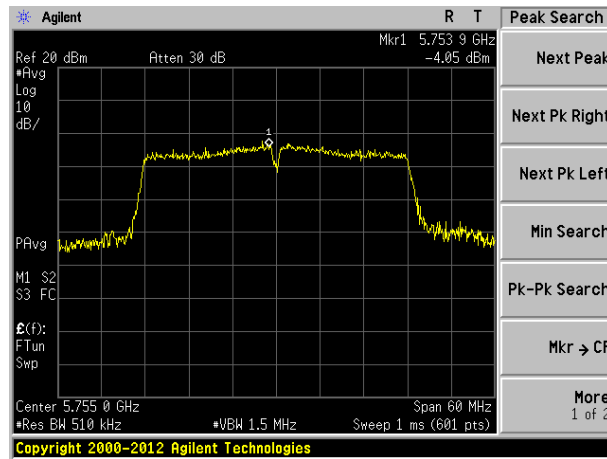


Lowest channel

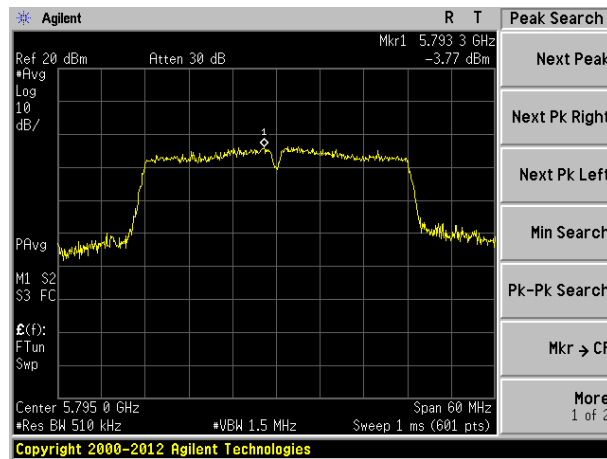


Highest channel

Test mode: 802.11ac(HT40)

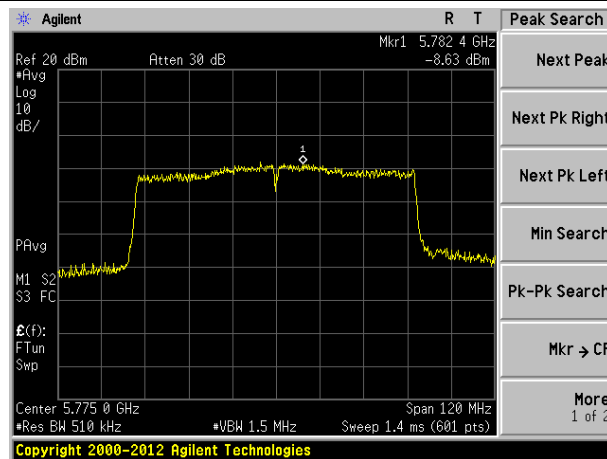


Lowest channel



Highest channel

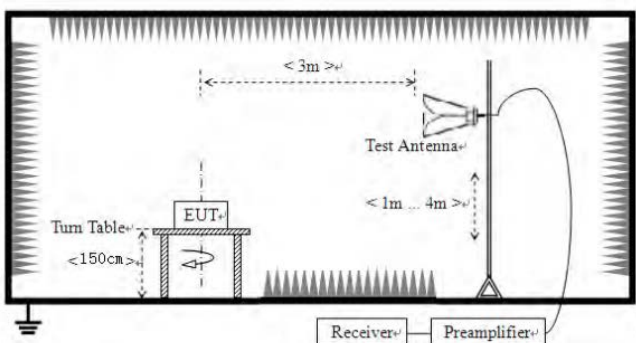
Test mode: 802.11ac(HT80)



Middle channel

## 7.6 Band edges

### 7.6.1 Radiated Emission Method

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |                    |      |         |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|------|---------|
| Test Requirement:     | FCC Part15 C Section 15.209 and 15.205                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                    |      |         |
| Test Method:          | ANSI C63.10: 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                    |      |         |
| Test Frequency Range: | 30MHz to 40GHz, only worse case is reported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                    |      |         |
| Test site:            | Measurement Distance: 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |                    |      |         |
| Receiver setup:       | Frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Detector | RBW                | VBW  | Value   |
|                       | Above 1GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Peak     | 1MHz               | 3MHz | Peak    |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Peak     | 1MHz               | 10Hz | Average |
| Limit:                | Frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          | Limit (dBuV/m @3m) |      | Value   |
|                       | Above 1GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          | 54.00              |      | Average |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          | 74.00              |      | Peak    |
| Test setup:           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                    |      |         |
| Test Procedure:       | <ol style="list-style-type: none"><li>1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li><li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li><li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li><li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li><li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li><li>7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.</li></ol> |          |                    |      |         |
| Test Instruments:     | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                    |      |         |

|               |                                  |
|---------------|----------------------------------|
| Test mode:    | Refer to section 5.2 for details |
| Test results: | Pass                             |

**Remark:**

According to KDB 789033 D02v02r01 section G) 1) d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2;$$

For example, if  $\text{EIRP} = -27\text{dBm}$

$$E[\text{dBuV/m}] = -27 + 95.2 = 68.2\text{dBuV/m}.$$

The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.

**Measurement data:**

*Remark: The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.*

| IEEE 802.11a    |                   |                       |                 |                          |                |                     |                 |              |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Peak value:     |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00         | 35.25             | 32.36                 | 9.72            | 23.83                    | 53.50          | 68.20               | -14.70          | Horizontal   |
| 5700.00         | 35.63             | 32.50                 | 9.79            | 23.84                    | 54.08          | 68.20               | -14.12          | Horizontal   |
| 5720.00         | 35.79             | 32.53                 | 9.81            | 23.85                    | 54.28          | 68.20               | -13.92          | Horizontal   |
| 5725.00         | 39.67             | 32.53                 | 9.83            | 23.86                    | 58.17          | 68.20               | -10.03          | Horizontal   |
| 5850.00         | 36.06             | 32.70                 | 9.99            | 23.87                    | 54.88          | 68.20               | -13.32          | Horizontal   |
| 5855.00         | 34.11             | 32.72                 | 9.99            | 23.88                    | 52.94          | 68.20               | -15.26          | Horizontal   |
| 5875.00         | 35.34             | 32.74                 | 10.04           | 23.89                    | 54.23          | 68.20               | -13.97          | Horizontal   |
| 5925.00         | 35.41             | 32.80                 | 10.11           | 23.90                    | 54.42          | 68.20               | -13.78          | Horizontal   |
| 5650.00         | 35.53             | 32.36                 | 9.72            | 23.83                    | 53.78          | 68.20               | -14.42          | Vertical     |
| 5700.00         | 34.17             | 32.50                 | 9.79            | 23.84                    | 52.62          | 68.20               | -15.58          | Vertical     |
| 5720.00         | 35.46             | 32.53                 | 9.81            | 23.85                    | 53.95          | 68.20               | -14.25          | Vertical     |
| 5725.00         | 38.32             | 32.53                 | 9.83            | 23.86                    | 56.82          | 68.20               | -11.38          | Vertical     |
| 5850.00         | 37.69             | 32.70                 | 9.99            | 23.87                    | 56.51          | 68.20               | -11.69          | Vertical     |
| 5855.00         | 34.31             | 32.72                 | 9.99            | 23.88                    | 53.14          | 68.20               | -15.06          | Vertical     |
| 5875.00         | 35.12             | 32.74                 | 10.04           | 23.89                    | 54.01          | 68.20               | -14.19          | Vertical     |
| 5925.00         | 35.63             | 32.80                 | 10.11           | 23.90                    | 54.64          | 68.20               | -13.56          | Vertical     |

| IEEE 802.11a    |                   |                       |                 |                          |                |                     |                 |              |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Average value:  |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00         | 25.12             | 32.36                 | 9.72            | 23.83                    | 43.37          | 54.00               | -10.63          | Horizontal   |
| 5700.00         | 25.31             | 32.50                 | 9.79            | 23.84                    | 43.76          | 54.00               | -10.24          | Horizontal   |
| 5720.00         | 24.42             | 32.53                 | 9.81            | 23.85                    | 42.91          | 54.00               | -11.09          | Horizontal   |
| 5725.00         | 29.12             | 32.53                 | 9.83            | 23.86                    | 47.62          | 54.00               | -6.38           | Horizontal   |
| 5850.00         | 28.42             | 32.70                 | 9.99            | 23.87                    | 47.24          | 54.00               | -6.76           | Horizontal   |
| 5855.00         | 25.71             | 32.72                 | 9.99            | 23.88                    | 44.54          | 54.00               | -9.46           | Horizontal   |
| 5875.00         | 24.98             | 32.74                 | 10.04           | 23.89                    | 43.87          | 54.00               | -10.13          | Horizontal   |
| 5925.00         | 25.37             | 32.80                 | 10.11           | 23.90                    | 44.38          | 54.00               | -9.62           | Horizontal   |
| 5650.00         | 25.16             | 32.36                 | 9.72            | 23.83                    | 43.41          | 54.00               | -10.59          | Vertical     |
| 5700.00         | 25.44             | 32.50                 | 9.79            | 23.84                    | 43.89          | 54.00               | -10.11          | Vertical     |
| 5720.00         | 25.46             | 32.53                 | 9.81            | 23.85                    | 43.95          | 54.00               | -10.05          | Vertical     |
| 5725.00         | 29.13             | 32.53                 | 9.83            | 23.86                    | 47.63          | 54.00               | -6.37           | Vertical     |
| 5850.00         | 28.52             | 32.70                 | 9.99            | 23.87                    | 47.34          | 54.00               | -6.66           | Vertical     |
| 5855.00         | 24.89             | 32.72                 | 9.99            | 23.88                    | 43.72          | 54.00               | -10.28          | Vertical     |
| 5875.00         | 25.07             | 32.74                 | 10.04           | 23.89                    | 43.96          | 54.00               | -10.04          | Vertical     |
| 5925.00         | 25.39             | 32.80                 | 10.11           | 23.90                    | 44.40          | 54.00               | -9.60           | Vertical     |

