

# **FCC REPORT**

## **(UNII)**

**Applicant:** HUNG WAI HOLDINGS LIMITED

**Address of Applicant:** Unit 11, 12/F., New Commerce Centre, 19 On Sum Street, Shatin, Hong Kong

**Equipment Under Test (EUT)**

Product Name: 15.6" LCD non-touch screen android quad core player

Model No.: DT156-AS4G1-1080

**FCC ID:** 2AB6Z-DT156-AS4G1

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

**Date of sample receipt:** 10 Mar., 2018

**Date of Test:** 10 Mar., to 28 May., 2018

**Date of report issued:** 28 May., 2018

**Test Result:** PASS\*

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

Authorized Signature:



Bruce Zhang  
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

## 2 Version

| Version No. | Date          | Description  |
|-------------|---------------|--|
| 00          | 28 May., 2018 | Android player Main board with wireless module (FCC ID: 2AB6Z-A18RK31) and same antenna were used by the device, only AC Power Line Conducted Emission and Radiated emission were re-tested. |
|             |               |  |
|             |               |  |
|             |               |  |
|             |               |  |

Tested by:

*Mike.Ou*

Date:

28 May., 2018

**Test Engineer**

Reviewed by:

*Wimer Zhang*

Date:

28 May., 2018

**Project Engineer**

## 3 Contents

|  | Page      |
|--|-----------|
| <b>1 COVER PAGE.....</b>                                   | <b>1</b>  |
| <b>2 VERSION .....</b>                                     | <b>2</b>  |
| <b>3 CONTENTS .....</b>                                    | <b>3</b>  |
| <b>4 TEST SUMMARY .....</b>                                | <b>4</b>  |
| <b>5 GENERAL INFORMATION.....</b>                          | <b>5</b>  |
| 5.1 CLIENT INFORMATION.....                                | 5         |
| 5.2 GENERAL DESCRIPTION OF E.U.T.....                      | 5         |
| 5.3 TEST ENVIRONMENT AND TEST MODE .....                   | 7         |
| 5.4 DESCRIPTION OF SUPPORT UNITS.....                      | 8         |
| 5.5 MEASUREMENT UNCERTAINTY.....                           | 8         |
| 5.6 RELATED SUBMITTAL(S) / GRANT (S).....                  | 8         |
| 5.7 LABORATORY FACILITY.....                               | 8         |
| 5.8 LABORATORY LOCATION .....                              | 8         |
| 5.9 TEST INSTRUMENTS LIST.....                             | 9         |
| <b>6 TEST RESULTS AND MEASUREMENT DATA .....</b>           | <b>10</b> |
| 6.1 ANTENNA REQUIREMENT .....                              | 10        |
| 6.2 CONDUCTED EMISSION .....                               | 11        |
| 6.3 CONDUCTED OUTPUT POWER .....                           | 14        |
| 6.4 OCCUPY BANDWIDTH .....                                 | 15        |
| 6.5 POWER SPECTRAL DENSITY .....                           | 16        |
| 6.6 BAND EDGE .....  | 17        |
| 6.7 SPURIOUS EMISSION.....                                 | 31        |
| 6.7.1 Restricted Band.....                                 | 31        |
| 6.7.2 Unwanted Emissions out of the Restricted Bands ..... | 44        |
| 6.8 FREQUENCY STABILITY .....                              | 60        |
| <b>7 TEST SETUP PHOTO .....</b>                            | <b>61</b> |
| <b>8 EUT CONSTRUCTIONAL DETAILS .....</b>                  | <b>62</b> |

## 4 Test Summary

| Test Item  | Section in CFR 47             | Test Result |
|--|-------------------------------|-------------|
| Antenna requirement  | 15.203 & 15.407 (a)           | Pass*       |
| AC Power Line Conducted Emission   | 15.207                        | Pass        |
| Conducted Peak Output Power  | 15.407 (a) (1) (iv) & (a) (3) | Pass*       |
| 26dB Occupied Bandwidth  | 15.407 (a) (5)                | Pass*       |
| 6dB Emission Bandwidth   | 15.407(e)                     | Pass*       |
| Power Spectral Density   | 15.407 (a) (1) (iv) & (a) (3) | Pass*       |
| Band Edge  | 15.407(b)                     | Pass        |
| Spurious Emission  | 15.407 (b) & 15.205 & 15.209  | Pass        |
| Frequency Stability  | 15.407(g)                     | Pass*       |
| <i>Pass: The EUT complies with the essential requirements in the standard.</i><br><i>N/A: Not Applicable.</i><br><i>Pass*: The test data refer to FCC ID: 2AB6Z-A18RK31.</i> |                               |             |

## 5 General Information

### 5.1 Client Information

|                        |   |
|------------------------|---|
| Applicant:             | HUNG WAI HOLDINGS LIMITED   |
| Address:               | Unit 11, 12/F., New Commerce Centre, 19 On Sum Street, Shatin, Hong Kong  |
| Manufacturer/ Factory: | HUNG WAI ELECTRONICS (HUIZHOU) LTD  |
| Address:               | 3rd floor, NO. 1, Minfeng Road, Huinan High and New Technology Industry Park, Huiao Avenue, Huizhou City, Guangdong |

### 5.2 General Description of E.U.T.

|  |  |
|--|--|
| Product Name:                          | 15.6" LCD non-touch screen android quad core player  |
| Model No.:                             | DT156-AS4G1-1080   |
| Operation Frequency:                   | Band 1: 5150MHz-5250MHz,<br>Band 4: 5725MHz-5825MHz  |
| Channel numbers:                       | Band 1: 802.11a/802.11n20: 4, 802.11n40: 2, 802.11ac: 1<br>Band 4: 802.11a/802.11n20: 5, 802.11n40: 2, 802.11ac: 1 |
| Channel separation:                    | 802.11a/802.11n20: 20MHz, 802.11n40: 40MHz,<br>802.11ac: 20/40/80MHz   |
| Modulation technology (IEEE 802.11a):  | BPSK, QPSK, 16-QAM, 64-QAM   |
| Modulation technology (IEEE 802.11n):  | BPSK, QPSK, 16-QAM, 64-QAM   |
| Modulation technology (IEEE 802.11ac): | BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM  |
| Data speed (IEEE 802.11a):             | 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps   |
| Data speed (IEEE 802.11n20):           | MCS0: 6.5Mbps, MCS1:13Mbps, MCS2:19.5Mbps, MCS3:26Mbps,<br>MCS4:39Mbps, MCS5:52Mbps, MCS6:58.5Mbps, MCS7:65Mbps    |
| Data speed (IEEE 802.11n40):           | MCS0:15Mbps, MCS1:30Mbps, MCS2:45Mbps, MCS3:60Mbps,<br>MCS4:90Mbps, MCS5:120Mbps, MCS6:135Mbps, MCS7:150Mbps       |
| Data speed (IEEE 802.11ac):            | Up to 433.3Mbps  |
| Antenna Type:                          | External Antenna   |
| Antenna gain:                          | 2.0 dBi  |
| Power supply:                          | DC 12V   |
| AC adapter:                            | Model No.:PS30D120K 2000UD<br>Input: AC100-240V, 50/60Hz, 800mA<br>Output: DC 12V, 2000mA                          |

| Operation Frequency each of channel |           |           |           |          |           |
|-------------------------------------|-----------|-----------|-----------|----------|-----------|
| Band 1                              |           |           |           |          |           |
| 802.11a/802.11n20                   |           | 802.11n40 |           | 802.11ac |           |
| Channel                             | Frequency | Channel   | Frequency | Channel  | Frequency |
| 36                                  | 5180MHz   | 38        | 5190MHz   | 42       | 5210MHz   |
| 40                                  | 5200MHz   | 46        | 5230MHz   |          |           |
| 44                                  | 5220MHz   |           |           |          |           |
| 48                                  | 5240MHz   |           |           |          |           |
| Band 4                              |           |           |           |          |           |
| 802.11a/802.11n20                   |           | 802.11n40 |           | 802.11ac |           |
| Channel                             | Frequency | Channel   | Frequency | Channel  | Frequency |
| 149                                 | 5745MHz   | 151       | 5755MHz   | 155      | 5775MHz   |
| 153                                 | 5765MHz   | 159       | 5795MHz   |          |           |
| 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:

| Band 1            |           |                 |           |                |           |
|-------------------|-----------|-----------------|-----------|----------------|-----------|
| 802.11a/802.11n20 |           | 802.11n40       |           | 802.11ac       |           |
| Channel           | Frequency | Channel         | Frequency | Channel        | Frequency |
| Lowest channel    | 5180MHz   | Lowest channel  | 5190MHz   | Middle channel | 5210MHz   |
| Middle channel    | 5200MHz   | Highest channel | 5230MHz   |                |           |
| Highest channel   | 5240MHz   |                 |           |                |           |
| Band 4            |           |                 |           |                |           |
| 802.11a/802.11n20 |           | 802.11n40       |           | 802.11ac       |           |
| Channel           | Frequency | Channel         | Frequency | Channel        | Frequency |
| Lowest channel    | 5745MHz   | Lowest channel  | 5755MHz   | Middle channel | 5775MHz   |
| Middle channel    | 5785MHz   | Highest channel | 5795MHz   |                |           |
| Highest channel   | 5825MHz   |                 |           |                |           |

## 5.3 Test environment and test mode

|  |   |
|--|---|
| <b>Operating Environment:</b>  |   |
| Temperature:   | 24.0 °C   |
| Humidity:  | 54 % RH   |
| Atmospheric Pressure:  | 1010 mbar   |
| <b>Test mode:</b>  |   |
| Continuously transmitting mode   | Keep the EUT in 100% duty cycle transmitting with modulation. |
| 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: |   |
| <b>Per-scan all kind of data rate, and found the follow list were the worst case.</b>  |   |
| Mode   | Data rate   |
| 802.11a  | 6 Mbps  |
| 802.11n20  | 6.5 Mbps  |
| 802.11n40  | 13 Mbps   |
| 802.11ac   | 29.3 Mbps   |

## 5.4 Description of Support Units

The EUT has been tested as an independent unit.

## 5.5 Measurement Uncertainty

| Parameters                          | Expanded Uncertainty (Confidence of 95%) |
|-------------------------------------|--|
| Conducted Emission (9kHz ~ 30MHz)   | 2.14 dB (k=2)                            |
| Radiated Emission (9kHz ~ 30MHz)    | 4.24 dB (k=2)                            |
| Radiated Emission (30MHz ~ 1000MHz) | 4.35 dB (k=2)                            |
| Radiated Emission (1GHz ~ 18GHz)    | 4.44 dB (k=2)                            |
| Radiated Emission (18GHz ~ 40GHz)   | 4.56 dB (k=2)                            |

## 5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

## 5.7 Laboratory Facility

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

- **FCC - Registration No.: 727551**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.

- **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

## 5.8 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>



## 5.9 Test Instruments list

| Radiated Emission: |                 |               |            |                      |                          |
|--------------------|-----------------|---------------|------------|----------------------|--------------------------|
| Test Equipment     | Manufacturer    | Model No.     | Serial No. | Cal. Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
| 3m SAC             | SAEMC           | 9m*6m*6m      | 966        | 07-22-2017           | 07-21-2020               |
| Loop Antenna       | SCHWARZBECK     | FMZB1519B     | 00044      | 02-25-2018           | 02-24-2019               |
| BiConiLog Antenna  | SCHWARZBECK     | VULB9163      | 497        | 02-25-2018           | 02-24-2019               |
| Horn Antenna       | SCHWARZBECK     | BBHA9120D     | 916        | 02-25-2018           | 02-24-2019               |
| EMI Test Software  | AUDIX           | E3            | 6.110919b  | N/A                  | N/A                      |
| Pre-amplifier      | HP              | 8447D         | 2944A09358 | 03-07-2018           | 03-06-2019               |
| Pre-amplifier      | CD              | PAP-1G18      | 11804      | 03-07-2018           | 03-06-2019               |
| Spectrum analyzer  | Rohde & Schwarz | FSP30         | 101454     | 03-07-2018           | 03-06-2019               |
| EMI Test Receiver  | Rohde & Schwarz | ESRP7         | 101070     | 03-07-2018           | 03-06-2019               |
| Cable              | ZDECL           | Z108-NJ-NJ-81 | 1608458    | 03-07-2018           | 03-06-2019               |
| Cable              | MICRO-COAX      | MFR64639      | K10742-5   | 03-07-2018           | 03-06-2019               |
| Cable              | SUHNER          | SUCOFLEX100   | 58193/4PE  | 03-07-2018           | 03-06-2019               |

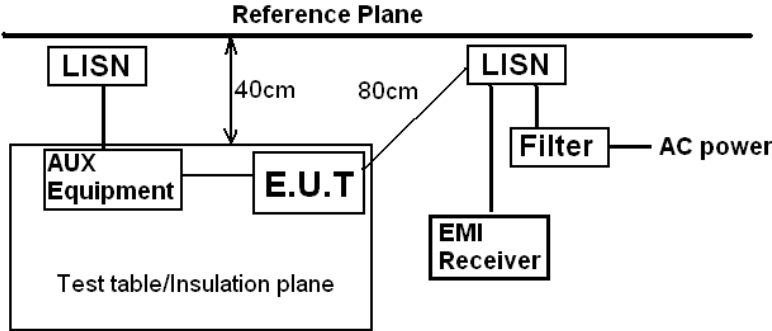
| Conducted Emission: |                 |            |             |                      |                          |
|---------------------|-----------------|------------|-------------|----------------------|--------------------------|
| Test Equipment      | Manufacturer    | Model No.  | Serial No.  | Cal. Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
| EMI Test Receiver   | Rohde & Schwarz | ESCI       | 101189      | 03-07-2018           | 03-06-2019               |
| Pulse Limiter       | SCHWARZBECK     | OSRAM 2306 | 9731        | 03-07-2018           | 03-06-2019               |
| LISN                | CHASE           | MN2050D    | 1447        | 02-25-2018           | 02-24-2019               |
| LISN                | Rohde & Schwarz | ESH3-Z5    | 8438621/010 | 07-21-2017           | 07-20-2018               |
| Cable               | HP              | 10503A     | N/A         | 03-07-2018           | 03-06-2019               |
| EMI Test Software   | AUDIX           | E3         | 6.110919b   | N/A                  | N/A                      |

## 6 Test results and Measurement Data

### 6.1 Antenna requirement

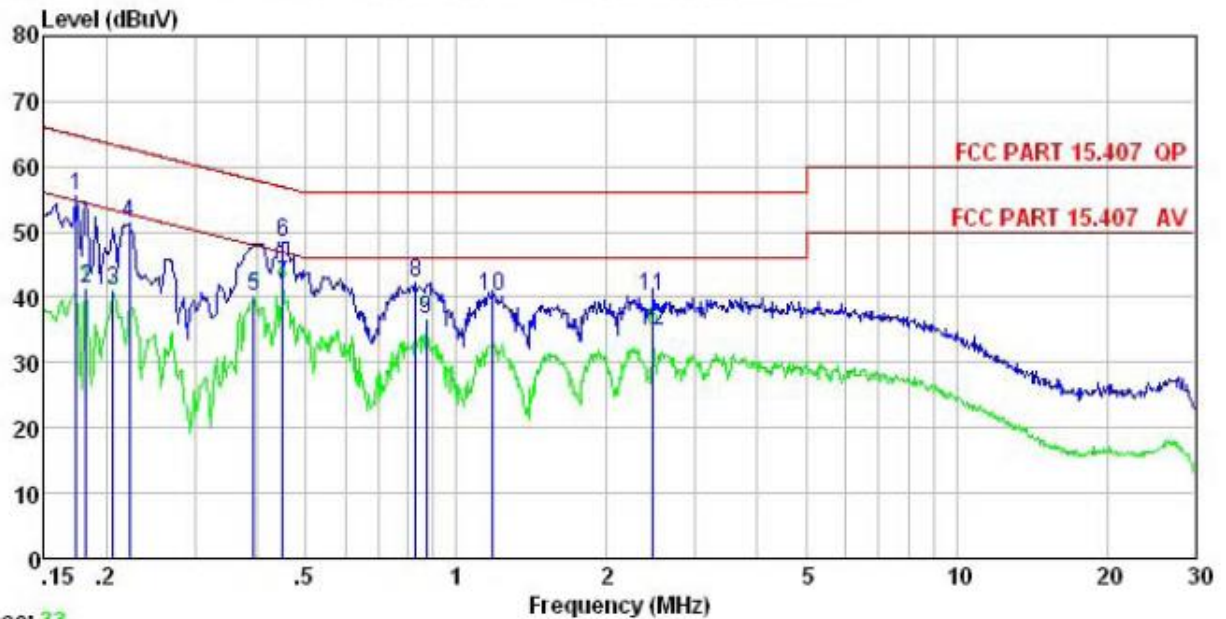
|   |                                     |
|---|-------------------------------------|
| <b>Standard requirement:</b>  | FCC Part15 E Section 15.203 /407(a) |
| <p>15.203 requirement:<br/>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible 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.<br/>This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</p> |                                     |
| <b>E.U.T Antenna:</b>   |                                     |
| <p>The WiFi antenna is an External antenna which cannot replace by end-user, the best case gain of the antenna is 2.0 dBi.</p>  |                                     |
|    |                                     |

## 6.2 Conducted Emission

|  |   |              |          |
|--|---|--------------|----------|
| 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   |              |          |
| Limit:   | Frequency range (MHz)   | Limit (dBuV) |          |
|  |   | Quasi-peak   |          |
|  | 0.15-0.5  | 66 to 56*    | 0.15-0.5 |
|  | 0.5-5   | 56           | 0.5-5    |
|  | 5-30  | 60           | 5-30     |
| * Decreases with the logarithm of the frequency. |   |              |          |
| Test procedure                                   | <ol style="list-style-type: none"> <li>1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). It provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>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).</li> <li>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.</li> </ol> |              |          |
| Test setup:                                      |  <p>Remark:<br/> E.U.T: Equipment Under Test<br/> LISN: Line Impedance Stabilization Network<br/> Test table height=0.8m</p>  |              |          |
| Test Instruments:                                | Refer to section 5.9 for details  |              |          |
| Test mode:                                       | Refer to section 5.3 for details.   |              |          |
| Test results:                                    | Passed  |              |          |

## Measurement Data:

Test Phase: Line



Trace: 33

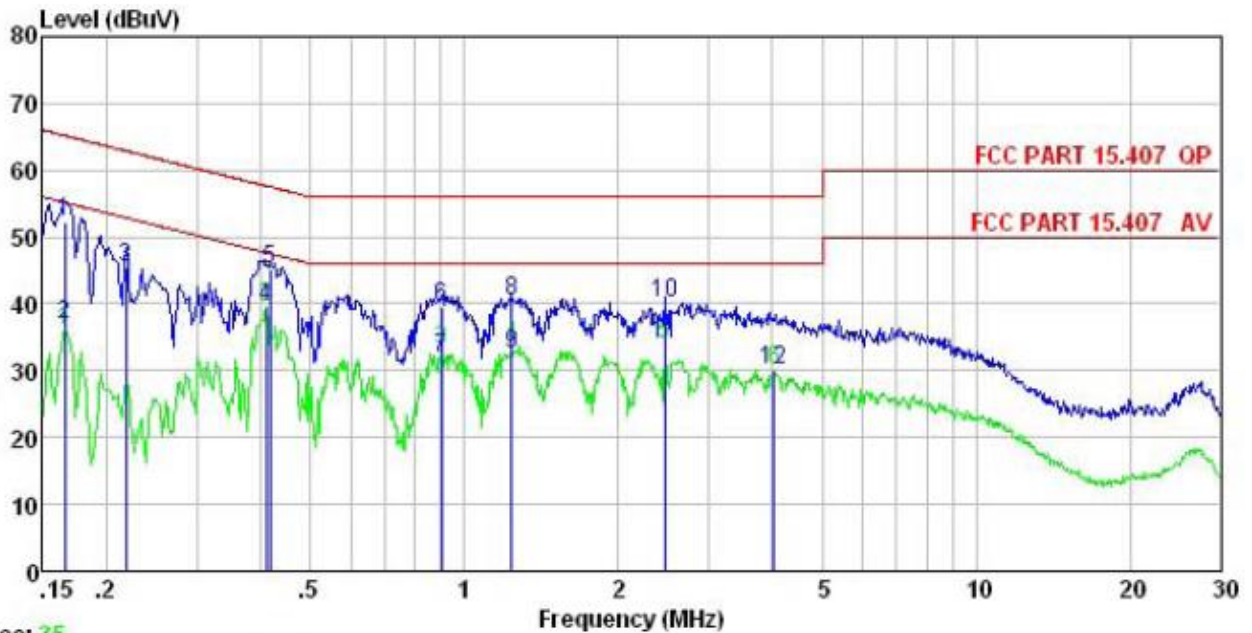
Site : CCIS Shielding Room  
 Condition : FCC PART 15.407 QP LISN(RS) LINE  
 EUT : nontouch screen android quad core player  
 Model : DT156-AS4G1-1080  
 Test Mode : 5G WIFI mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp: 23 °C Humi:56% Atmos:101KPa  
 Test Engineer: MIKE  
 Remark :

|    | Freq  | Read  | LISN   | Cable | Limit | Over  |                |
|----|-------|-------|--------|-------|-------|-------|----------------|
|    | MHz   | Level | Factor | Loss  | Line  | Limit | Remark         |
|    | MHz   | dBuV  | dB     | dB    | dBuV  | dB    |                |
| 1  | 0.174 | 43.89 | 0.73   | 10.77 | 55.39 | 64.77 | -9.38 QP       |
| 2  | 0.182 | 29.83 | 0.73   | 10.77 | 41.33 | 54.42 | -13.09 Average |
| 3  | 0.206 | 29.65 | 0.73   | 10.76 | 41.14 | 53.36 | -12.22 Average |
| 4  | 0.222 | 39.75 | 0.73   | 10.76 | 51.24 | 62.74 | -11.50 QP      |
| 5  | 0.393 | 28.59 | 0.75   | 10.72 | 40.06 | 47.99 | -7.93 Average  |
| 6  | 0.449 | 37.01 | 0.76   | 10.74 | 48.51 | 56.89 | -8.38 QP       |
| 7  | 0.449 | 30.34 | 0.76   | 10.74 | 41.84 | 46.89 | -5.05 Average  |
| 8  | 0.830 | 30.54 | 0.77   | 10.82 | 42.13 | 56.00 | -13.87 QP      |
| 9  | 0.871 | 25.01 | 0.78   | 10.83 | 36.62 | 46.00 | -9.38 Average  |
| 10 | 1.184 | 28.41 | 0.78   | 10.89 | 40.08 | 56.00 | -15.92 QP      |
| 11 | 2.474 | 28.56 | 0.78   | 10.94 | 40.28 | 56.00 | -15.72 QP      |
| 12 | 2.474 | 22.99 | 0.78   | 10.94 | 34.71 | 46.00 | -11.29 Average |