**Remark:**

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*

*The emission levels of other frequencies are very lower than the limit and not show in test report.*

| IEEE 802.11n HT20 |                   |                       |                 |                          |                |                     |                 |              |
|-------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Peak value:       |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00           | 35.12             | 32.36                 | 9.72            | 23.83                    | 53.37          | 68.20               | -14.83          | Horizontal   |
| 5700.00           | 35.87             | 32.50                 | 9.79            | 23.84                    | 54.32          | 68.20               | -13.88          | Horizontal   |
| 5720.00           | 36.02             | 32.53                 | 9.81            | 23.85                    | 54.51          | 68.20               | -13.69          | Horizontal   |
| 5725.00           | 39.81             | 32.53                 | 9.83            | 23.86                    | 58.31          | 68.20               | -9.89           | Horizontal   |
| 5850.00           | 37.62             | 32.70                 | 9.99            | 23.87                    | 56.44          | 68.20               | -11.76          | Horizontal   |
| 5855.00           | 35.66             | 32.72                 | 9.99            | 23.88                    | 54.49          | 68.20               | -13.71          | Horizontal   |
| 5875.00           | 35.17             | 32.74                 | 10.04           | 23.89                    | 54.06          | 68.20               | -14.14          | Horizontal   |
| 5925.00           | 35.09             | 32.80                 | 10.11           | 23.90                    | 54.10          | 68.20               | -14.10          | Horizontal   |
| 5650.00           | 35.79             | 32.36                 | 9.72            | 23.83                    | 54.04          | 68.20               | -14.16          | Vertical     |
| 5700.00           | 35.83             | 32.50                 | 9.79            | 23.84                    | 54.28          | 68.20               | -13.92          | Vertical     |
| 5720.00           | 34.74             | 32.53                 | 9.81            | 23.85                    | 53.23          | 68.20               | -14.97          | Vertical     |
| 5725.00           | 38.33             | 32.53                 | 9.83            | 23.86                    | 56.83          | 68.20               | -11.37          | Vertical     |
| 5850.00           | 37.52             | 32.70                 | 9.99            | 23.87                    | 56.34          | 68.20               | -11.86          | Vertical     |
| 5855.00           | 35.12             | 32.72                 | 9.99            | 23.88                    | 53.95          | 68.20               | -14.25          | Vertical     |
| 5875.00           | 35.47             | 32.74                 | 10.04           | 23.89                    | 54.36          | 68.20               | -13.84          | Vertical     |
| 5925.00           | 34.98             | 32.80                 | 10.11           | 23.90                    | 53.99          | 68.20               | -14.21          | Vertical     |

| IEEE 802.11n HT20 |                   |                       |                 |                          |                |                     |                 |              |
|-------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Average value:    |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00           | 25.36             | 32.36                 | 9.72            | 23.83                    | 43.61          | 54.00               | -10.39          | Horizontal   |
| 5700.00           | 25.39             | 32.50                 | 9.79            | 23.84                    | 43.84          | 54.00               | -10.16          | Horizontal   |
| 5720.00           | 25.42             | 32.53                 | 9.81            | 23.85                    | 43.91          | 54.00               | -10.09          | Horizontal   |
| 5725.00           | 29.83             | 32.53                 | 9.83            | 23.86                    | 48.33          | 54.00               | -5.67           | Horizontal   |
| 5850.00           | 28.11             | 32.70                 | 9.99            | 23.87                    | 46.93          | 54.00               | -7.07           | Horizontal   |
| 5855.00           | 25.63             | 32.72                 | 9.99            | 23.88                    | 44.46          | 54.00               | -9.54           | Horizontal   |
| 5875.00           | 25.18             | 32.74                 | 10.04           | 23.89                    | 44.07          | 54.00               | -9.93           | Horizontal   |
| 5925.00           | 25.30             | 32.80                 | 10.11           | 23.90                    | 44.31          | 54.00               | -9.69           | Horizontal   |
| 5650.00           | 25.09             | 32.36                 | 9.72            | 23.83                    | 43.34          | 54.00               | -10.66          | Vertical     |
| 5700.00           | 25.44             | 32.50                 | 9.79            | 23.84                    | 43.89          | 54.00               | -10.11          | Vertical     |
| 5720.00           | 25.39             | 32.53                 | 9.81            | 23.85                    | 43.88          | 54.00               | -10.12          | Vertical     |
| 5725.00           | 29.37             | 32.53                 | 9.83            | 23.86                    | 47.87          | 54.00               | -6.13           | Vertical     |
| 5850.00           | 28.03             | 32.70                 | 9.99            | 23.87                    | 46.85          | 54.00               | -7.15           | Vertical     |
| 5855.00           | 25.36             | 32.72                 | 9.99            | 23.88                    | 44.19          | 54.00               | -9.81           | Vertical     |
| 5875.00           | 25.11             | 32.74                 | 10.04           | 23.89                    | 44.00          | 54.00               | -10.00          | Vertical     |
| 5925.00           | 25.36             | 32.80                 | 10.11           | 23.90                    | 44.37          | 54.00               | -9.63           | Vertical     |

| <b>IEEE 802.11ac HT20</b> |                   |                       |                 |                          |                |                     |                 |              |
|---------------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| <b>Peak value:</b>        |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)           | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00                   | 35.42             | 32.36                 | 9.72            | 23.83                    | 53.67          | 68.20               | -14.53          | Horizontal   |
| 5700.00                   | 35.36             | 32.50                 | 9.79            | 23.84                    | 53.81          | 68.20               | -14.39          | Horizontal   |
| 5720.00                   | 35.18             | 32.53                 | 9.81            | 23.85                    | 53.67          | 68.20               | -14.53          | Horizontal   |
| 5725.00                   | 38.92             | 32.53                 | 9.83            | 23.86                    | 57.42          | 68.20               | -10.78          | Horizontal   |
| 5850.00                   | 37.66             | 32.70                 | 9.99            | 23.87                    | 56.48          | 68.20               | -11.72          | Horizontal   |
| 5855.00                   | 35.61             | 32.72                 | 9.99            | 23.88                    | 54.44          | 68.20               | -13.76          | Horizontal   |
| 5875.00                   | 35.09             | 32.74                 | 10.04           | 23.89                    | 53.98          | 68.20               | -14.22          | Horizontal   |
| 5925.00                   | 35.10             | 32.80                 | 10.11           | 23.90                    | 54.11          | 68.20               | -14.09          | Horizontal   |
| 5650.00                   | 35.23             | 32.36                 | 9.72            | 23.83                    | 53.48          | 68.20               | -14.72          | Vertical     |
| 5700.00                   | 35.44             | 32.50                 | 9.79            | 23.84                    | 53.89          | 68.20               | -14.31          | Vertical     |
| 5720.00                   | 35.67             | 32.53                 | 9.81            | 23.85                    | 54.16          | 68.20               | -14.04          | Vertical     |
| 5725.00                   | 38.42             | 32.53                 | 9.83            | 23.86                    | 56.92          | 68.20               | -11.28          | Vertical     |
| 5850.00                   | 37.68             | 32.70                 | 9.99            | 23.87                    | 56.50          | 68.20               | -11.70          | Vertical     |
| 5855.00                   | 35.29             | 32.72                 | 9.99            | 23.88                    | 54.12          | 68.20               | -14.08          | Vertical     |
| 5875.00                   | 35.26             | 32.74                 | 10.04           | 23.89                    | 54.15          | 68.20               | -14.05          | Vertical     |
| 5925.00                   | 35.40             | 32.80                 | 10.11           | 23.90                    | 54.41          | 68.20               | -13.79          | Vertical     |

| IEEE 802.11ac HT20 |                   |                       |                 |                          |                |                     |                 |              |
|--------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Average value:     |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)    | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00            | 25.69             | 32.36                 | 9.72            | 23.83                    | 43.94          | 54.00               | -10.06          | Horizontal   |
| 5700.00            | 26.33             | 32.50                 | 9.79            | 23.84                    | 44.78          | 54.00               | -9.22           | Horizontal   |
| 5720.00            | 25.14             | 32.53                 | 9.81            | 23.85                    | 43.63          | 54.00               | -10.37          | Horizontal   |
| 5725.00            | 29.30             | 32.53                 | 9.83            | 23.86                    | 47.80          | 54.00               | -6.20           | Horizontal   |
| 5850.00            | 28.45             | 32.70                 | 9.99            | 23.87                    | 47.27          | 54.00               | -6.73           | Horizontal   |
| 5855.00            | 25.60             | 32.72                 | 9.99            | 23.88                    | 44.43          | 54.00               | -9.57           | Horizontal   |
| 5875.00            | 25.11             | 32.74                 | 10.04           | 23.89                    | 44.00          | 54.00               | -10.00          | Horizontal   |
| 5925.00            | 25.37             | 32.80                 | 10.11           | 23.90                    | 44.38          | 54.00               | -9.62           | Horizontal   |
| 5650.00            | 25.09             | 32.36                 | 9.72            | 23.83                    | 43.34          | 54.00               | -10.66          | Vertical     |
| 5700.00            | 25.88             | 32.50                 | 9.79            | 23.84                    | 44.33          | 54.00               | -9.67           | Vertical     |
| 5720.00            | 25.42             | 32.53                 | 9.81            | 23.85                    | 43.91          | 54.00               | -10.09          | Vertical     |
| 5725.00            | 29.07             | 32.53                 | 9.83            | 23.86                    | 47.57          | 54.00               | -6.43           | Vertical     |
| 5850.00            | 28.52             | 32.70                 | 9.99            | 23.87                    | 47.34          | 54.00               | -6.66           | Vertical     |
| 5855.00            | 25.13             | 32.72                 | 9.99            | 23.88                    | 43.96          | 54.00               | -10.04          | Vertical     |
| 5875.00            | 25.37             | 32.74                 | 10.04           | 23.89                    | 44.26          | 54.00               | -9.74           | Vertical     |
| 5925.00            | 25.61             | 32.80                 | 10.11           | 23.90                    | 44.62          | 54.00               | -9.38           | Vertical     |