## Notes:

1. An initial pre-scan was performed on the live 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.

Test Phase: Neutral



Trace: 35

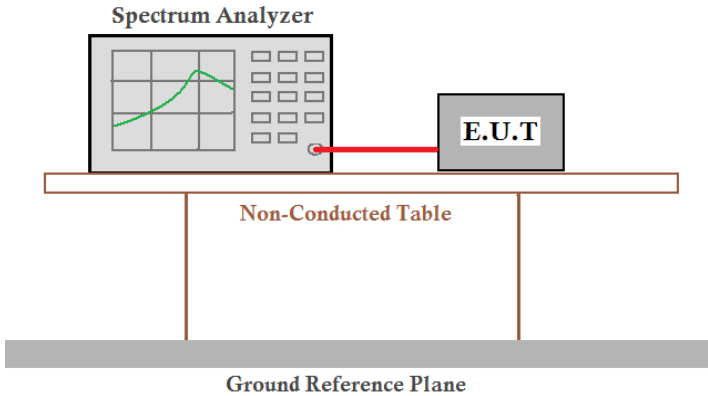
Site : CCIS Shielding Room  
 Condition : FCC PART 15.407 QP LISN(RS) NEUTRAL  
 EUT : nontouch screen android quad core player  
 Model : DT156-AS4G1-1080  
 Test Mode : 5G WIFI mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp: 23 °C Humi:56% Atmos:101KPa  
 Test Engineer: MIKE  
 Remark :

|    | Freq  | Read Level | LISN Factor | Cable Loss | Level | Limit Line | Over Limit | Remark  |
|----|-------|------------|-------------|------------|-------|------------|------------|---------|
|    | MHz   | dBuV       | dB          | dB         | dBuV  | dBuV       | dB         |         |
| 1  | 0.166 | 40.87      | 0.70        | 10.77      | 52.34 | 65.16      | -12.82     | QP      |
| 2  | 0.166 | 25.55      | 0.70        | 10.77      | 37.02 | 55.16      | -18.14     | Average |
| 3  | 0.219 | 34.00      | 0.66        | 10.76      | 45.42 | 62.88      | -17.46     | QP      |
| 4  | 0.410 | 28.24      | 0.62        | 10.72      | 39.58 | 47.64      | -8.06      | Average |
| 5  | 0.417 | 33.82      | 0.62        | 10.73      | 45.17 | 57.51      | -12.34     | QP      |
| 6  | 0.904 | 27.93      | 0.66        | 10.84      | 39.43 | 56.00      | -16.57     | QP      |
| 7  | 0.904 | 20.45      | 0.66        | 10.84      | 31.95 | 46.00      | -14.05     | Average |
| 8  | 1.236 | 28.89      | 0.67        | 10.90      | 40.46 | 56.00      | -15.54     | QP      |
| 9  | 1.236 | 20.99      | 0.67        | 10.90      | 32.56 | 46.00      | -13.44     | Average |
| 10 | 2.461 | 28.55      | 0.67        | 10.94      | 40.16 | 56.00      | -15.84     | QP      |
| 11 | 2.461 | 22.20      | 0.67        | 10.94      | 33.81 | 46.00      | -12.19     | Average |
| 12 | 4.027 | 18.50      | 0.69        | 10.89      | 30.08 | 46.00      | -15.92     | Average |

## Notes:

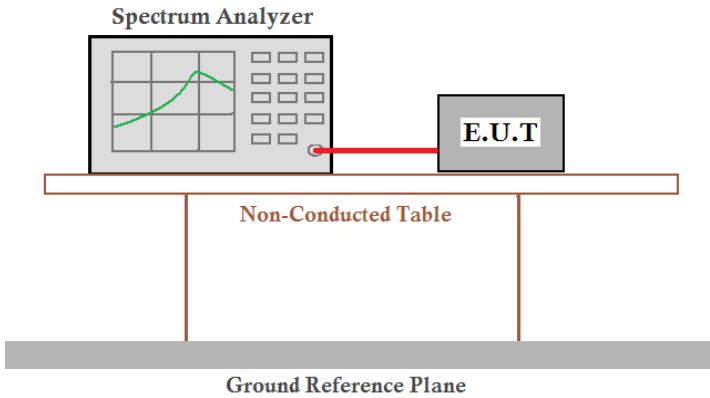
1. An initial pre-scan was performed on the live and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

## 6.3 Conducted Output Power

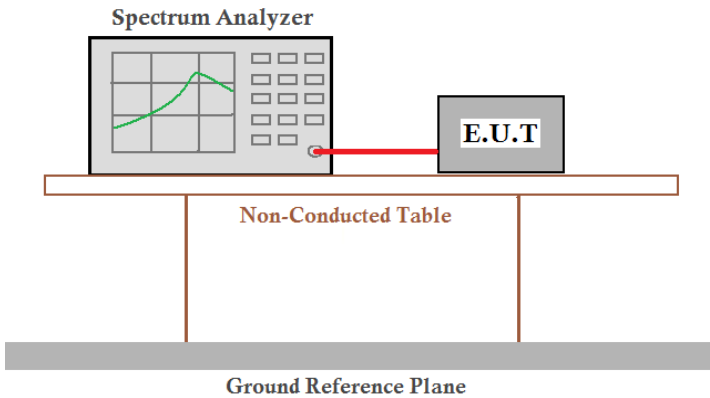
|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part15 E Section 15.407 (a) (1) (iv) & (a) (3)  |
| Test Method:      | ANSI C63.10: 2013, KDB789033  |
| Limit:            | Band 1: 24dBm<br>Band 4: 30dBm  |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer, shown with a grid and a green signal trace, is connected to an E.U.T. (Equipment Under Test) box by a red cable. Both the Spectrum Analyzer and the E.U.T. are positioned on a table labeled 'Non-Conducted Table'. This table is supported by two vertical legs and sits on a thick grey horizontal bar labeled 'Ground Reference Plane'.</p> |
| Test Instruments: | Refer to section 5.9 for details  |
| Test mode:        | Refer to section 5.3 for details  |
| Test results:     | Refer to FCC ID: 2AB6Z-A18RK31  |



## 6.4 Occupy Bandwidth

|                   |  |
|-------------------|--|
| Test Requirement: | FCC Part15 E Section 15.407 (a) (5) and Section 15.407 (e)   |
| Test Method:      | ANSI C63.10:2013 and KDB 789033  |
| Limit:            | Band 1/2/3/4: N/A (26dB Emission Bandwidth and 99% Occupy Bandwidth)<br>Band 4: >500kHz (6dB Bandwidth)  |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer, shown with a grid and a green curve, is connected to an E.U.T (Equipment Under Test) box by a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a table labeled 'Non-Conducted Table'. Below this table is a thick grey bar labeled 'Ground Reference Plane'.</p> |
| Test Instruments: | Refer to section 5.9 for details   |
| Test mode:        | Refer to section 5.3 for details   |
| Test results:     | Refer to FCC ID: 2AB6Z-A18RK31   |

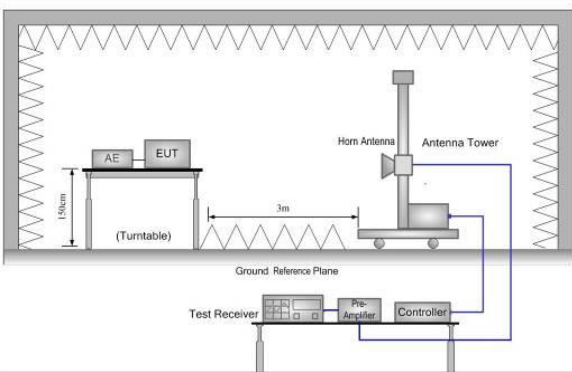
## 6.5 Power Spectral Density

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part15 E Section 15.407 (a) (1) (iv) & (a)(3)   |
| Test Method:      | ANSI C63.10:2013, KDB 789033  |
| Limit:            | Band 1: 11 dBm/MHz<br>Band 4: 30 dBm/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. Below the table is a Ground Reference Plane.</p> |
| Test Instruments: | Refer to section 5.9 for details  |
| Test mode:        | Refer to section 5.3 for details  |
| Test results:     | Refer to FCC ID: 2AB6Z-A18RK31  |



## 6.6 Band Edge

|  |  |   |                    |                  |  |
|--|--|---|--------------------|------------------|--|
| Test Requirement:  | FCC Part 15 E Section 15.407 (b)   |   |                    |                  |  |
| Test Method:   | ANSI C63.10:2013 , KDB 789033  |   |                    |                  |  |
| Receiver setup:  | Detector   | RBW   | VBW                | Remark           |  |
|  | Quasi-peak   | 120kHz  | 300kHz             | Quasi-peak Value |  |
|  | RMS  | 1MHz  | 3MHz               | Average Value    |  |
| Limit:   | Band   |   | Limit (dBuV/m @3m) | Remark           |  |
|  | Band 1   |   | 68.20              | Peak Value       |  |
|  |  |   | 54.00              | Average Value    |  |
|  | Band 4   |   | 78.20              | Peak Value       |  |
|  |  |   | 54.00              | Average Value    |  |
|  | Band 4 limit:<br>For transmitters operating in the 5.725-5.85 GHz band:<br>All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. |   |                    |                  |  |
|  | Remark:<br>1. Band 1 limit:<br>E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.   |   |                    |                  |  |
|  | 2. Band 4 limit:<br>E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBuV/m, for EIPR[dBm]=-27dBm.<br>E[dBμV/m] = EIRP[dBm] + 95.2=105.2 dBuV/m, for EIPR[dBm]=10dBm.<br>E[dBμV/m] = EIRP[dBm] + 95.2=110.8 dBuV/m, for EIPR[dBm]=15.6dBm.<br>E[dBμV/m] = EIRP[dBm] + 95.2=122.2 dBuV/m, for EIPR[dBm]=27dBm.   |   |                    |                  |  |
|  | Test Procedure:  | 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. |                    |                  |  |
|  |  | 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.  |                    |                  |  |
| 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.  |  |   |                    |                  |  |
| 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 rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.  |  |   |                    |                  |  |
| 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.  |  |   |                    |                  |  |
| 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. |  |   |                    |                  |  |

|                   |  |  |
|-------------------|--|--|
| Test setup:       |  |  |
| Test Instruments: | Refer to section 5.9 for details   |  |
| Test mode:        | Refer to section 5.3 for details   |  |
| Test results:     | Passed   |  |