| IEEE 802.11n HT40 |                   |                       |                 |                          |                |                     |                 |              |
|-------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Peak value:       |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00           | 35.32             | 32.36                 | 9.72            | 23.83                    | 53.57          | 68.20               | -14.63          | Horizontal   |
| 5700.00           | 35.50             | 32.50                 | 9.79            | 23.84                    | 53.95          | 68.20               | -14.25          | Horizontal   |
| 5720.00           | 35.53             | 32.53                 | 9.81            | 23.85                    | 54.02          | 68.20               | -14.18          | Horizontal   |
| 5725.00           | 38.28             | 32.53                 | 9.83            | 23.86                    | 56.78          | 68.20               | -11.42          | Horizontal   |
| 5850.00           | 37.72             | 32.70                 | 9.99            | 23.87                    | 56.54          | 68.20               | -11.66          | Horizontal   |
| 5855.00           | 35.31             | 32.72                 | 9.99            | 23.88                    | 54.14          | 68.20               | -14.06          | Horizontal   |
| 5875.00           | 35.13             | 32.74                 | 10.04           | 23.89                    | 54.02          | 68.20               | -14.18          | Horizontal   |
| 5925.00           | 35.77             | 32.80                 | 10.11           | 23.90                    | 54.78          | 68.20               | -13.42          | Horizontal   |
| 5650.00           | 35.44             | 32.36                 | 9.72            | 23.83                    | 53.69          | 68.20               | -14.51          | Vertical     |
| 5700.00           | 35.09             | 32.50                 | 9.79            | 23.84                    | 53.54          | 68.20               | -14.66          | Vertical     |
| 5720.00           | 35.81             | 32.53                 | 9.81            | 23.85                    | 54.30          | 68.20               | -13.90          | Vertical     |
| 5725.00           | 38.62             | 32.53                 | 9.83            | 23.86                    | 57.12          | 68.20               | -11.08          | Vertical     |
| 5850.00           | 37.44             | 32.70                 | 9.99            | 23.87                    | 56.26          | 68.20               | -11.94          | Vertical     |
| 5855.00           | 35.52             | 32.72                 | 9.99            | 23.88                    | 54.35          | 68.20               | -13.85          | Vertical     |
| 5875.00           | 35.66             | 32.74                 | 10.04           | 23.89                    | 54.55          | 68.20               | -13.65          | Vertical     |
| 5925.00           | 35.08             | 32.80                 | 10.11           | 23.90                    | 54.09          | 68.20               | -14.11          | Vertical     |

| IEEE 802.11n HT40 |                   |                       |                 |                          |                |                     |                 |              |
|-------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Average value:    |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00           | 25.50             | 32.36                 | 9.72            | 23.83                    | 43.75          | 54.00               | -10.25          | Horizontal   |
| 5700.00           | 26.84             | 32.50                 | 9.79            | 23.84                    | 45.29          | 54.00               | -8.71           | Horizontal   |
| 5720.00           | 25.31             | 32.53                 | 9.81            | 23.85                    | 43.80          | 54.00               | -10.20          | Horizontal   |
| 5725.00           | 29.87             | 32.53                 | 9.83            | 23.86                    | 48.37          | 54.00               | -5.63           | Horizontal   |
| 5850.00           | 28.62             | 32.70                 | 9.99            | 23.87                    | 47.44          | 54.00               | -6.56           | Horizontal   |
| 5855.00           | 25.66             | 32.72                 | 9.99            | 23.88                    | 44.49          | 54.00               | -9.51           | Horizontal   |
| 5875.00           | 25.04             | 32.74                 | 10.04           | 23.89                    | 43.93          | 54.00               | -10.07          | Horizontal   |
| 5925.00           | 25.74             | 32.80                 | 10.11           | 23.90                    | 44.75          | 54.00               | -9.25           | Horizontal   |
| 5650.00           | 25.25             | 32.36                 | 9.72            | 23.83                    | 43.50          | 54.00               | -10.50          | Vertical     |
| 5700.00           | 25.17             | 32.50                 | 9.79            | 23.84                    | 43.62          | 54.00               | -10.38          | Vertical     |
| 5720.00           | 25.09             | 32.53                 | 9.81            | 23.85                    | 43.58          | 54.00               | -10.42          | Vertical     |
| 5725.00           | 29.77             | 32.53                 | 9.83            | 23.86                    | 48.27          | 54.00               | -5.73           | Vertical     |
| 5850.00           | 28.60             | 32.70                 | 9.99            | 23.87                    | 47.42          | 54.00               | -6.58           | Vertical     |
| 5855.00           | 25.70             | 32.72                 | 9.99            | 23.88                    | 44.53          | 54.00               | -9.47           | Vertical     |
| 5875.00           | 25.05             | 32.74                 | 10.04           | 23.89                    | 43.94          | 54.00               | -10.06          | Vertical     |
| 5925.00           | 25.80             | 32.80                 | 10.11           | 23.90                    | 44.81          | 54.00               | -9.19           | Vertical     |

| <b>IEEE 802.11ac HT40</b> |                   |                       |                 |                          |                |                     |                 |              |
|---------------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| <b>Peak value:</b>        |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)           | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00                   | 35.42             | 32.36                 | 9.72            | 23.83                    | 53.67          | 68.20               | -14.53          | Horizontal   |
| 5700.00                   | 35.09             | 32.50                 | 9.79            | 23.84                    | 53.54          | 68.20               | -14.66          | Horizontal   |
| 5720.00                   | 35.14             | 32.53                 | 9.81            | 23.85                    | 53.63          | 68.20               | -14.57          | Horizontal   |
| 5725.00                   | 39.65             | 32.53                 | 9.83            | 23.86                    | 58.15          | 68.20               | -10.05          | Horizontal   |
| 5850.00                   | 38.06             | 32.70                 | 9.99            | 23.87                    | 56.88          | 68.20               | -11.32          | Horizontal   |
| 5855.00                   | 35.27             | 32.72                 | 9.99            | 23.88                    | 54.10          | 68.20               | -14.10          | Horizontal   |
| 5875.00                   | 35.11             | 32.74                 | 10.04           | 23.89                    | 54.00          | 68.20               | -14.20          | Horizontal   |
| 5925.00                   | 35.36             | 32.80                 | 10.11           | 23.90                    | 54.37          | 68.20               | -13.83          | Horizontal   |
| 5650.00                   | 35.44             | 32.36                 | 9.72            | 23.83                    | 53.69          | 68.20               | -14.51          | Vertical     |
| 5700.00                   | 35.30             | 32.50                 | 9.79            | 23.84                    | 53.75          | 68.20               | -14.45          | Vertical     |
| 5720.00                   | 35.80             | 32.53                 | 9.81            | 23.85                    | 54.29          | 68.20               | -13.91          | Vertical     |
| 5725.00                   | 38.44             | 32.53                 | 9.83            | 23.86                    | 56.94          | 68.20               | -11.26          | Vertical     |
| 5850.00                   | 37.72             | 32.70                 | 9.99            | 23.87                    | 56.54          | 68.20               | -11.66          | Vertical     |
| 5855.00                   | 35.89             | 32.72                 | 9.99            | 23.88                    | 54.72          | 68.20               | -13.48          | Vertical     |
| 5875.00                   | 35.13             | 32.74                 | 10.04           | 23.89                    | 54.02          | 68.20               | -14.18          | Vertical     |
| 5925.00                   | 35.79             | 32.80                 | 10.11           | 23.90                    | 54.80          | 68.20               | -13.40          | Vertical     |

| IEEE 802.11ac HT40 |                   |                       |                 |                          |                |                     |                 |              |
|--------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Average value:     |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)    | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00            | 25.53             | 32.36                 | 9.72            | 23.83                    | 43.78          | 54.00               | -10.22          | Horizontal   |
| 5700.00            | 26.33             | 32.50                 | 9.79            | 23.84                    | 44.78          | 54.00               | -9.22           | Horizontal   |
| 5720.00            | 25.42             | 32.53                 | 9.81            | 23.85                    | 43.91          | 54.00               | -10.09          | Horizontal   |
| 5725.00            | 29.55             | 32.53                 | 9.83            | 23.86                    | 48.05          | 54.00               | -5.95           | Horizontal   |
| 5850.00            | 28.67             | 32.70                 | 9.99            | 23.87                    | 47.49          | 54.00               | -6.51           | Horizontal   |
| 5855.00            | 25.44             | 32.72                 | 9.99            | 23.88                    | 44.27          | 54.00               | -9.73           | Horizontal   |
| 5875.00            | 25.51             | 32.74                 | 10.04           | 23.89                    | 44.40          | 54.00               | -9.60           | Horizontal   |
| 5925.00            | 25.79             | 32.80                 | 10.11           | 23.90                    | 44.80          | 54.00               | -9.20           | Horizontal   |
| 5650.00            | 25.15             | 32.36                 | 9.72            | 23.83                    | 43.40          | 54.00               | -10.60          | Vertical     |
| 5700.00            | 25.63             | 32.50                 | 9.79            | 23.84                    | 44.08          | 54.00               | -9.92           | Vertical     |
| 5720.00            | 25.60             | 32.53                 | 9.81            | 23.85                    | 44.09          | 54.00               | -9.91           | Vertical     |
| 5725.00            | 29.48             | 32.53                 | 9.83            | 23.86                    | 47.98          | 54.00               | -6.02           | Vertical     |
| 5850.00            | 28.72             | 32.70                 | 9.99            | 23.87                    | 47.54          | 54.00               | -6.46           | Vertical     |
| 5855.00            | 25.44             | 32.72                 | 9.99            | 23.88                    | 44.27          | 54.00               | -9.73           | Vertical     |
| 5875.00            | 25.36             | 32.74                 | 10.04           | 23.89                    | 44.25          | 54.00               | -9.75           | Vertical     |
| 5925.00            | 25.78             | 32.80                 | 10.11           | 23.90                    | 44.79          | 54.00               | -9.21           | Vertical     |