**Measurement Data (worst case):**

**Band 1:**

| Band 1 – 802.11a  |                     |                     |                 |                    |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                    |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 46.46               | 31.38               | 7.05            | 41.93              | 42.96          | 68.20               | -25.24          | Horizontal   |
| 5150.00   | 46.45               | 31.38               | 7.05            | 41.93              | 42.95          | 68.20               | -25.25          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 37.48               | 31.38               | 7.05            | 41.93              | 33.98          | 54.00               | -20.02          | Horizontal   |
| 5150.00   | 37.41               | 31.38               | 7.05            | 41.93              | 33.91          | 54.00               | -20.09          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                    |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 47.48               | 30.82               | 7.11            | 41.89              | 43.52          | 68.20               | -24.68          | Horizontal   |
| 5350.00   | 47.32               | 30.82               | 7.11            | 41.89              | 43.36          | 68.20               | -24.84          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 37.18               | 30.82               | 7.11            | 41.89              | 33.22          | 54.00               | -20.78          | Horizontal   |
| 5350.00   | 37.66               | 30.82               | 7.11            | 41.89              | 33.70          | 54.00               | -20.30          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                    |                |                     |                 |              |

| Band 1 – 802.11n(HT20)  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 46.46               | 31.38               | 7.05            | 41.93                    | 42.96          | 68.20               | -25.24          | Horizontal   |
| 5150.00   | 46.26               | 31.38               | 7.05            | 41.93                    | 42.76          | 68.20               | -25.44          | Vertical     |
| Detector: Average   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 37.29               | 31.38               | 7.05            | 41.93                    | 33.79          | 54.00               | -20.21          | Horizontal   |
| 5150.00   | 37.48               | 31.38               | 7.05            | 41.93                    | 33.98          | 54.00               | -20.02          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 47.56               | 30.82               | 7.11            | 41.89                    | 43.60          | 68.20               | -24.60          | Horizontal   |
| 5350.00   | 47.44               | 30.82               | 7.11            | 41.89                    | 43.48          | 68.20               | -24.72          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 37.18               | 30.82               | 7.11            | 41.89                    | 33.22          | 54.00               | -20.78          | Horizontal   |
| 5350.00   | 37.12               | 30.82               | 7.11            | 41.89                    | 33.16          | 54.00               | -20.84          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11n(HT40)  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 46.25               | 31.38               | 7.05            | 41.93                    | 42.75          | 68.20               | -25.45          | Horizontal   |
| 5150.00   | 46.36               | 31.38               | 7.05            | 41.93                    | 42.86          | 68.20               | -25.34          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 37.35               | 31.38               | 7.05            | 41.93                    | 33.85          | 54.00               | -20.15          | Horizontal   |
| 5150.00   | 37.31               | 31.38               | 7.05            | 41.93                    | 33.81          | 54.00               | -20.19          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 47.59               | 30.82               | 35.37           | 7.11                     | 41.89          | 68.20               | -26.31          | Horizontal   |
| 5350.00   | 47.48               | 30.82               | 35.37           | 7.11                     | 41.89          | 68.20               | -26.31          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 37.15               | 30.82               | 7.11            | 41.89                    | 33.19          | 54.00               | -20.81          | Horizontal   |
| 5350.00   | 37.06               | 30.82               | 7.11            | 41.89                    | 33.10          | 54.00               | -20.90          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT20)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 46.32               | 31.38               | 7.05            | 41.93                    | 42.82          | 68.20               | -25.38          | Horizontal   |
| 5150.00   | 46.42               | 31.38               | 7.05            | 41.93                    | 42.92          | 68.20               | -25.28          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 37.42               | 31.38               | 7.05            | 41.93                    | 33.92          | 54.00               | -20.08          | Horizontal   |
| 5150.00   | 37.39               | 31.38               | 7.05            | 41.93                    | 33.89          | 54.00               | -20.11          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 41.52               | 30.82               | 7.11            | 41.89                    | 37.56          | 68.20               | -30.64          | Horizontal   |
| 5350.00   | 42.38               | 30.82               | 7.11            | 41.89                    | 38.42          | 68.20               | -29.78          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 31.26               | 30.82               | 7.11            | 41.89                    | 27.30          | 54.00               | -26.70          | Horizontal   |
| 5350.00   | 32.44               | 30.82               | 7.11            | 41.89                    | 28.48          | 54.00               | -25.52          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT40)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 46.33               | 31.38               | 7.05            | 41.93                    | 42.83          | 68.20               | -25.37          | Horizontal   |
| 5150.00   | 46.24               | 31.38               | 7.05            | 41.93                    | 42.74          | 68.20               | -25.46          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 37.26               | 31.38               | 7.05            | 41.93                    | 33.76          | 54.00               | -20.24          | Horizontal   |
| 5150.00   | 37.41               | 31.38               | 7.05            | 41.93                    | 33.91          | 54.00               | -20.09          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 42.68               | 30.82               | 7.11            | 41.89                    | 38.72          | 68.20               | -29.48          | Horizontal   |
| 5350.00   | 41.33               | 30.82               | 7.11            | 41.89                    | 37.37          | 68.20               | -30.83          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 32.78               | 30.82               | 7.11            | 41.89                    | 28.82          | 54.00               | -25.18          | Horizontal   |
| 5350.00   | 31.21               | 30.82               | 7.11            | 41.89                    | 27.25          | 54.00               | -26.75          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT80)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 46.31               | 31.38               | 7.05            | 41.93                    | 42.81          | 68.20               | -25.39          | Horizontal   |
| 5150.00   | 46.38               | 31.38               | 7.05            | 41.93                    | 42.88          | 68.20               | -25.32          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5150.00   | 37.36               | 31.38               | 7.05            | 41.93                    | 33.86          | 54.00               | -20.14          | Horizontal   |
| 5150.00   | 37.48               | 31.38               | 7.05            | 41.93                    | 33.98          | 54.00               | -20.02          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 42.21               | 30.82               | 35.37           | 7.11                     | 41.89          | 68.20               | -26.31          | Horizontal   |
| 5350.00   | 42.58               | 30.82               | 35.37           | 7.11                     | 41.89          | 68.20               | -26.31          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 32.84               | 30.82               | 7.11            | 41.89                    | 28.88          | 54.00               | -25.12          | Horizontal   |
| 5350.00   | 33.16               | 30.82               | 7.11            | 41.89                    | 29.20          | 54.00               | -24.80          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |



### Band 4:

| Band 4 – 802.11a  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.38               | 31.03               | 7.69            | 41.94                    | 43.16          | 78.20               | -35.04          | Horizontal   |
| 5725.00   | 46.51               | 31.03               | 7.69            | 41.94                    | 43.29          | 78.20               | -34.91          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 36.31               | 31.03               | 7.69            | 41.94                    | 33.09          | 54.00               | -20.91          | Horizontal   |
| 5725.00   | 36.42               | 31.03               | 7.69            | 41.94                    | 33.20          | 54.00               | -20.80          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 46.38               | 31.37               | 7.90            | 42.03                    | 43.62          | 78.20               | -34.58          | Horizontal   |
| 5850.00   | 45.77               | 31.37               | 7.90            | 42.03                    | 43.01          | 78.20               | -35.19          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 36.35               | 31.37               | 7.90            | 42.03                    | 33.59          | 54.00               | -20.41          | Horizontal   |
| 5850.00   | 35.52               | 31.37               | 7.90            | 42.03                    | 32.76          | 54.00               | -21.24          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11n(HT20)  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.38               | 31.03               | 7.69            | 41.94                    | 43.16          | 78.20               | -35.04          | Horizontal   |
| 5725.00   | 46.51               | 31.03               | 7.69            | 41.94                    | 43.29          | 78.20               | -34.91          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 36.48               | 31.03               | 7.69            | 41.94                    | 33.26          | 54.00               | -20.74          | Horizontal   |
| 5725.00   | 36.25               | 31.03               | 7.69            | 41.94                    | 33.03          | 54.00               | -20.97          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 46.43               | 31.37               | 7.90            | 42.03                    | 43.67          | 78.20               | -34.53          | Horizontal   |
| 5850.00   | 45.83               | 31.37               | 7.90            | 42.03                    | 43.07          | 78.20               | -35.13          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 36.26               | 31.37               | 7.90            | 42.03                    | 33.50          | 54.00               | -20.50          | Horizontal   |
| 5850.00   | 35.14               | 31.37               | 7.90            | 42.03                    | 32.38          | 54.00               | -21.62          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11n(HT40)  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.62               | 31.03               | 7.69            | 41.94                    | 43.40          | 78.20               | -34.80          | Horizontal   |
| 5725.00   | 46.44               | 31.03               | 7.69            | 41.94                    | 43.22          | 78.20               | -34.98          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 36.35               | 31.03               | 7.69            | 41.94                    | 33.13          | 54.00               | -20.87          | Horizontal   |
| 5725.00   | 36.29               | 31.03               | 7.69            | 41.94                    | 33.07          | 54.00               | -20.93          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 46.58               | 31.37               | 7.90            | 42.03                    | 43.82          | 78.20               | -34.38          | Horizontal   |
| 5850.00   | 45.78               | 31.37               | 7.90            | 42.03                    | 43.02          | 78.20               | -35.18          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 36.25               | 31.37               | 7.90            | 42.03                    | 33.49          | 54.00               | -20.51          | Horizontal   |
| 5850.00   | 35.29               | 31.37               | 7.90            | 42.03                    | 32.53          | 54.00               | -21.47          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

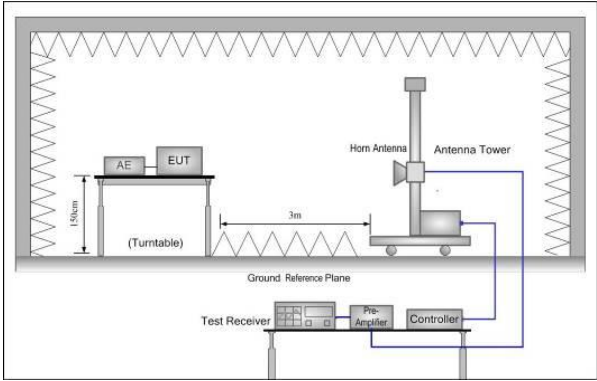
| Band 4 – 802.11ac(HT20)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.35               | 31.03               | 7.69            | 41.94                    | 43.13          | 78.20               | -35.07          | Horizontal   |
| 5725.00   | 45.58               | 31.03               | 7.69            | 41.94                    | 42.36          | 78.20               | -35.84          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 36.32               | 31.03               | 7.69            | 41.94                    | 33.10          | 54.00               | -20.90          | Horizontal   |
| 5725.00   | 35.48               | 31.03               | 7.69            | 41.94                    | 32.26          | 54.00               | -21.74          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 46.72               | 31.37               | 7.90            | 42.03                    | 43.96          | 78.20               | -34.24          | Horizontal   |
| 5850.00   | 45.36               | 31.37               | 7.90            | 42.03                    | 42.60          | 78.20               | -35.60          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 36.26               | 31.37               | 7.90            | 42.03                    | 33.50          | 54.00               | -20.50          | Horizontal   |
| 5850.00   | 35.20               | 31.37               | 7.90            | 42.03                    | 32.44          | 54.00               | -21.56          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11ac(HT40)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.22               | 31.03               | 7.69            | 41.94                    | 43.00          | 78.20               | -35.20          | Horizontal   |
| 5725.00   | 45.32               | 31.03               | 7.69            | 41.94                    | 42.10          | 78.20               | -36.10          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 36.75               | 31.03               | 7.69            | 41.94                    | 33.53          | 54.00               | -20.47          | Horizontal   |
| 5725.00   | 35.46               | 31.03               | 7.69            | 41.94                    | 32.24          | 54.00               | -21.76          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 46.32               | 31.37               | 7.90            | 42.03                    | 43.56          | 78.20               | -34.64          | Horizontal   |
| 5850.00   | 45.24               | 31.37               | 7.90            | 42.03                    | 42.48          | 78.20               | -35.72          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 36.15               | 31.37               | 7.90            | 42.03                    | 33.39          | 54.00               | -20.61          | Horizontal   |
| 5850.00   | 35.38               | 31.37               | 7.90            | 42.03                    | 32.62          | 54.00               | -21.38          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11ac(HT80)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Middle channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.44               | 31.03               | 7.69            | 41.94                    | 43.22          | 78.20               | -34.98          | Horizontal   |
| 5725.00   | 45.76               | 31.03               | 7.69            | 41.94                    | 42.54          | 78.20               | -35.66          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5725.00   | 46.52               | 31.03               | 7.69            | 41.94                    | 43.30          | 54.00               | -10.70          | Horizontal   |
| 5725.00   | 35.43               | 31.03               | 7.69            | 41.94                    | 32.21          | 54.00               | -21.79          | Vertical     |
| Test channel: Middle channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 46.45               | 31.37               | 7.90            | 42.03                    | 43.69          | 78.20               | -34.51          | Horizontal   |
| 5850.00   | 45.37               | 31.37               | 7.90            | 42.03                    | 42.61          | 78.20               | -35.59          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5850.00   | 36.25               | 31.37               | 7.90            | 42.03                    | 33.49          | 54.00               | -20.51          | Horizontal   |
| 5850.00   | 35.39               | 31.37               | 7.90            | 42.03                    | 32.63          | 54.00               | -21.37          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