| <b>IEEE 802.11ac HT80</b> |                   |                       |                 |                          |                |                     |                 |              |
|---------------------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| <b>Peak value:</b>        |                   |                       |                 |                          |                |                     |                 |              |
| Frequency (MHz)           | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00                   | 35.84             | 32.36                 | 9.72            | 23.83                    | 54.09          | 68.20               | -14.11          | Horizontal   |
| 5700.00                   | 35.20             | 32.50                 | 9.79            | 23.84                    | 53.65          | 68.20               | -14.55          | Horizontal   |
| 5720.00                   | 35.11             | 32.53                 | 9.81            | 23.85                    | 53.60          | 68.20               | -14.60          | Horizontal   |
| 5725.00                   | 39.86             | 32.53                 | 9.83            | 23.86                    | 58.36          | 68.20               | -9.84           | Horizontal   |
| 5850.00                   | 38.47             | 32.70                 | 9.99            | 23.87                    | 57.29          | 68.20               | -10.91          | Horizontal   |
| 5855.00                   | 35.20             | 32.72                 | 9.99            | 23.88                    | 54.03          | 68.20               | -14.17          | Horizontal   |
| 5875.00                   | 35.19             | 32.74                 | 10.04           | 23.89                    | 54.08          | 68.20               | -14.12          | Horizontal   |
| 5925.00                   | 35.42             | 32.80                 | 10.11           | 23.90                    | 54.43          | 68.20               | -13.77          | Horizontal   |
| 5650.00                   | 35.63             | 32.36                 | 9.72            | 23.83                    | 53.88          | 68.20               | -14.32          | Vertical     |
| 5700.00                   | 35.88             | 32.50                 | 9.79            | 23.84                    | 54.33          | 68.20               | -13.87          | Vertical     |
| 5720.00                   | 35.75             | 32.53                 | 9.81            | 23.85                    | 54.24          | 68.20               | -13.96          | Vertical     |
| 5725.00                   | 38.45             | 32.53                 | 9.83            | 23.86                    | 56.95          | 68.20               | -11.25          | Vertical     |
| 5850.00                   | 37.96             | 32.70                 | 9.99            | 23.87                    | 56.78          | 68.20               | -11.42          | Vertical     |
| 5855.00                   | 35.77             | 32.72                 | 9.99            | 23.88                    | 54.60          | 68.20               | -13.60          | Vertical     |
| 5875.00                   | 35.02             | 32.74                 | 10.04           | 23.89                    | 53.91          | 68.20               | -14.29          | Vertical     |
| 5925.00                   | 35.82             | 32.80                 | 10.11           | 23.90                    | 54.83          | 68.20               | -13.37          | Vertical     |

| IEEE 802.11ac HT40 |                   |                       |                 |                     |                |                     |                 |              |
|--------------------|-------------------|-----------------------|-----------------|---------------------|----------------|---------------------|-----------------|--------------|
| Average value:     |                   |                       |                 |                     |                |                     |                 |              |
| Frequency (MHz)    | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preampl Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5650.00            | 25.17             | 32.36                 | 9.72            | 23.83               | 43.42          | 54.00               | -10.58          | Horizontal   |
| 5700.00            | 26.08             | 32.50                 | 9.79            | 23.84               | 44.53          | 54.00               | -9.47           | Horizontal   |
| 5720.00            | 25.36             | 32.53                 | 9.81            | 23.85               | 43.85          | 54.00               | -10.15          | Horizontal   |
| 5725.00            | 29.77             | 32.53                 | 9.83            | 23.86               | 48.27          | 54.00               | -5.73           | Horizontal   |
| 5850.00            | 28.30             | 32.70                 | 9.99            | 23.87               | 47.12          | 54.00               | -6.88           | Horizontal   |
| 5855.00            | 25.15             | 32.72                 | 9.99            | 23.88               | 43.98          | 54.00               | -10.02          | Horizontal   |
| 5875.00            | 25.48             | 32.74                 | 10.04           | 23.89               | 44.37          | 54.00               | -9.63           | Horizontal   |
| 5925.00            | 25.37             | 32.80                 | 10.11           | 23.90               | 44.38          | 54.00               | -9.62           | Horizontal   |
| 5650.00            | 25.49             | 32.36                 | 9.72            | 23.83               | 43.74          | 54.00               | -10.26          | Vertical     |
| 5700.00            | 25.67             | 32.50                 | 9.79            | 23.84               | 44.12          | 54.00               | -9.88           | Vertical     |
| 5720.00            | 25.33             | 32.53                 | 9.81            | 23.85               | 43.82          | 54.00               | -10.18          | Vertical     |
| 5725.00            | 28.58             | 32.53                 | 9.83            | 23.86               | 47.08          | 54.00               | -6.92           | Vertical     |
| 5850.00            | 28.34             | 32.70                 | 9.99            | 23.87               | 47.16          | 54.00               | -6.84           | Vertical     |
| 5855.00            | 25.67             | 32.72                 | 9.99            | 23.88               | 44.50          | 54.00               | -9.50           | Vertical     |
| 5875.00            | 25.26             | 32.74                 | 10.04           | 23.89               | 44.15          | 54.00               | -9.85           | Vertical     |
| 5925.00            | 25.29             | 32.80                 | 10.11           | 23.90               | 44.30          | 54.00               | -9.70           | Vertical     |

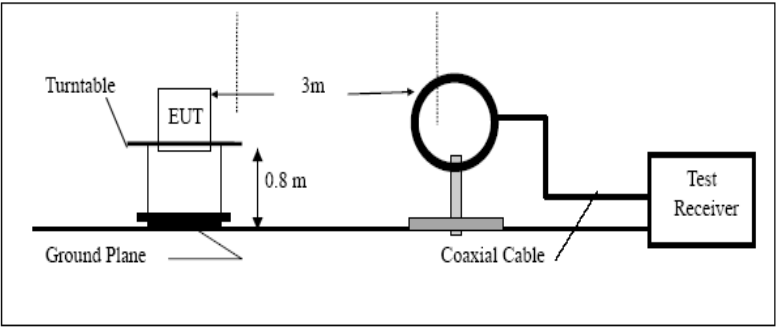
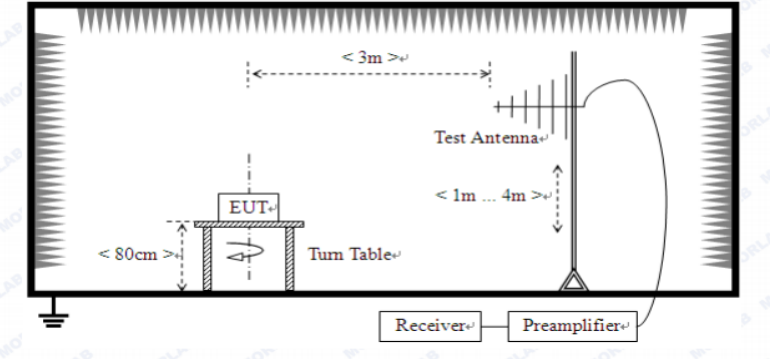
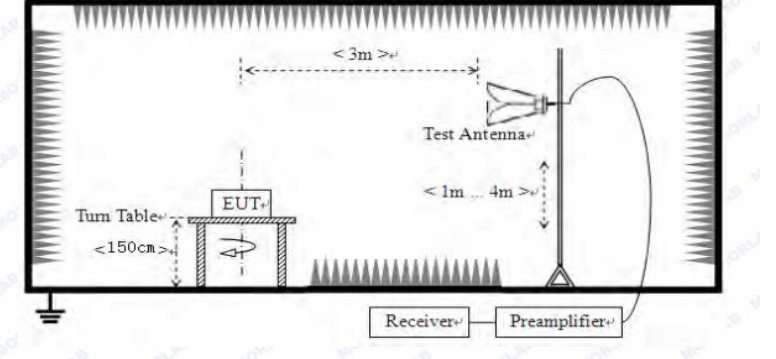
**Remark:**

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*  
*The emission levels of other frequencies are very lower than the limit and not show*

## 7.7 Spurious Emission

### 7.7.1 Radiated Emission Method

|                       |                                                            |                 |            |                      |                  |
|-----------------------|------------------------------------------------------------|-----------------|------------|----------------------|------------------|
| Test Requirement:     | FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4) |                 |            |                      |                  |
| Test Method:          | ANSI C63.10:2013                                           |                 |            |                      |                  |
| Test Frequency Range: | 9kHz to 40GHz                                              |                 |            |                      |                  |
| Test site:            | Measurement Distance: 3m                                   |                 |            |                      |                  |
| Receiver setup:       | Frequency                                                  | Detector        | RBW        | VBW                  | Value            |
|                       | 9kHz-150KHz                                                | Quasi-peak      | 200Hz      | 1kHz                 | Quasi-peak Value |
|                       | 150kHz-30MHz                                               | Quasi-peak      | 9kHz       | 30kHz                | Quasi-peak Value |
|                       | 30MHz-1GHz                                                 | Quasi-peak      | 100KHz     | 300KHz               | Quasi-peak Value |
|                       | Above 1GHz                                                 | Peak            | 1MHz       | 3MHz                 | Peak Value       |
|                       |                                                            | AV              | 1MHz       | 3MHz                 | Average Value    |
| Limit:                | Frequency                                                  | Limit (uV/m)    | Value      | Measurement Distance |                  |
|                       | 0.009MHz-0.490MHz                                          | 2400/F(KHz)     | QP         | 300m                 |                  |
|                       | 0.490MHz-1.705MHz                                          | 24000/F(KHz)    | QP         | 300m                 |                  |
|                       | 1.705MHz-30MHz                                             | 30              | QP         | 30m                  |                  |
|                       | 30MHz-88MHz                                                | 100             | QP         | 3m                   |                  |
|                       | 88MHz-216MHz                                               | 150             | QP         |                      |                  |
|                       | 216MHz-960MHz                                              | 200             | QP         |                      |                  |
|                       | 960MHz-1GHz                                                | 500             | QP         |                      |                  |
|                       | Frequency                                                  | Limit (dBm/MHz) | Remark     |                      |                  |
|                       | Above 1GHz                                                 | -27.0           | Peak Value |                      |                  |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Test setup:</p>     | <p>Below 30MHz</p>  <p>Below 1GHz</p>  <p>Above 1GHz</p>                                                                                                                          |
| <p>Test Procedure:</p> | <ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> </ol> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p> <p>7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.</p> |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Test mode:        | Refer to section 5.2 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Measurement Data:

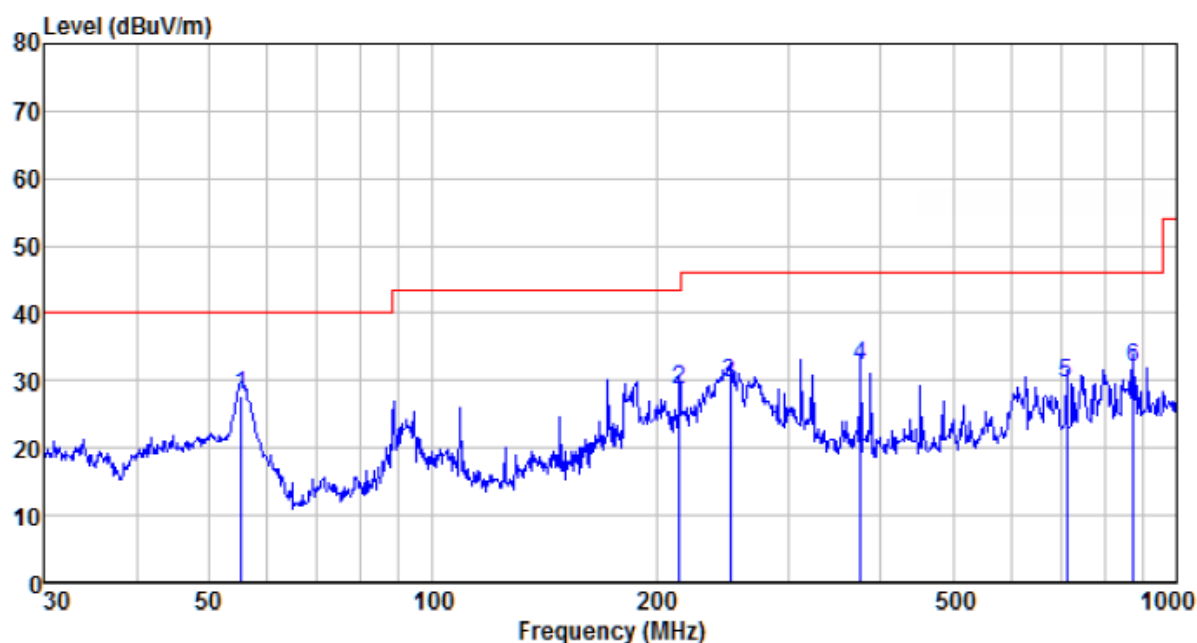
### 9 kHz ~ 30 MHz

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

## Below 1GHz

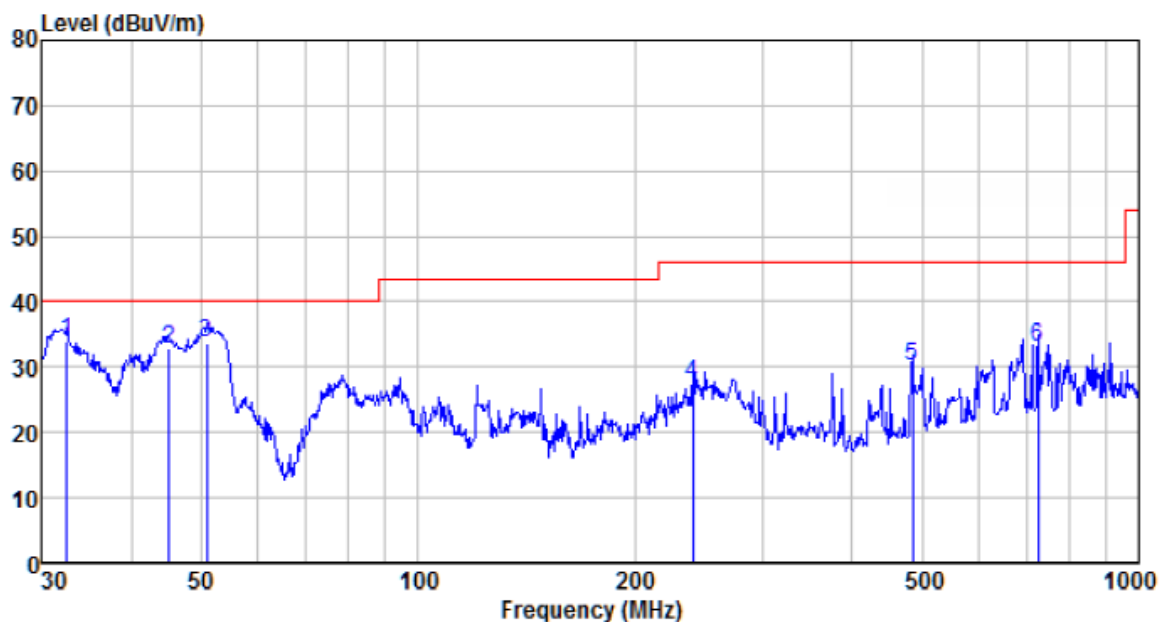
Only the data of worst case at each channel plan (nominal bandwidth =20MHz, 40MHz, 80MHz) is reported.

Horizontal:



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 55.221      | 51.53                    | 11.78                     | 0.82                | 36.26                  | 27.87         | 40.00                    | -12.13              | QP     |
| 214.514     | 52.96                    | 10.95                     | 1.93                | 37.35                  | 28.49         | 43.50                    | -15.01              | QP     |
| 251.180     | 52.66                    | 12.18                     | 2.13                | 37.38                  | 29.59         | 46.00                    | -16.41              | QP     |
| 375.939     | 51.87                    | 14.94                     | 2.75                | 37.50                  | 32.06         | 46.00                    | -13.94              | QP     |
| 711.674     | 43.28                    | 19.85                     | 4.13                | 37.63                  | 29.63         | 46.00                    | -16.37              | QP     |
| 875.247     | 42.62                    | 22.09                     | 4.76                | 37.60                  | 31.87         | 46.00                    | -14.13              | QP     |

Vertical:



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 32.520      | 57.23                    | 11.25                     | 0.58                | 35.19                  | 33.87         | 40.00                    | -6.13               | QP     |
| 45.058      | 55.80                    | 12.25                     | 0.72                | 35.94                  | 32.83         | 40.00                    | -7.17               | QP     |
| 50.942      | 56.72                    | 12.20                     | 0.78                | 36.19                  | 33.51         | 40.00                    | -6.49               | QP     |
| 240.830     | 50.97                    | 11.85                     | 2.08                | 37.37                  | 27.53         | 46.00                    | -18.47              | QP     |
| 485.609     | 47.21                    | 17.06                     | 3.24                | 37.51                  | 30.00         | 46.00                    | -16.00              | QP     |
| 724.261     | 46.34                    | 20.03                     | 4.18                | 37.63                  | 32.92         | 46.00                    | -13.08              | QP     |

## Above 1GHz:

802.11a,11n(HT20),11ac(HT20),11n(HT40),11ac(HT40),11ac(HT80) all have been tested ,Only the data of worst case at each channel plan (nominal bandwidth =20MHz, 40MHz, 80MHz) is reported.

| Test mode:   |                 | 802.11a                |                 | Test channel:          |                | lowest         |          |
|--------------|-----------------|------------------------|-----------------|------------------------|----------------|----------------|----------|
| Antenna Pol. | Frequency (MHz) | Reading Level (dBuV/m) | Factor (dBuV/m) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over limit(dB) | Detector |
| V            | 11490           | 21.33                  | 21.64           | 42.97                  | 54(Note3)      | -11.03         | PK       |
| V            | 17235           | 21.85                  | 21.80           | 43.65                  | 54(Note3)      | -10.35         | PK       |
| H            | 11490           | 22.49                  | 21.83           | 44.32                  | 54(Note3)      | -9.68          | PK       |
| H            | 17235           | 20.97                  | 21.67           | 42.64                  | 54(Note3)      | -11.36         | PK       |

| Test mode:   |                 | 802.11a                |                 | Test channel:          |                | Middle         |          |
|--------------|-----------------|------------------------|-----------------|------------------------|----------------|----------------|----------|
| Antenna Pol. | Frequency (MHz) | Reading Level (dBuV/m) | Factor (dBuV/m) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over limit(dB) | Detector |
| V            | 11570           | 19.87                  | 21.64           | 41.51                  | 54(Note3)      | -12.49         | PK       |
| V            | 17355           | 20.36                  | 21.80           | 42.16                  | 54(Note3)      | -11.84         | PK       |
| H            | 11570           | 20.65                  | 21.83           | 42.48                  | 54(Note3)      | -11.52         | PK       |
| H            | 17355           | 21.77                  | 21.67           | 43.44                  | 54(Note3)      | -10.56         | PK       |

| Test mode:   |                 | 802.11a                |                 | Test channel:          |                | Highest        |          |
|--------------|-----------------|------------------------|-----------------|------------------------|----------------|----------------|----------|
| Antenna Pol. | Frequency (MHz) | Reading Level (dBuV/m) | Factor (dBuV/m) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over limit(dB) | Detector |
| V            | 11650           | 21.53                  | 21.64           | 43.17                  | 54(Note3)      | -10.83         | PK       |
| V            | 17475           | 21.12                  | 21.80           | 42.92                  | 54(Note3)      | -11.08         | PK       |
| H            | 11650           | 20.36                  | 21.83           | 42.19                  | 54(Note3)      | -11.81         | PK       |
| H            | 17475           | 20.74                  | 21.67           | 42.41                  | 54(Note3)      | -11.59         | PK       |

| Test mode:   |                 | 802.11ac(HT40)         |                 | Test channel:          |                | Lowest         |          |
|--------------|-----------------|------------------------|-----------------|------------------------|----------------|----------------|----------|
| Antenna Pol. | Frequency (MHz) | Reading Level (dBuV/m) | Factor (dBuV/m) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over limit(dB) | Detector |
| V            | 11510           | 22.36                  | 21.67           | 44.03                  | 54(Note3)      | -9.97          | PK       |
| V            | 17265           | 21.45                  | 21.83           | 43.28                  | 54(Note3)      | -10.72         | PK       |
| H            | 11510           | 20.96                  | 21.67           | 42.63                  | 54(Note3)      | -11.37         | PK       |
| H            | 17265           | 22.07                  | 21.83           | 43.90                  | 54(Note3)      | -10.10         | PK       |