## 6.7 Spurious Emission

### 6.7.1 Restricted Band

|                       |  |                    |      |               |               |
|-----------------------|--|--------------------|------|---------------|---------------|
| Test Requirement:     | FCC Part15 E Section 15.407(b)   |                    |      |               |               |
| Test Method:          | ANSI C63.10: 2013  |                    |      |               |               |
| Test Frequency Range: | 4.5 GHz to 5.15 GHz and 5.35GHz to 5.46GHz   |                    |      |               |               |
| Test site:            | Measurement Distance: 3m   |                    |      |               |               |
| Receiver setup:       | Frequency  | Detector           | RBW  | VBW           | Remark        |
|                       | Above 1GHz   | Peak               | 1MHz | 3MHz          | Peak Value    |
|                       |  | RMS                | 1MHz | 3MHz          | Average Value |
| Limit:                | Frequency  | Limit (dBuV/m @3m) |      | Remark        |               |
|                       | Above 1GHz   | 74.00              |      | Peak Value    |               |
|                       |  | 54.00              |      | Average Value |               |
| Test Procedure:       | <div>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.</div> <div>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.</div> <div>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.</div> <div>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.</div> <div>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</div> <div>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.</div> |                    |      |               |               |
| Test setup:           |    |                    |      |               |               |
| Test Instruments:     | Refer to section 5.9 for details   |                    |      |               |               |
| Test mode:            | Refer to section 5.3 for details   |                    |      |               |               |
| Test results:         | Passed   |                    |      |               |               |

**Measurement Data (worst case):**

**Band 1:**

| Band 1 – 802.11a  |                     |                     |                 |                    |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                    |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00   | 47.33               | 29.30               | 6.80            | 42.05              | 41.38          | 74.00               | -32.62          | Horizontal   |
| 4500.00   | 46.62               | 29.30               | 6.80            | 42.05              | 40.67          | 74.00               | -33.33          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00   | 37.33               | 29.30               | 6.80            | 42.05              | 31.38          | 54.00               | -22.62          | Horizontal   |
| 4500.00   | 37.62               | 29.30               | 6.80            | 42.05              | 31.67          | 54.00               | -22.33          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                    |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.51               | 30.54               | 7.18            | 41.85              | 42.38          | 74.00               | -31.62          | Horizontal   |
| 5460.00   | 47.68               | 30.54               | 7.18            | 41.85              | 43.55          | 74.00               | -30.45          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.19               | 30.54               | 7.18            | 41.85              | 32.06          | 54.00               | -21.94          | Horizontal   |
| 5460.00   | 35.45               | 30.54               | 7.18            | 41.85              | 31.32          | 54.00               | -22.68          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                    |                |                     |                 |              |



| Band 1 – 802.11n(HT20)   |                     |                     |                 |                          |                |                     |                 |              |
|--|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00  | 47.36               | 29.30               | 6.80            | 42.05                    | 41.41          | 74.00               | -32.59          | Horizontal   |
| 4500.00  | 46.32               | 29.30               | 6.80            | 42.05                    | 40.37          | 74.00               | -33.63          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00  | 37.36               | 29.30               | 6.80            | 42.05                    | 31.41          | 54.00               | -22.59          | Horizontal   |
| 4500.00  | 37.25               | 29.30               | 6.80            | 42.05                    | 31.30          | 54.00               | -22.70          | Vertical     |
| Test channel: Highest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 46.53               | 30.54               | 7.18            | 41.85                    | 42.40          | 74.00               | -31.60          | Horizontal   |
| 5460.00  | 47.72               | 30.54               | 7.18            | 41.85                    | 43.59          | 74.00               | -30.41          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 36.25               | 30.54               | 7.18            | 41.85                    | 32.12          | 54.00               | -21.88          | Horizontal   |
| 5460.00  | 35.76               | 30.54               | 7.18            | 41.85                    | 31.63          | 54.00               | -22.37          | Vertical     |
| Remark:<br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11n(HT40)  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00   | 47.63               | 29.30               | 6.80            | 42.05                    | 41.68          | 74.00               | -32.32          | Horizontal   |
| 4500.00   | 46.25               | 29.30               | 6.80            | 42.05                    | 40.30          | 74.00               | -33.70          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00   | 37.35               | 29.30               | 6.80            | 42.05                    | 31.40          | 54.00               | -22.60          | Horizontal   |
| 4500.00   | 37.26               | 29.30               | 6.80            | 42.05                    | 31.31          | 54.00               | -22.69          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.43               | 30.54               | 7.18            | 41.85                    | 42.30          | 74.00               | -31.70          | Horizontal   |
| 5460.00   | 47.61               | 30.54               | 7.18            | 41.85                    | 43.48          | 74.00               | -30.52          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.45               | 30.54               | 7.18            | 41.85                    | 32.32          | 54.00               | -21.68          | Horizontal   |
| 5460.00   | 35.83               | 30.54               | 7.18            | 41.85                    | 31.70          | 54.00               | -22.30          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT20)  |                     |                     |                 |                          |                |                     |                 |              |
|--|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00  | 47.68               | 29.30               | 6.80            | 42.05                    | 41.73          | 74.00               | -32.27          | Horizontal   |
| 4500.00  | 46.52               | 29.30               | 6.80            | 42.05                    | 40.57          | 74.00               | -33.43          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00  | 37.62               | 29.30               | 6.80            | 42.05                    | 31.67          | 54.00               | -22.33          | Horizontal   |
| 4500.00  | 36.45               | 29.30               | 6.80            | 42.05                    | 30.50          | 54.00               | -23.50          | Vertical     |
| Test channel: Highest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 47.52               | 30.54               | 7.18            | 41.85                    | 43.39          | 74.00               | -30.61          | Horizontal   |
| 5460.00  | 46.32               | 30.54               | 7.18            | 41.85                    | 42.19          | 74.00               | -31.81          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 37.52               | 30.54               | 7.18            | 41.85                    | 33.39          | 54.00               | -20.61          | Horizontal   |
| 5460.00  | 36.54               | 30.54               | 7.18            | 41.85                    | 32.41          | 54.00               | -21.59          | Vertical     |
| Remark:<br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT40)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00   | 47.56               | 29.30               | 6.80            | 42.05                    | 41.61          | 74.00               | -32.39          | Horizontal   |
| 4500.00   | 46.51               | 29.30               | 6.80            | 42.05                    | 40.56          | 74.00               | -33.44          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00   | 36.42               | 29.30               | 6.80            | 42.05                    | 30.47          | 54.00               | -23.53          | Horizontal   |
| 4500.00   | 36.35               | 29.30               | 6.80            | 42.05                    | 30.40          | 54.00               | -23.60          | Vertical     |
| Test channel: Highest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 47.62               | 34.90               | 7.18            | 41.85                    | 47.85          | 74.00               | -26.15          | Horizontal   |
| 5460.00   | 46.42               | 34.90               | 7.18            | 41.85                    | 46.65          | 74.00               | -27.35          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 37.59               | 34.90               | 7.18            | 41.85                    | 37.82          | 54.00               | -16.18          | Horizontal   |
| 5460.00   | 36.42               | 34.90               | 7.18            | 41.85                    | 36.65          | 54.00               | -17.35          | Vertical     |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT80)  |                     |                     |                 |                          |                |                     |                 |              |
|--|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00  | 47.36               | 29.30               | 6.80            | 42.05                    | 41.41          | 74.00               | -32.59          | Horizontal   |
| 4500.00  | 46.42               | 29.30               | 6.80            | 42.05                    | 40.47          | 74.00               | -33.53          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4500.00  | 37.62               | 29.30               | 6.80            | 42.05                    | 31.67          | 54.00               | -22.33          | Horizontal   |
| 4500.00  | 36.26               | 29.30               | 6.80            | 42.05                    | 30.31          | 54.00               | -23.69          | Vertical     |
| Test channel: Highest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 47.65               | 30.54               | 7.18            | 41.85                    | 43.52          | 74.00               | -30.48          | Horizontal   |
| 5460.00  | 46.58               | 30.54               | 7.18            | 41.85                    | 42.45          | 74.00               | -31.55          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 37.45               | 30.54               | 7.18            | 41.85                    | 33.32          | 54.00               | -20.68          | Horizontal   |
| 5460.00  | 36.54               | 30.54               | 7.18            | 41.85                    | 32.41          | 54.00               | -21.59          | Vertical     |
| Remark:<br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

**Band 4:**

| Band 4 – 802.11a  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 46.47               | 30.82               | 7.11            | 41.89                    | 42.51          | 74.00               | -31.49          | 46.47        |
| 5350.00   | 45.68               | 30.82               | 7.11            | 41.89                    | 41.72          | 74.00               | -32.28          | 45.68        |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 36.25               | 30.82               | 7.11            | 41.89                    | 32.29          | 54.00               | -21.71          | Horizontal   |
| 5350.00   | 35.32               | 30.82               | 7.11            | 41.89                    | 31.36          | 54.00               | -22.64          | Vertical     |
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.42               | 30.54               | 7.18            | 41.85                    | 42.29          | 74.00               | -31.71          | Horizontal   |
| 5460.00   | 45.31               | 30.54               | 7.18            | 41.85                    | 41.18          | 74.00               | -32.82          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.15               | 30.54               | 7.18            | 41.85                    | 32.02          | 54.00               | -21.98          | Horizontal   |
| 5460.00   | 35.42               | 30.54               | 7.18            | 41.85                    | 31.29          | 54.00               | -22.71          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11n(HT20)  |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 45.57               | 30.82               | 7.11            | 41.89                    | 41.61          | 74.00               | -32.39          | Horizontal   |
| 5350.00   | 45.32               | 30.82               | 7.11            | 41.89                    | 41.36          | 74.00               | -32.64          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 36.26               | 30.82               | 7.11            | 41.89                    | 32.30          | 54.00               | -21.70          | Horizontal   |
| 5350.00   | 35.32               | 30.82               | 7.11            | 41.89                    | 31.36          | 54.00               | -22.64          | Vertical     |
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.31               | 30.54               | 7.18            | 41.85                    | 42.18          | 74.00               | -31.82          | Horizontal   |
| 5460.00   | 45.48               | 30.54               | 7.18            | 41.85                    | 41.35          | 74.00               | -32.65          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.25               | 30.54               | 7.18            | 41.85                    | 32.12          | 54.00               | -21.88          | Horizontal   |
| 5460.00   | 35.35               | 30.54               | 7.18            | 41.85                    | 31.22          | 54.00               | -22.78          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11n(HT40)   |                     |                     |                 |                          |                |                     |                 |              |
|--|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00  | 46.62               | 30.82               | 7.11            | 41.89                    | 42.66          | 74.00               | -31.34          | Horizontal   |
| 5350.00  | 46.32               | 30.82               | 7.11            | 41.89                    | 42.36          | 74.00               | -31.64          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00  | 34.32               | 30.82               | 7.11            | 41.89                    | 30.36          | 54.00               | -23.64          | Horizontal   |
| 5350.00  | 35.26               | 30.82               | 7.11            | 41.89                    | 31.30          | 54.00               | -22.70          | Vertical     |
| Test channel: Lowest channel   |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 46.32               | 30.54               | 7.18            | 41.85                    | 42.19          | 74.00               | -31.81          | Horizontal   |
| 5460.00  | 45.39               | 30.54               | 7.18            | 41.85                    | 41.26          | 74.00               | -32.74          | Vertical     |
| Detector: Average Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00  | 36.28               | 30.54               | 7.18            | 41.85                    | 32.15          | 54.00               | -21.85          | Horizontal   |
| 5460.00  | 35.34               | 30.54               | 7.18            | 41.85                    | 31.21          | 54.00               | -22.79          | Vertical     |
| Remark:<br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