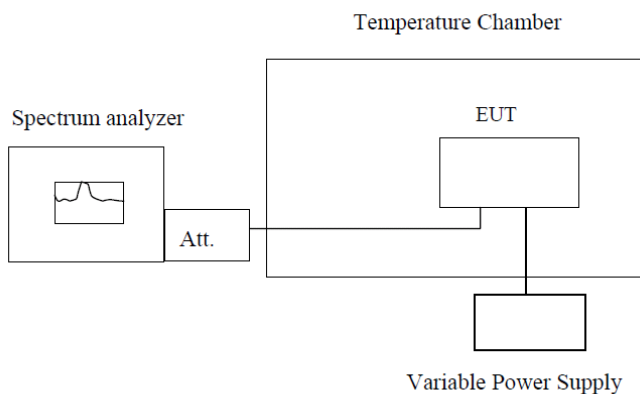
| Test mode:   |                 | 802.11ac(HT40)         |                 | Test channel:          |                | Highest        |          |
|--------------|-----------------|------------------------|-----------------|------------------------|----------------|----------------|----------|
| Antenna Pol. | Frequency (MHz) | Reading Level (dBuV/m) | Factor (dBuV/m) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over limit(dB) | Detector |
| V            | 11590           | 21.56                  | 21.67           | 43.23                  | 54(Note3)      | -10.77         | PK       |
| V            | 17385           | 21.41                  | 21.83           | 43.24                  | 54(Note3)      | -10.76         | PK       |
| H            | 11590           | 22.03                  | 21.67           | 43.70                  | 54(Note3)      | -10.30         | PK       |
| H            | 17385           | 21.89                  | 21.83           | 43.72                  | 54(Note3)      | -10.28         | PK       |

| Test mode:   |                 | 802.11ac(HT80)         |                 | Test channel:          |                | Middle         |          |
|--------------|-----------------|------------------------|-----------------|------------------------|----------------|----------------|----------|
| Antenna Pol. | Frequency (MHz) | Reading Level (dBuV/m) | Factor (dBuV/m) | Measure Level (dBuV/m) | Limit (dBuV/m) | Over limit(dB) | Detector |
| V            | 11550.00        | 20.36                  | 21.65           | 42.01                  | 54(Note3)      | -11.99         | PK       |
| V            | 17325.00        | 20.23                  | 21.81           | 42.04                  | 54(Note3)      | -11.96         | PK       |
| H            | 11550.00        | 20.58                  | 21.65           | 42.23                  | 54(Note3)      | -11.77         | PK       |
| H            | 17325.00        | 21.67                  | 21.81           | 43.48                  | 54(Note3)      | -10.52         | PK       |

Note:

1. Measure Level = Reading Level + Factor.
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

## 7.8 Frequency stability

|                   |                                                                                                                                                                                                       |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part15 C Section 15.407(g)                                                                                                                                                                        |
| Test Method:      | ANSI C63.10:2013, FCC Part 2.1055                                                                                                                                                                     |
| Limit:            | Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified |
| Test Procedure:   | The EUT was setup to ANSI C63.4, 2003; tested to 2.1055 for compliance to FCC Part 15.407(g) requirements.                                                                                            |
| Test setup:       |  <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>                                           |
| Test Instruments: | Refer to section 5.10 for details                                                                                                                                                                     |
| Test mode:        | Refer to section 5.2 for details                                                                                                                                                                      |
| Test results:     | Pass                                                                                                                                                                                                  |

**Measurement data:**

| 802.11a                          |                                 |                                         |                                         |                                         |                                          |
|----------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Frequency stability versus Temp. |                                 |                                         |                                         |                                         |                                          |
| Power Supply: DC 3.7V            |                                 |                                         |                                         |                                         |                                          |
| Temp.<br>(°C)                    | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| -30                              | 5745                            | 5743.1487                               | 5744.8806                               | 5744.6330                               | 5744.9782                                |
|                                  | 5785                            | 5784.2937                               | 5784.6455                               | 5783.3629                               | 5783.0281                                |
|                                  | 5825                            | 5823.7646                               | 5824.0976                               | 5823.3956                               | 5823.3413                                |
| -20                              | 5745                            | 5743.0743                               | 5744.9087                               | 5744.2312                               | 5744.1410                                |
|                                  | 5785                            | 5784.4929                               | 5784.3224                               | 5784.2772                               | 5784.4421                                |
|                                  | 5825                            | 5823.5070                               | 5823.0990                               | 5824.5511                               | 5824.5202                                |
| -10                              | 5745                            | 5744.8945                               | 5744.4355                               | 5744.0140                               | 5744.2139                                |
|                                  | 5785                            | 5784.0161                               | 5783.3812                               | 5784.4210                               | 5784.1715                                |
|                                  | 5825                            | 5824.6972                               | 5824.2478                               | 5824.9301                               | 5824.6576                                |
| 0                                | 5745                            | 5744.9896                               | 5743.7039                               | 5744.9595                               | 5744.8244                                |
|                                  | 5785                            | 5784.8166                               | 5783.7887                               | 5784.7167                               | 5784.1509                                |
|                                  | 5825                            | 5823.0892                               | 5824.9071                               | 5824.9393                               | 5824.0847                                |
| 10                               | 5745                            | 5744.2220                               | 5744.4753                               | 5743.4730                               | 5744.6410                                |
|                                  | 5785                            | 5783.9105                               | 5784.7174                               | 5783.3205                               | 5783.3504                                |
|                                  | 5825                            | 5824.6419                               | 5823.1586                               | 5824.9476                               | 5824.8801                                |
| 20                               | 5745                            | 5744.4255                               | 5744.6195                               | 5743.5453                               | 5743.6578                                |
|                                  | 5785                            | 5783.4338                               | 5783.2303                               | 5784.4608                               | 5784.7206                                |
|                                  | 5825                            | 5823.3871                               | 5823.9937                               | 5824.6297                               | 5824.5541                                |
| 30                               | 5745                            | 5743.8328                               | 5743.9346                               | 5744.4308                               | 5744.6929                                |
|                                  | 5785                            | 5784.7123                               | 5784.7830                               | 5784.4475                               | 5784.5786                                |
|                                  | 5825                            | 5823.4881                               | 5823.9215                               | 5824.7831                               | 5824.2944                                |
| 40                               | 5745                            | 5744.1157                               | 5744.1859                               | 5744.1913                               | 5744.5401                                |
|                                  | 5785                            | 5783.0621                               | 5783.2424                               | 5784.0083                               | 5784.8498                                |
|                                  | 5825                            | 5823.0653                               | 5823.3776                               | 5823.7231                               | 5823.8228                                |
| 50                               | 5745                            | 5743.3574                               | 5743.5340                               | 5744.6232                               | 5744.9475                                |
|                                  | 5785                            | 5783.5245                               | 5784.5020                               | 5784.5478                               | 5784.0804                                |
|                                  | 5825                            | 5823.1295                               | 5824.2705                               | 5823.0556                               | 5824.5494                                |

| Frequency stability versus Voltage |                                 |                                         |                                         |                                         |                                          |
|------------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Temperature: 25°C                  |                                 |                                         |                                         |                                         |                                          |
| Power<br>Supply<br>(AC)            | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| 3.3                                | 5745                            | 5744.6884                               | 5744.6247                               | 5743.2215                               | 5743.2188                                |
|                                    | 5785                            | 5784.6857                               | 5784.4494                               | 5783.3368                               | 5784.1125                                |
|                                    | 5825                            | 5824.7312                               | 5824.9964                               | 5823.8656                               | 5824.3290                                |
| 3.7                                | 5745                            | 5743.4708                               | 5744.5194                               | 5744.4807                               | 5744.2587                                |
|                                    | 5785                            | 5783.3592                               | 5783.7345                               | 5784.1315                               | 5784.8414                                |
|                                    | 5825                            | 5823.9364                               | 5824.3768                               | 5824.1738                               | 5824.9051                                |
| 4.1                                | 5745                            | 5743.5796                               | 5744.8498                               | 5743.5213                               | 5743.1516                                |
|                                    | 5785                            | 5784.3453                               | 5784.1045                               | 5784.0624                               | 5784.7185                                |
|                                    | 5825                            | 5823.5478                               | 5824.7743                               | 5824.1351                               | 5824.2811                                |

Note: The worst case is FL=5744.0953MHz, FH=5824.9844MHz

| 802.11n(HT20)                    |                                 |                                         |                                         |                                         |                                          |
|----------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Frequency stability versus Temp. |                                 |                                         |                                         |                                         |                                          |
| Power Supply: DC 3.7V            |                                 |                                         |                                         |                                         |                                          |
| Temp.<br>(°C)                    | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| -30                              | 5745                            | 5746.3172                               | 5744.5283                               | 5743.5441                               | 5746.6137                                |
|                                  | 5785                            | 5785.3476                               | 5784.7988                               | 5783.6011                               | 5785.9928                                |
|                                  | 5825                            | 5825.0127                               | 5824.4689                               | 5824.5878                               | 5825.4970                                |
| -20                              | 5745                            | 5745.5773                               | 5744.5591                               | 5744.6504                               | 5745.5004                                |
|                                  | 5785                            | 5785.8455                               | 5784.1650                               | 5784.6975                               | 5785.5021                                |
|                                  | 5825                            | 5825.7398                               | 5824.7556                               | 5824.4355                               | 5825.1319                                |
| -10                              | 5745                            | 5745.0086                               | 5744.1125                               | 5744.9132                               | 5745.1702                                |
|                                  | 5785                            | 5785.5143                               | 5784.9681                               | 5784.0043                               | 5785.2898                                |
|                                  | 5825                            | 5825.3603                               | 5824.4354                               | 5824.5380                               | 5825.7788                                |
| 0                                | 5745                            | 5745.7020                               | 5744.6248                               | 5744.4815                               | 5745.7196                                |
|                                  | 5785                            | 5785.6100                               | 5784.5114                               | 5784.5357                               | 5785.0679                                |
|                                  | 5825                            | 5825.8631                               | 5824.3819                               | 5824.5870                               | 5825.4598                                |
| 10                               | 5745                            | 5745.9527                               | 5744.9542                               | 5744.6185                               | 5745.0814                                |
|                                  | 5785                            | 5785.6510                               | 5784.8687                               | 5784.4132                               | 5785.9512                                |
|                                  | 5825                            | 5825.0885                               | 5824.6374                               | 5824.2057                               | 5825.2018                                |
| 20                               | 5745                            | 5745.1048                               | 5744.0389                               | 5744.4361                               | 5745.6419                                |
|                                  | 5785                            | 5785.1886                               | 5784.0245                               | 5784.9074                               | 5785.1415                                |
|                                  | 5825                            | 5825.3400                               | 5824.7407                               | 5824.5105                               | 5825.9934                                |
| 30                               | 5745                            | 5745.0123                               | 5744.1192                               | 5744.2341                               | 5745.8252                                |
|                                  | 5785                            | 5785.5825                               | 5784.7384                               | 5784.4237                               | 5785.5584                                |
|                                  | 5825                            | 5825.5734                               | 5824.1428                               | 5824.8086                               | 5825.8732                                |
| 40                               | 5745                            | 5745.8489                               | 5744.8946                               | 5744.1864                               | 5745.0454                                |
|                                  | 5785                            | 5785.8237                               | 5784.8943                               | 5784.1095                               | 5785.5693                                |
|                                  | 5825                            | 5825.5666                               | 5824.8088                               | 5824.5868                               | 5825.0153                                |
| 50                               | 5745                            | 5745.5375                               | 5744.6825                               | 5744.6996                               | 5745.8057                                |
|                                  | 5785                            | 5785.4596                               | 5784.7911                               | 5784.7429                               | 5785.4449                                |
|                                  | 5825                            | 5825.3274                               | 5824.8996                               | 5824.4791                               | 5825.8754                                |

| Frequency stability versus Voltage |                                 |                                         |                                         |                                         |                                          |
|------------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Temperature: 25°C                  |                                 |                                         |                                         |                                         |                                          |
| Power<br>Supply<br>(AC)            | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| 3.3                                | 5745                            | 5745.9868                               | 5745.1779                               | 5744.1487                               | 5743.8761                                |
|                                    | 5785                            | 5785.1430                               | 5785.0584                               | 5784.3826                               | 5784.0857                                |
|                                    | 5825                            | 5825.4188                               | 5825.2429                               | 5824.4882                               | 5824.2632                                |
| 3.7                                | 5745                            | 5745.3475                               | 5745.8494                               | 5744.0207                               | 5744.1134                                |
|                                    | 5785                            | 5785.1120                               | 5785.1355                               | 5784.6481                               | 5784.3700                                |
|                                    | 5825                            | 5825.6384                               | 5825.9518                               | 5824.7438                               | 5824.6611                                |
| 4.1                                | 5745                            | 5745.2319                               | 5745.7471                               | 5744.4399                               | 5744.4197                                |
|                                    | 5785                            | 5785.4220                               | 5785.8906                               | 5784.7078                               | 5784.0217                                |
|                                    | 5825                            | 5825.0703                               | 5825.5642                               | 5824.7910                               | 5824.9795                                |

Note: The worst case is FL=5743.8207MHz, FH=5825.9832MHz

| 802.11ac(HT20)                   |                                 |                                         |                                         |                                         |                                          |
|----------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Frequency stability versus Temp. |                                 |                                         |                                         |                                         |                                          |
| Power Supply: DC 3.7V            |                                 |                                         |                                         |                                         |                                          |
| Temp.<br>(°C)                    | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| -30                              | 5745                            | 5743.2454                               | 5743.6091                               | 5743.5312                               | 5743.4010                                |
|                                  | 5785                            | 5783.1335                               | 5783.5467                               | 5783.8809                               | 5783.0884                                |
|                                  | 5825                            | 5823.0625                               | 5823.9079                               | 5824.2789                               | 5823.3718                                |
| -20                              | 5745                            | 5743.8887                               | 5744.4669                               | 5744.3028                               | 5743.6964                                |
|                                  | 5785                            | 5783.6346                               | 5784.8485                               | 5784.8932                               | 5783.2137                                |
|                                  | 5825                            | 5824.0395                               | 5824.4526                               | 5824.2992                               | 5823.9012                                |
| -10                              | 5745                            | 5744.8975                               | 5744.3863                               | 5744.6157                               | 5744.8956                                |
|                                  | 5785                            | 5784.6684                               | 5784.6123                               | 5784.1419                               | 5784.8260                                |
|                                  | 5825                            | 5824.7355                               | 5824.1098                               | 5824.8944                               | 5824.6677                                |
| 0                                | 5745                            | 5744.0386                               | 5744.8851                               | 5744.4503                               | 5744.9673                                |
|                                  | 5785                            | 5784.3015                               | 5784.5422                               | 5784.4154                               | 5784.4031                                |
|                                  | 5825                            | 5824.2250                               | 5824.5625                               | 5824.7606                               | 5824.1278                                |
| 10                               | 5745                            | 5744.9046                               | 5744.3622                               | 5744.9205                               | 5744.6125                                |
|                                  | 5785                            | 5784.2888                               | 5784.7411                               | 5784.4204                               | 5784.6557                                |
|                                  | 5825                            | 5824.8946                               | 5824.6906                               | 5824.4426                               | 5824.9587                                |
| 20                               | 5745                            | 5744.5783                               | 5744.3799                               | 5744.6814                               | 5744.7752                                |
|                                  | 5785                            | 5784.5043                               | 5784.5648                               | 5784.7178                               | 5784.7483                                |
|                                  | 5825                            | 5824.2398                               | 5824.2959                               | 5824.3911                               | 5824.1115                                |
| 30                               | 5745                            | 5744.3257                               | 5744.8509                               | 5744.3094                               | 5744.3297                                |
|                                  | 5785                            | 5784.8571                               | 5784.5168                               | 5784.4984                               | 5784.3355                                |
|                                  | 5825                            | 5824.2763                               | 5824.3240                               | 5824.7625                               | 5824.4175                                |
| 40                               | 5745                            | 5744.7511                               | 5744.0450                               | 5744.7888                               | 5744.4323                                |
|                                  | 5785                            | 5784.9991                               | 5784.2126                               | 5784.9687                               | 5784.7223                                |
|                                  | 5825                            | 5824.1861                               | 5824.7299                               | 5824.1102                               | 5824.4327                                |
| 50                               | 5745                            | 5744.4067                               | 5744.7711                               | 5744.6803                               | 5744.8413                                |
|                                  | 5785                            | 5784.3208                               | 5784.9922                               | 5784.6034                               | 5784.9190                                |
|                                  | 5825                            | 5824.6983                               | 5824.3602                               | 5824.7719                               | 5824.8313                                |

| Frequency stability versus Voltage |                                 |                                         |                                         |                                         |                                          |
|------------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Temperature: 25°C                  |                                 |                                         |                                         |                                         |                                          |
| Power<br>Supply<br>(AC)            | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| 108                                | 5745                            | 5744.6947                               | 5744.8261                               | 5745.2006                               | 5745.4764                                |
|                                    | 5785                            | 5784.2901                               | 5784.6720                               | 5785.8253                               | 5785.8825                                |
|                                    | 5825                            | 5824.9130                               | 5824.5437                               | 5825.2825                               | 5825.0362                                |
| 120                                | 5745                            | 5744.9599                               | 5744.4020                               | 5745.6077                               | 5745.0350                                |
|                                    | 5785                            | 5784.7386                               | 5784.0056                               | 5785.3176                               | 5785.8770                                |
|                                    | 5825                            | 5824.0130                               | 5824.0493                               | 5825.2067                               | 5825.1195                                |
| 132                                | 5745                            | 5744.4304                               | 5744.3241                               | 5745.4011                               | 5745.1608                                |
|                                    | 5785                            | 5784.9883                               | 5784.8086                               | 5785.6992                               | 5785.3145                                |
|                                    | 5825                            | 5824.0409                               | 5824.2783                               | 5825.9004                               | 5825.9545                                |

Note: The worst case is FL=5742.3838MHz, FH=5826.7890MHz

| 802.11n(HT40)                    |                                 |                                         |                                         |                                         |                                          |
|----------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Frequency stability versus Temp. |                                 |                                         |                                         |                                         |                                          |
| Power Supply: DC 3.7V            |                                 |                                         |                                         |                                         |                                          |
| Temp.<br>(°C)                    | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| -30                              | 5755                            | 5756.7804                               | 5754.3075                               | 5753.2252                               | 5755.2472                                |
|                                  | 5795                            | 5796.9686                               | 5794.2162                               | 5793.5149                               | 5795.8027                                |
| -20                              | 5755                            | 5756.6380                               | 5754.0127                               | 5754.0158                               | 5755.4882                                |
|                                  | 5795                            | 5796.6259                               | 5794.7076                               | 5794.1867                               | 5795.8374                                |
| -10                              | 5755                            | 5755.8998                               | 5754.0368                               | 5754.4554                               | 5755.8570                                |
|                                  | 5795                            | 5795.3768                               | 5794.1572                               | 5794.3993                               | 5795.5341                                |
| 0                                | 5755                            | 5755.3606                               | 5754.2421                               | 5754.4051                               | 5755.2297                                |
|                                  | 5795                            | 5795.1173                               | 5794.2983                               | 5794.0016                               | 5795.0213                                |
| 10                               | 5755                            | 5755.6407                               | 5754.2076                               | 5754.6565                               | 5755.0393                                |
|                                  | 5795                            | 5795.7971                               | 5794.3368                               | 5794.7585                               | 5795.7819                                |
| 20                               | 5755                            | 5755.9798                               | 5754.5390                               | 5754.2834                               | 5755.0630                                |
|                                  | 5795                            | 5795.5562                               | 5794.0917                               | 5794.5299                               | 5795.6786                                |
| 30                               | 5755                            | 5755.5532                               | 5754.0891                               | 5754.4723                               | 5755.9357                                |
|                                  | 5795                            | 5795.9660                               | 5794.3243                               | 5794.8309                               | 5795.4454                                |
| 40                               | 5755                            | 5755.2418                               | 5754.8918                               | 5754.6929                               | 5755.1735                                |
|                                  | 5795                            | 5795.6724                               | 5794.0295                               | 5794.3599                               | 5795.7909                                |
| 50                               | 5755                            | 5755.8726                               | 5754.4359                               | 5754.1864                               | 5755.5917                                |
|                                  | 5795                            | 5795.9031                               | 5794.7917                               | 5794.3334                               | 5795.7036                                |