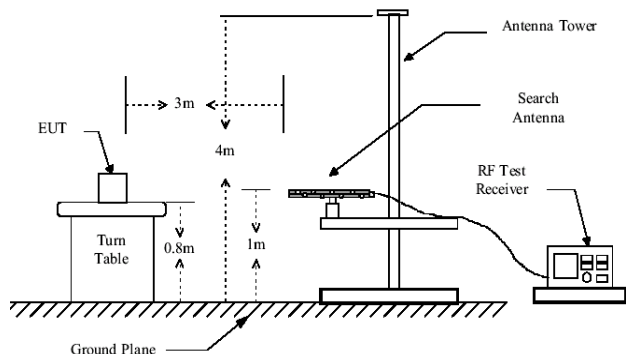


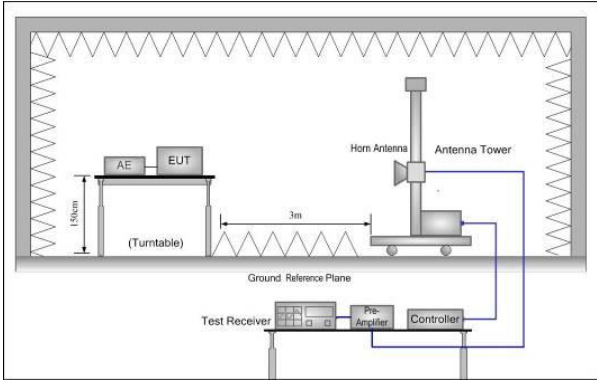
| Band 4 – 802.11ac(HT20)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 46.48               | 30.82               | 7.11            | 41.89                    | 42.52          | 74.00               | -31.48          | Horizontal   |
| 5350.00   | 45.68               | 30.82               | 7.11            | 41.89                    | 41.72          | 74.00               | -32.28          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 36.25               | 30.82               | 7.11            | 41.89                    | 32.29          | 54.00               | -21.71          | Horizontal   |
| 5350.00   | 35.24               | 30.82               | 7.11            | 41.89                    | 31.28          | 54.00               | -22.72          | Vertical     |
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.48               | 30.54               | 7.18            | 41.85                    | 42.35          | 74.00               | -31.65          | Horizontal   |
| 5460.00   | 45.39               | 30.54               | 7.18            | 41.85                    | 41.26          | 74.00               | -32.74          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.28               | 30.54               | 7.18            | 41.85                    | 32.15          | 54.00               | -21.85          | Horizontal   |
| 5460.00   | 35.29               | 30.54               | 7.18            | 41.85                    | 31.16          | 54.00               | -22.84          | Vertical     |
| <b>Remark:</b><br>1 Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2 The emission levels of other frequencies are very lower than the limit and not show in test report. |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11ac(HT40)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 46.55               | 30.82               | 7.11            | 41.89                    | 42.59          | 74.00               | -31.41          | Horizontal   |
| 5350.00   | 45.68               | 30.82               | 7.11            | 41.89                    | 41.72          | 74.00               | -32.28          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 36.68               | 30.82               | 7.11            | 41.89                    | 32.72          | 54.00               | -21.28          | Horizontal   |
| 5350.00   | 35.53               | 30.82               | 7.11            | 41.89                    | 31.57          | 54.00               | -22.43          | Vertical     |
| Test channel: Lowest channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.58               | 30.54               | 7.18            | 41.85                    | 42.45          | 74.00               | -31.55          | Horizontal   |
| 5460.00   | 45.45               | 30.54               | 7.18            | 41.85                    | 41.32          | 74.00               | -32.68          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.28               | 30.54               | 7.18            | 41.85                    | 32.15          | 54.00               | -21.85          | Horizontal   |
| 5460.00   | 35.48               | 30.54               | 7.18            | 41.85                    | 31.35          | 54.00               | -22.65          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

| Band 4 – 802.11ac(HT80)   |                     |                     |                 |                          |                |                     |                 |              |
|---|---------------------|---------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Middle channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 46.57               | 30.82               | 7.11            | 41.89                    | 42.61          | 74.00               | -31.39          | Horizontal   |
| 5350.00   | 46.48               | 30.82               | 7.11            | 41.89                    | 42.52          | 74.00               | -31.48          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5350.00   | 34.38               | 30.82               | 7.11            | 41.89                    | 30.42          | 54.00               | -23.58          | Horizontal   |
| 5350.00   | 35.42               | 30.82               | 7.11            | 41.89                    | 31.46          | 54.00               | -22.54          | Vertical     |
| Test channel: Middle channel  |                     |                     |                 |                          |                |                     |                 |              |
| Detector: Peak Value  |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 46.43               | 30.54               | 7.18            | 41.85                    | 42.30          | 74.00               | -31.70          | Horizontal   |
| 5460.00   | 45.48               | 30.54               | 7.18            | 41.85                    | 41.35          | 74.00               | -32.65          | Vertical     |
| Detector: Average Value   |                     |                     |                 |                          |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV/m) | Antenna Factor (dB) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 5460.00   | 36.34               | 30.54               | 7.18            | 41.85                    | 32.21          | 54.00               | -21.79          | Horizontal   |
| 5460.00   | 35.39               | 30.54               | 7.18            | 41.85                    | 31.26          | 54.00               | -22.74          | Vertical     |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                     |                     |                 |                          |                |                     |                 |              |

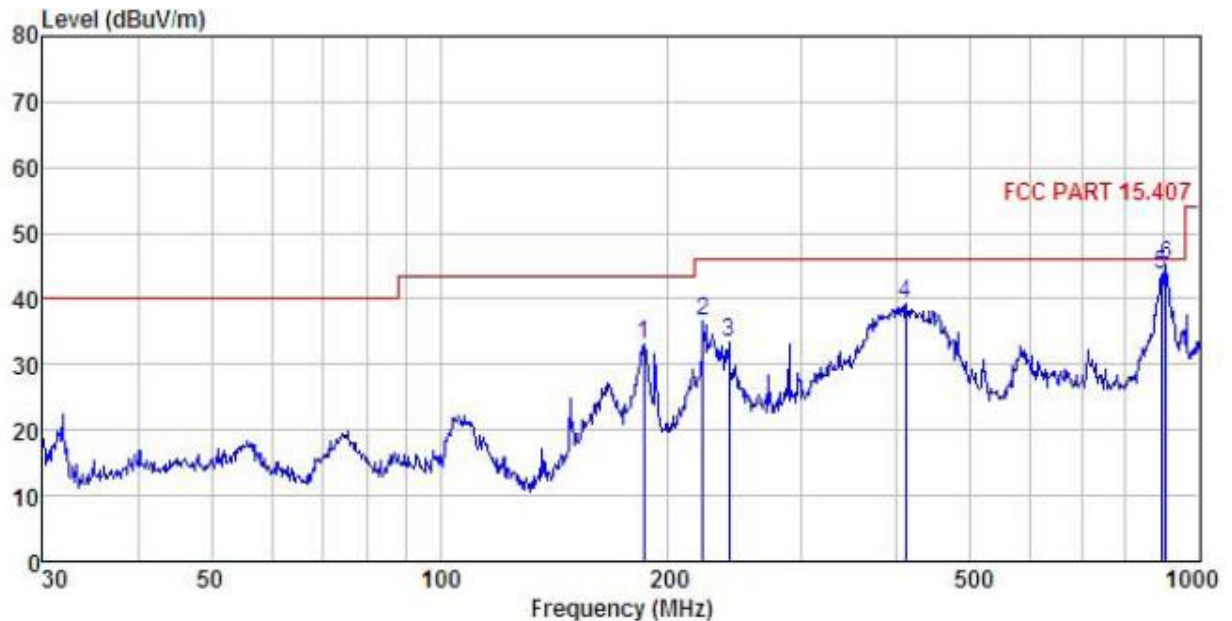
## 6.7.2 Unwanted Emissions out of the Restricted Bands

|                       |   |            |                    |        |                  |
|-----------------------|---|------------|--------------------|--------|------------------|
| Test Requirement:     | FCC Part15 C Section 15.209 and 15.205  |            |                    |        |                  |
| Test Method:          | ANSI C63.10: 2013   |            |                    |        |                  |
| Test Frequency Range: | 30MHz to 40GHz  |            |                    |        |                  |
| Test site:            | Measurement Distance: 3m  |            |                    |        |                  |
| Receiver setup:       | Frequency   | Detector   | RBW                | VBW    | Remark           |
|                       | 30MHz-1GHz  | Quasi-peak | 100kHz             | 300kHz | Quasi-peak Value |
|                       | Above 1GHz  | Peak       | 1MHz               | 3MHz   | Peak Value       |
|                       |   | RMS        | 1MHz               | 3MHz   | Average Value    |
| Limit:                | Frequency   |            | Limit (dBuV/m @3m) |        | Remark           |
|                       | 30MHz-88MHz   |            | 40.0               |        | Quasi-peak Value |
|                       | 88MHz-216MHz  |            | 43.5               |        | Quasi-peak Value |
|                       | 216MHz-960MHz   |            | 46.0               |        | Quasi-peak Value |
|                       | 960MHz-1GHz   |            | 54.0               |        | Quasi-peak Value |
|                       | Above 1GHz  |            | 68.20              |        | Peak Value       |
|                       |   |            | 54.00              |        | Average Value    |
|                       | Remark:<br>Above 1GHz limit:<br>$E[dBuV/m] = EIRP[dBm] + 95.2 = 68.2 \text{ dBuV/m}$ , for $EIPR[dBm] = -27dBm$ .   |            |                    |        |                  |
| Test Procedure:       | <div>1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</div> <div>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.</div> <div>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.</div> <div>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.</div> <div>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</div> <div>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.</div> |            |                    |        |                  |
| Test setup:           | <div>Below 1GHz</div> <div></div>   |            |                    |        |                  |

|                   |  |
|-------------------|--|
|                   | <p>Above 1GHz</p>  |
| Test Instruments: | Refer to section 5.9 for details   |
| Test mode:        | Refer to section 5.3 for details   |
| Test results:     | Passed   |

**Measurement Data (worst case):**  
**Below 1GHz**

Test Polarization: Horizontal



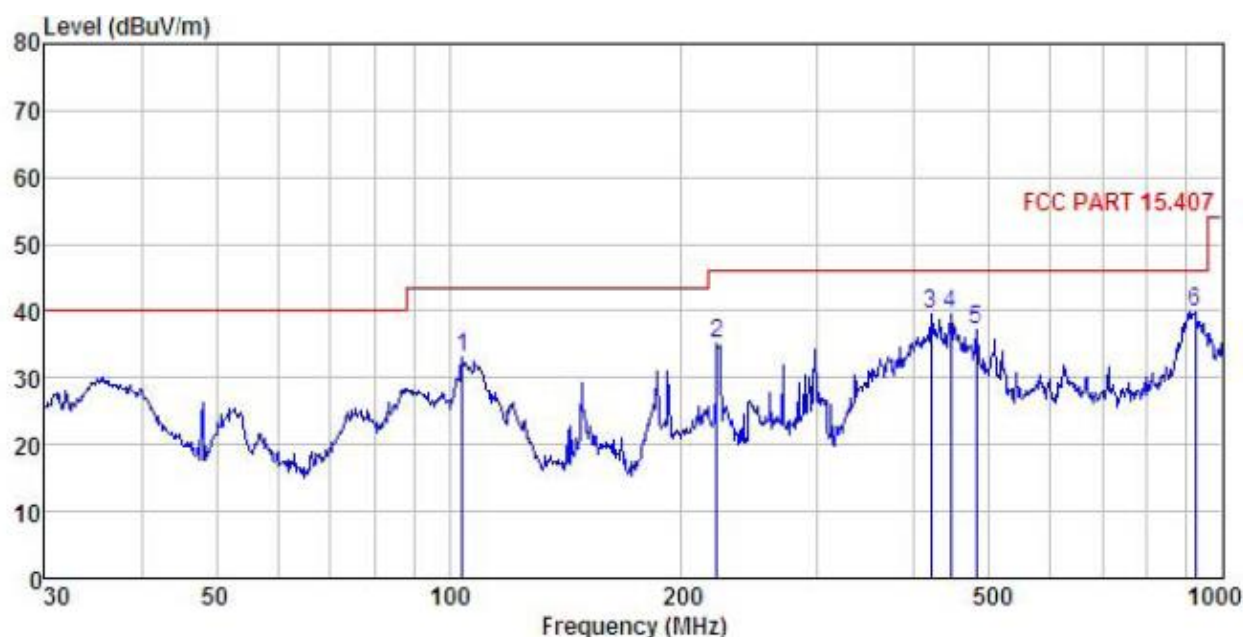
Site : 3m chamber  
 Condition : FCC PART 15.407 3m VULB9163(30M2G) HORIZONTAL  
 EUT : 15.6" LCD non-touch screen android quad  
 Model : DT156-AS4G1-1080  
 Test mode : 5G WIFI mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: MIKE  
 Remark :

|   | Freq    | Read  | Antenna | Cable | Preamp | Level  | Limit  | Over   |        |
|---|---------|-------|---------|-------|--------|--------|--------|--------|--------|
|   | MHz     | Level | Factor  | Loss  | Factor | Level  | Line   | Limit  | Remark |
|   |         | dBuV  | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |        |
| 1 | 185.788 | 48.68 | 10.62   | 2.77  | 28.93  | 33.14  | 43.50  | -10.36 | QP     |
| 2 | 222.170 | 50.14 | 12.35   | 2.84  | 28.69  | 36.64  | 46.00  | -9.36  | QP     |
| 3 | 239.987 | 46.06 | 12.97   | 2.82  | 28.59  | 33.26  | 46.00  | -12.74 | QP     |
| 4 | 410.383 | 49.41 | 15.63   | 3.10  | 28.80  | 39.34  | 46.00  | -6.66  | QP     |
| 5 | 890.728 | 45.73 | 22.12   | 3.80  | 27.90  | 43.75  | 46.00  | -2.25  | QP     |
| 6 | 903.309 | 46.94 | 22.31   | 3.74  | 27.87  | 45.12  | 46.00  | -0.88  | QP     |

**Remark:**

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

Test Polarization: Vertical



Site : 3m chamber  
 Condition : FCC PART 15.407 3m VULB9163(30M2G) VERTICAL  
 EUT : 15.6" LCD non-touch screen android quad  
 Model : DT156-AS4G1-1080  
 Test mode : 5G WIFI mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: MIKE  
 Remark :

|   | Freq    | ReadAntenna | Cable Preamp |             | Limit | Over   |                 |
|---|---------|-------------|--------------|-------------|-------|--------|-----------------|
|   | MHz     | Level       | Factor       | Loss Factor | Line  | Limit  | Remark          |
|   |         | dBuV        | dB/m         | dB          | dB    | dBuV/m | dBuV/m          |
| 1 | 104.170 | 48.68       | 11.96        | 1.99        | 29.50 | 33.13  | 43.50 -10.37 QP |
| 2 | 222.170 | 48.58       | 12.35        | 2.84        | 28.69 | 35.08  | 46.00 -10.92 QP |
| 3 | 420.580 | 49.46       | 15.76        | 3.13        | 28.82 | 39.53  | 46.00 -6.47 QP  |
| 4 | 444.851 | 49.07       | 16.04        | 3.19        | 28.86 | 39.44  | 46.00 -6.56 QP  |
| 5 | 480.528 | 45.83       | 16.97        | 3.46        | 28.92 | 37.34  | 46.00 -8.66 QP  |
| 6 | 922.516 | 41.44       | 22.35        | 3.94        | 27.81 | 39.92  | 46.00 -6.08 QP  |

Remark:

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



Above 1GHz:  
Band 1:

| Band 1 – 802.11a  |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10360.00  | 47.69             | 36.94                 | 9.75            | 42.02                    | 52.36          | 68.20               | -15.84          | Vertical     |
| 10360.00  | 47.68             | 36.94                 | 9.75            | 42.02                    | 52.35          | 68.20               | -15.85          | Horizontal   |
| Detector: 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 |
| 10360.00  | 37.58             | 36.94                 | 9.75            | 42.02                    | 42.25          | 54.00               | -11.75          | Vertical     |
| 10360.00  | 37.49             | 36.94                 | 9.75            | 42.02                    | 42.16          | 54.00               | -11.84          | Horizontal   |
| Test channel: Middle channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10400.00  | 46.58             | 36.96                 | 9.85            | 41.95                    | 51.44          | 68.20               | -16.76          | Vertical     |
| 10400.00  | 46.88             | 36.96                 | 9.85            | 41.95                    | 51.74          | 68.20               | -16.46          | Horizontal   |
| Detector: 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 |
| 10400.00  | 36.86             | 36.96                 | 9.85            | 41.95                    | 41.72          | 54.00               | -12.28          | Vertical     |
| 10400.00  | 37.68             | 36.96                 | 9.85            | 41.95                    | 42.54          | 54.00               | -11.46          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10480.00  | 47.64             | 37.49                 | 10.81           | 42.29                    | 53.65          | 68.20               | -14.55          | Vertical     |
| 10480.00  | 46.56             | 37.49                 | 10.81           | 42.29                    | 52.57          | 68.20               | -15.63          | Horizontal   |
| Detector: 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 |
| 10480.00  | 38.61             | 37.49                 | 10.81           | 42.29                    | 44.62          | 54.00               | -9.38           | Vertical     |
| 10480.00  | 37.33             | 37.49                 | 10.81           | 42.29                    | 43.34          | 54.00               | -10.66          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |



| Band 1 – 802.11n(HT20)  |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10360.00  | 47.68             | 36.94                 | 9.75            | 42.02                    | 52.35          | 68.20               | -15.85          | Vertical     |
| 10360.00  | 47.63             | 36.94                 | 9.75            | 42.02                    | 52.30          | 68.20               | -15.90          | Horizontal   |
| Detector: 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 |
| 10360.00  | 37.33             | 36.94                 | 9.75            | 42.02                    | 42.00          | 54.00               | -12.00          | Vertical     |
| 10360.00  | 37.42             | 36.94                 | 9.75            | 42.02                    | 42.09          | 54.00               | -11.91          | Horizontal   |
| Test channel: Middle channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10400.00  | 46.72             | 36.96                 | 9.85            | 41.95                    | 51.58          | 68.20               | -16.62          | Vertical     |
| 10400.00  | 46.88             | 36.96                 | 9.85            | 41.95                    | 51.74          | 68.20               | -16.46          | Horizontal   |
| Detector: 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 |
| 10400.00  | 36.81             | 36.96                 | 9.85            | 41.95                    | 41.67          | 54.00               | -12.33          | Vertical     |
| 10400.00  | 37.67             | 36.96                 | 9.85            | 41.95                    | 42.53          | 54.00               | -11.47          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10480.00  | 47.59             | 37.49                 | 10.81           | 42.29                    | 53.60          | 68.20               | -14.60          | Vertical     |
| 10480.00  | 46.62             | 37.49                 | 10.81           | 42.29                    | 52.63          | 68.20               | -15.57          | Horizontal   |
| Detector: 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 |
| 10480.00  | 38.46             | 37.49                 | 10.81           | 42.29                    | 44.47          | 54.00               | -9.53           | Vertical     |
| 10480.00  | 37.58             | 37.49                 | 10.81           | 42.29                    | 43.59          | 54.00               | -10.41          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 1 – 802.11n(HT40)  |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10380.00  | 47.76             | 36.94                 | 9.75            | 42.02                    | 52.43          | 68.20               | -15.77          | Vertical     |
| 10380.00  | 47.61             | 36.94                 | 9.75            | 42.02                    | 52.28          | 68.20               | -15.92          | Horizontal   |
| Detector: 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 |
| 10380.00  | 37.23             | 36.94                 | 9.75            | 42.02                    | 41.90          | 54.00               | -12.10          | Vertical     |
| 10380.00  | 37.42             | 36.94                 | 9.75            | 42.02                    | 42.09          | 54.00               | -11.91          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10460.00  | 46.54             | 37.49                 | 10.81           | 42.29                    | 52.55          | 68.20               | -15.65          | Vertical     |
| 10460.00  | 46.93             | 37.49                 | 10.81           | 42.29                    | 52.94          | 68.20               | -15.26          | Horizontal   |
| Detector: 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 |
| 10460.00  | 36.92             | 37.49                 | 10.81           | 42.29                    | 42.93          | 54.00               | -11.07          | Vertical     |
| 10460.00  | 37.69             | 37.49                 | 10.81           | 42.29                    | 43.70          | 54.00               | -10.30          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT20)   |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10360.00  | 47.61             | 36.94                 | 9.75            | 42.02                    | 52.28          | 68.20               | -15.92          | Vertical     |
| 10360.00  | 47.72             | 36.94                 | 9.75            | 42.02                    | 52.39          | 68.20               | -15.81          | Horizontal   |
| Detector: 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 |
| 10360.00  | 37.54             | 36.94                 | 9.75            | 42.02                    | 42.21          | 54.00               | -11.79          | Vertical     |
| 10360.00  | 37.63             | 36.94                 | 9.75            | 42.02                    | 42.30          | 54.00               | -11.70          | Horizontal   |
| Test channel: Middle channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10400.00  | 46.58             | 36.96                 | 9.85            | 41.95                    | 51.44          | 68.20               | -16.76          | Vertical     |
| 10400.00  | 46.87             | 36.96                 | 9.85            | 41.95                    | 51.73          | 68.20               | -16.47          | Horizontal   |
| Detector: 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 |
| 10400.00  | 36.86             | 36.96                 | 9.85            | 41.95                    | 41.72          | 54.00               | -12.28          | Vertical     |
| 10400.00  | 37.65             | 36.96                 | 9.85            | 41.95                    | 42.51          | 54.00               | -11.49          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10480.00  | 47.66             | 37.49                 | 10.81           | 42.29                    | 53.67          | 68.20               | -14.53          | Vertical     |
| 10480.00  | 46.54             | 37.49                 | 10.81           | 42.29                    | 52.55          | 68.20               | -15.65          | Horizontal   |
| Detector: 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 |
| 10480.00  | 38.46             | 37.49                 | 10.81           | 42.29                    | 44.47          | 54.00               | -9.53           | Vertical     |
| 10480.00  | 37.65             | 37.49                 | 10.81           | 42.29                    | 43.66          | 54.00               | -10.34          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT40)   |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10380.00  | 47.88             | 36.94                 | 9.75            | 42.02                    | 52.55          | 68.20               | -15.65          | Vertical     |
| 10380.00  | 47.65             | 36.94                 | 9.75            | 42.02                    | 52.32          | 68.20               | -15.88          | Horizontal   |
| Detector: 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 |
| 10380.00  | 37.26             | 36.94                 | 9.75            | 42.02                    | 41.93          | 54.00               | -12.07          | Vertical     |
| 10380.00  | 37.52             | 36.94                 | 9.75            | 42.02                    | 42.19          | 54.00               | -11.81          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 10460.00  | 46.54             | 37.49                 | 10.81           | 42.29                    | 52.55          | 68.20               | -15.65          | Vertical     |
| 10460.00  | 46.88             | 37.49                 | 10.81           | 42.29                    | 52.89          | 68.20               | -15.31          | Horizontal   |
| Detector: 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 |
| 10460.00  | 36.86             | 37.49                 | 10.81           | 42.29                    | 42.87          | 54.00               | -11.13          | Vertical     |
| 10460.00  | 37.65             | 37.49                 | 10.81           | 42.29                    | 43.66          | 54.00               | -10.34          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 1 – 802.11ac(HT80)  |                   |                       |                 |                    |                |                     |                 |              |
|--|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel   |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 10420.00   | 47.89             | 36.96                 | 9.85            | 41.95              | 52.75          | 68.20               | -15.45          | Vertical     |
| 10420.00   | 47.66             | 36.96                 | 9.85            | 41.95              | 52.52          | 68.20               | -15.68          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 10420.00   | 37.44             | 36.96                 | 9.85            | 41.95              | 42.30          | 54.00               | -11.70          | Vertical     |
| 10420.00   | 37.61             | 36.96                 | 9.85            | 41.95              | 42.47          | 54.00               | -11.53          | Horizontal   |
| Remark:<br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                    |                |                     |                 |              |