| Frequency stability versus Voltage |                                 |                                         |                                         |                                         |                                          |
|------------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Temperature: 25°C                  |                                 |                                         |                                         |                                         |                                          |
| Power<br>Supply<br>(AC)            | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| 3.3                                | 5755                            | 5756.4619                               | 5754.0347                               | 5756.5610                               | 5754.4714                                |
|                                    | 5795                            | 5795.9326                               | 5794.6940                               | 5796.2676                               | 5794.8471                                |
| 3.7                                | 5755                            | 5755.2212                               | 5754.5803                               | 5755.5603                               | 5754.6894                                |
|                                    | 5795                            | 5795.5536                               | 5794.2027                               | 5795.5804                               | 5794.9382                                |
| 4.1                                | 5755                            | 5755.6206                               | 5754.2245                               | 5755.0195                               | 5754.8480                                |
|                                    | 5795                            | 5795.9944                               | 5794.8191                               | 5795.1208                               | 5794.3979                                |

Note: The worst case is FL=5753.0680MHz, FH=5796.5693MHz

| 802.11ac(HT40)                   |                                 |                                         |                                         |                                         |                                          |
|----------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Frequency stability versus Temp. |                                 |                                         |                                         |                                         |                                          |
| Power Supply: DC 3.7V            |                                 |                                         |                                         |                                         |                                          |
| Temp.<br>(°C)                    | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| -30                              | 5755                            | 5755.4083                               | 5753.1224                               | 5756.0545                               | 5753.3047                                |
|                                  | 5795                            | 5795.6162                               | 5794.2748                               | 5795.8754                               | 5794.0449                                |
| -20                              | 5755                            | 5755.4828                               | 5754.7687                               | 5755.7376                               | 5754.1622                                |
|                                  | 5795                            | 5795.3934                               | 5794.2431                               | 5795.2641                               | 5794.1380                                |
| -10                              | 5755                            | 5755.0508                               | 5754.8927                               | 5755.4426                               | 5754.6460                                |
|                                  | 5795                            | 5795.0835                               | 5794.1748                               | 5795.5102                               | 5794.9275                                |
| 0                                | 5755                            | 5755.0581                               | 5754.4645                               | 5755.4719                               | 5754.9718                                |
|                                  | 5795                            | 5795.5324                               | 5794.9522                               | 5795.3279                               | 5794.5505                                |
| 10                               | 5755                            | 5755.7166                               | 5754.1453                               | 5755.0233                               | 5754.5970                                |
|                                  | 5795                            | 5795.8945                               | 5794.7373                               | 5795.5373                               | 5794.4392                                |
| 20                               | 5755                            | 5755.6567                               | 5754.0786                               | 5755.1866                               | 5754.8912                                |
|                                  | 5795                            | 5795.0705                               | 5794.9378                               | 5795.1512                               | 5794.7831                                |
| 30                               | 5755                            | 5755.9001                               | 5754.8017                               | 5755.8543                               | 5754.2562                                |
|                                  | 5795                            | 5795.7216                               | 5794.1477                               | 5795.2472                               | 5794.7847                                |
| 40                               | 5755                            | 5755.1024                               | 5754.7507                               | 5755.2724                               | 5754.6050                                |
|                                  | 5795                            | 5795.8765                               | 5794.0099                               | 5795.4332                               | 5794.6643                                |
| 50                               | 5755                            | 5755.4252                               | 5754.7639                               | 5755.3738                               | 5754.2242                                |
|                                  | 5795                            | 5795.5841                               | 5794.4383                               | 5795.8158                               | 5794.0812                                |

| Frequency stability versus Voltage |                                 |                                         |                                         |                                         |                                          |
|------------------------------------|---------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|
| Temperature: 25°C                  |                                 |                                         |                                         |                                         |                                          |
| Power<br>Supply<br>(AC)            | Operating<br>Frequency<br>(MHz) | 0 minute<br>Measured<br>Frequency (MHz) | 2 minute<br>Measured<br>Frequency (MHz) | 5 minute<br>Measured<br>Frequency (MHz) | 10 minute<br>Measured<br>Frequency (MHz) |
| 3.3                                | 5755                            | 5756.3274                               | 5754.4404                               | 5755.2999                               | 5753.7932                                |
|                                    | 5795                            | 5795.9494                               | 5794.4617                               | 5795.0210                               | 5793.9355                                |
| 3.7                                | 5755                            | 5755.6383                               | 5754.2834                               | 5755.5212                               | 5753.2892                                |
|                                    | 5795                            | 5795.4865                               | 5794.3749                               | 5795.9511                               | 5794.2040                                |
| 4.1                                | 5755                            | 5755.3928                               | 5754.2272                               | 5755.0129                               | 5754.1615                                |
|                                    | 5795                            | 5795.2479                               | 5794.8431                               | 5795.6777                               | 5794.7030                                |

Note: The worst case is FL=5752.4120MHz, FH=5796.5192MHz

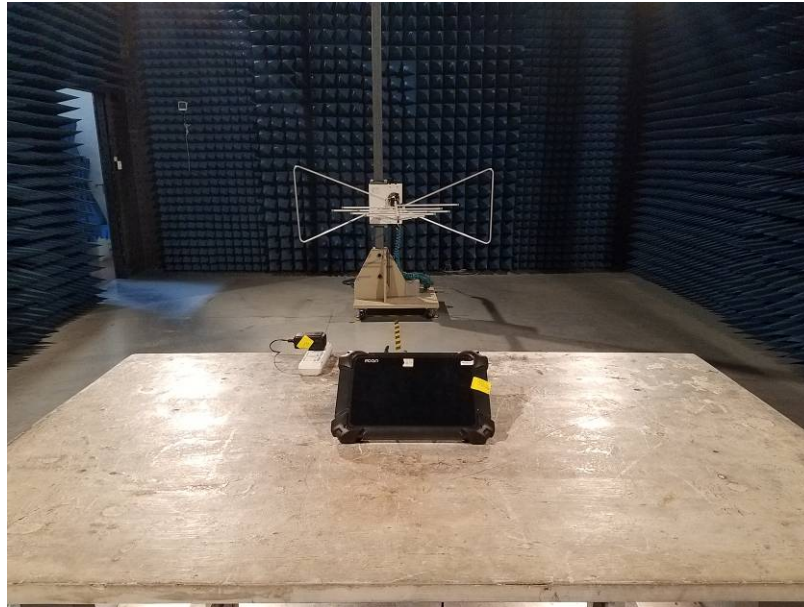
| 802.11ac(HT80)                   |                                 |                             |                             |                             |                             |
|----------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Frequency stability versus Temp. |                                 |                             |                             |                             |                             |
| Power Supply: DC 3.7V            |                                 |                             |                             |                             |                             |
| Temp.<br>(°C)                    | Operating<br>Frequency<br>(MHz) | 0 minute                    | 2 minute                    | 5 minute                    | 10 minute                   |
|                                  |                                 | Measured<br>Frequency (MHz) | Measured<br>Frequency (MHz) | Measured<br>Frequency (MHz) | Measured<br>Frequency (MHz) |
| -30                              | 5775                            | 5775.8687                   | 5776.5241                   | 5774.2629                   | 5773.1319                   |
| -20                              | 5775                            | 5775.4731                   | 5775.9258                   | 5774.1751                   | 5773.2599                   |
| -10                              | 5775                            | 5775.9487                   | 5775.0213                   | 5774.2449                   | 5774.4262                   |
| 0                                | 5775                            | 5775.7279                   | 5775.2045                   | 5774.7241                   | 5774.9434                   |
| 10                               | 5775                            | 5775.7363                   | 5775.2008                   | 5774.7361                   | 5774.4278                   |
| 20                               | 5775                            | 5775.3750                   | 5775.9273                   | 5774.2897                   | 5774.4837                   |
| 30                               | 5775                            | 5775.5255                   | 5775.5970                   | 5774.8657                   | 5774.0366                   |
| 40                               | 5775                            | 5775.2023                   | 5775.2572                   | 5774.2497                   | 5774.1757                   |
| 50                               | 5775                            | 5775.8829                   | 5775.3802                   | 5774.9905                   | 5774.3174                   |

| Frequency stability versus Voltage |                                 |                             |                             |                             |                             |
|------------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Temperature: 25°C                  |                                 |                             |                             |                             |                             |
| Power<br>Supply<br>(AC)            | Operating<br>Frequency<br>(MHz) | 0 minute                    | 2 minute                    | 5 minute                    | 10 minute                   |
|                                    |                                 | Measured<br>Frequency (MHz) | Measured<br>Frequency (MHz) | Measured<br>Frequency (MHz) | Measured<br>Frequency (MHz) |
| 3.3                                | 5775                            | 5774.0714                   | 5776.2450                   | 5776.8849                   | 5776.7561                   |
| 3.7                                | 5775                            | 5774.6022                   | 5775.1546                   | 5775.7853                   | 5775.1887                   |
| 4.1                                | 5775                            | 5773.2676                   | 5776.0722                   | 5775.7724                   | 5776.3721                   |

Note: The worst case is FL=5773.1168MHz, FH=5776.7635MHz

## 8 Test Setup Photo

Radiated Emission



## Conducted Emission



## 9 EUT Constructional Details

Reference to the test report No. GTS201803000169E01

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