## Band 4:

| Band 4 – 802.11a   |                   |                       |                 |                    |                |                     |                 |              |
|--|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel   |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11490.00   | 47.31             | 37.49                 | 10.81           | 42.29              | 53.32          | 74.00               | -20.68          | Vertical     |
| 11490.00   | 46.57             | 37.49                 | 10.81           | 42.29              | 52.58          | 74.00               | -21.42          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11490.00   | 36.33             | 37.49                 | 10.81           | 42.29              | 42.34          | 54.00               | -11.66          | Vertical     |
| 11490.00   | 37.14             | 37.49                 | 10.81           | 42.29              | 43.15          | 54.00               | -10.85          | Horizontal   |
| Test channel: Middle channel   |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11570.00   | 45.24             | 37.55                 | 10.78           | 42.27              | 51.30          | 74.00               | -22.70          | Vertical     |
| 11570.00   | 46.33             | 37.55                 | 10.78           | 42.27              | 52.39          | 74.00               | -21.61          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11570.00   | 36.08             | 37.55                 | 10.78           | 42.27              | 42.14          | 54.00               | -11.86          | Vertical     |
| 11570.00   | 35.58             | 37.55                 | 10.78           | 42.27              | 41.64          | 54.00               | -12.36          | Horizontal   |
| Test channel: Highest channel  |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11650.00   | 46.36             | 37.60                 | 10.76           | 42.26              | 52.46          | 74.00               | -21.54          | Vertical     |
| 11650.00   | 46.39             | 37.60                 | 10.76           | 42.26              | 52.49          | 74.00               | -21.51          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11650.00   | 36.65             | 37.60                 | 10.76           | 42.26              | 42.75          | 54.00               | -11.25          | Vertical     |
| 11650.00   | 35.88             | 37.60                 | 10.76           | 42.26              | 41.98          | 54.00               | -12.02          | Horizontal   |
| Remark:  |                   |                       |                 |                    |                |                     |                 |              |
| 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.              |                   |                       |                 |                    |                |                     |                 |              |
| 2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                    |                |                     |                 |              |

| Band 4 – 802.11n(HT20)  |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11490.00  | 47.18             | 37.49                 | 10.81           | 42.29                    | 53.19          | 74.00               | -20.81          | Vertical     |
| 11490.00  | 47.06             | 37.49                 | 10.81           | 42.29                    | 53.07          | 74.00               | -20.93          | Horizontal   |
| Detector: 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 |
| 11490.00  | 36.16             | 37.49                 | 10.81           | 42.29                    | 42.17          | 54.00               | -11.83          | Vertical     |
| 11490.00  | 37.05             | 37.49                 | 10.81           | 42.29                    | 43.06          | 54.00               | -10.94          | Horizontal   |
| Test channel: Middle channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11570.00  | 45.25             | 37.55                 | 10.78           | 42.27                    | 51.31          | 74.00               | -22.69          | Vertical     |
| 11570.00  | 46.52             | 37.55                 | 10.78           | 42.27                    | 52.58          | 74.00               | -21.42          | Horizontal   |
| Detector: 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 |
| 11570.00  | 36.25             | 37.55                 | 10.78           | 42.27                    | 42.31          | 54.00               | -11.69          | Vertical     |
| 11570.00  | 35.61             | 37.55                 | 10.78           | 42.27                    | 41.67          | 54.00               | -12.33          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11650.00  | 46.38             | 37.60                 | 10.76           | 42.26                    | 52.48          | 74.00               | -21.52          | Vertical     |
| 11650.00  | 46.21             | 37.60                 | 10.76           | 42.26                    | 52.31          | 74.00               | -21.69          | Horizontal   |
| Detector: 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 |
| 11650.00  | 37.06             | 37.60                 | 10.76           | 42.26                    | 43.16          | 54.00               | -10.84          | Vertical     |
| 11650.00  | 36.26             | 37.60                 | 10.76           | 42.26                    | 42.36          | 54.00               | -11.64          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 4 – 802.11n(HT40)  |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11510.00  | 45.88             | 37.50                 | 10.81           | 42.29                    | 51.90          | 74.00               | -22.10          | Vertical     |
| 11510.00  | 46.14             | 37.50                 | 10.81           | 42.29                    | 52.16          | 74.00               | -21.84          | Horizontal   |
| Detector: 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 |
| 11510.00  | 35.62             | 37.50                 | 10.81           | 42.29                    | 41.64          | 54.00               | -12.36          | Vertical     |
| 11510.00  | 36.84             | 37.50                 | 10.81           | 42.29                    | 42.86          | 54.00               | -11.14          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11590.00  | 46.29             | 37.56                 | 10.77           | 42.27                    | 52.35          | 74.00               | -21.65          | Vertical     |
| 11590.00  | 45.25             | 37.56                 | 10.77           | 42.27                    | 51.31          | 74.00               | -22.69          | Horizontal   |
| Detector: 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 |
| 11590.00  | 35.63             | 37.56                 | 10.77           | 42.27                    | 41.69          | 54.00               | -12.31          | Vertical     |
| 11590.00  | 36.41             | 37.56                 | 10.77           | 42.27                    | 42.47          | 54.00               | -11.53          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

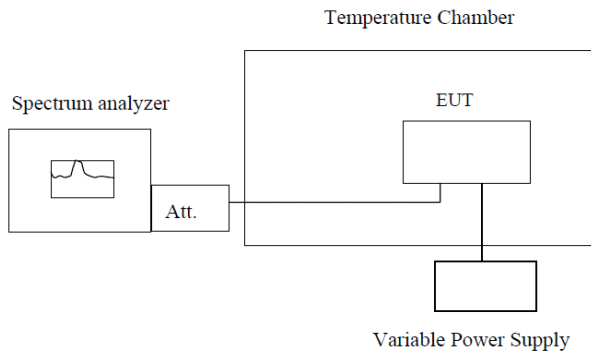


| Band 4 – 802.11ac(HT20)   |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11490.00  | 47.24             | 37.49                 | 10.81           | 42.29                    | 53.25          | 74.00               | -20.75          | Vertical     |
| 11490.00  | 46.34             | 37.49                 | 10.81           | 42.29                    | 52.35          | 74.00               | -21.65          | Horizontal   |
| Detector: 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 |
| 11490.00  | 36.84             | 37.49                 | 10.81           | 42.29                    | 42.85          | 54.00               | -11.15          | Vertical     |
| 11490.00  | 37.21             | 37.49                 | 10.81           | 42.29                    | 43.22          | 54.00               | -10.78          | Horizontal   |
| Test channel: Middle channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11570.00  | 45.61             | 37.55                 | 10.78           | 42.27                    | 51.67          | 74.00               | -22.33          | Vertical     |
| 11570.00  | 46.25             | 37.55                 | 10.78           | 42.27                    | 52.31          | 74.00               | -21.69          | Horizontal   |
| Detector: 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 |
| 11570.00  | 36.24             | 37.55                 | 10.78           | 42.27                    | 42.30          | 54.00               | -11.70          | Vertical     |
| 11570.00  | 35.64             | 37.55                 | 10.78           | 42.27                    | 41.70          | 54.00               | -12.30          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11650.00  | 46.78             | 37.60                 | 10.76           | 42.26                    | 52.88          | 74.00               | -21.12          | Vertical     |
| 11650.00  | 46.62             | 37.60                 | 10.76           | 42.26                    | 52.72          | 74.00               | -21.28          | Horizontal   |
| Detector: 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 |
| 11650.00  | 36.64             | 37.60                 | 10.76           | 42.26                    | 42.74          | 54.00               | -11.26          | Vertical     |
| 11650.00  | 35.72             | 37.60                 | 10.76           | 42.26                    | 41.82          | 54.00               | -12.18          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 4 – 802.11ac(HT40)   |                   |                       |                 |                          |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Lowest channel  |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11510.00  | 45.83             | 37.50                 | 10.81           | 42.29                    | 51.85          | 74.00               | -22.15          | Vertical     |
| 11510.00  | 46.62             | 37.50                 | 10.81           | 42.29                    | 52.64          | 74.00               | -21.36          | Horizontal   |
| Detector: 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 |
| 11510.00  | 35.64             | 37.50                 | 10.81           | 42.29                    | 41.66          | 54.00               | -12.34          | Vertical     |
| 11510.00  | 36.82             | 37.50                 | 10.81           | 42.29                    | 42.84          | 54.00               | -11.16          | Horizontal   |
| Test channel: Highest channel   |                   |                       |                 |                          |                |                     |                 |              |
| Detector: 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 |
| 11590.00  | 46.33             | 37.56                 | 10.77           | 42.27                    | 52.39          | 74.00               | -21.61          | Vertical     |
| 11590.00  | 45.21             | 37.56                 | 10.77           | 42.27                    | 51.27          | 74.00               | -22.73          | Horizontal   |
| Detector: 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 |
| 11590.00  | 35.62             | 37.56                 | 10.77           | 42.27                    | 41.68          | 54.00               | -12.32          | Vertical     |
| 11590.00  | 36.42             | 37.56                 | 10.77           | 42.27                    | 42.48          | 54.00               | -11.52          | Horizontal   |
| <b>Remark:</b><br>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.<br>2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                          |                |                     |                 |              |

| Band 4 – 802.11ac(HT80)   |                   |                       |                 |                    |                |                     |                 |              |
|---|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| Test channel: Middle channel  |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11550.00  | 46.89             | 37.54                 | 10.81           | 42.29              | 52.95          | 74.00               | -21.05          | Vertical     |
| 11550.00  | 46.61             | 37.54                 | 10.81           | 42.29              | 52.67          | 74.00               | -21.33          | Horizontal   |
| Detector: Average Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)   | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
| 11550.00  | 35.83             | 37.54                 | 10.81           | 42.29              | 41.89          | 54.00               | -12.11          | Vertical     |
| 11550.00  | 36.87             | 37.54                 | 10.81           | 42.29              | 42.93          | 54.00               | -11.07          | Horizontal   |
| <b>Remark:</b><br>1. <i>Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</i><br>2. <i>The emission levels of other frequencies are very lower than the limit and not show in test report.</i> |                   |                       |                 |                    |                |                     |                 |              |

## 6.8 Frequency stability

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part15 E Section 15.407 (g)   |
| Limit:            | Manufacturers 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 in the user's manual.  |
| Test setup:       |  <p>Note : Measurement setup for testing on Antenna connector</p>   |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. The EUT is installed in an environment test chamber with external power source.</li> <li>2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.</li> <li>3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.</li> <li>4. When temperature is stabled, measure the frequency stability.</li> <li>5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.</li> </ol> |
| Test Instruments: | Refer to section 5.9 for details  |
| Test mode:        | Refer to section 5.3 for details  |
| Test results:     | Refer to FCC ID: 2AB6Z-A18RK31  |