

## **CTC** Laboratories, Inc.

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| TEST REPORT   |   |                       |  |
|---|---|-----------------------|--|
| Report No. ·····:   | CTC20222139E02  |                       |  |
| FCC ID······:   | 2AYGT-JYM   |                       |  |
| Applicant:  | IRay Technology Co., Ltd.   |                       |  |
| Address   | 11GUIYANG STREET, YANTAI ECON<br>DEVELOPMENT DISTRICT, YANTAI S                             |                       |  |
| Manufacturer  | IRay Technology Co., Ltd.   |                       |  |
| Address   | 11GUIYANG STREET, YANTAI ECON<br>DEVELOPMENT DISTRICT, YANTAI S                             |                       |  |
| Product Name······:   | Monocular Head Mounted Thermal I  | mager                 |  |
| Trade Mark······:   | (n) iRay  |                       |  |
| Model/Type reference······:   | J-YM  |                       |  |
| Listed Model(s) ······  | J-YM316, J-YM627  |                       |  |
| Standard:   | FCC CFR Title 47 Part 15 Subpart C Section 15.247   |                       |  |
| Date of receipt of test sample:   | Nov. 28, 2022   |                       |  |
| Date of testing:  | Nov. 29, 2022 ~ Dec. 22, 2022   |                       |  |
| Date of issue:  | Dec. 23, 2022   |                       |  |
| Result:   | PASS  |                       |  |
| Compiled by:  |   | <del></del> - C       |  |
| (Printed name+signature)  | Terry Su  | Jerry Su<br>Zic shang |  |
| Supervised by:  |   | Zir shang             |  |
| (Printed name+signature)  | Eric Zhang  |                       |  |
| Approved by:  |   | Jemas                 |  |
| (Printed name+signature)  | Totti Zhao  | 100000                |  |
| Testing Laboratory Name:  | CTC Laboratories, Inc.  |                       |  |
| Address   | 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park,<br>Shenzhen, Guangdong, China |                       |  |
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# 1. TEST SUMMARY

## 1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

<u>RSS 247 Issue 2:</u> Standard Specifications for Frequency Hopping Systems (FHSs) and Digital Transmission Systems (DTSs) Operating in the Bands 902-928MHz, 2400-2483.5MHz and 5725-5850MHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

## 1.2. Report version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01          | Dec. 23, 2022 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |



## 1.3. Test Description

| FCC Part 15 Subpart C (15.247) / RSS 247 Issue 2 |                             |                             |        |            |  |
|--|-----------------------------|-----------------------------|--------|------------|--|
| Test Item  | Standard Section            |                             | Result | Test       |  |
| rest item  | FCC                         | IC                          | Result | Engineer   |  |
| Antenna Requirement                              | 15.203                      | /                           | Pass   | Alicia Liu |  |
| Conducted Emission                               | 15.207                      | RSS-Gen 8.8                 | Pass   | Lance Lan  |  |
| Radiated Band Edge and<br>Spurious Emissions     | 15.205&15.209&<br>15.247(d) | RSS 247 5.5                 | Pass   | Alicia Liu |  |
| Conducted Band Edge and<br>Spurious Emissions    | 15.247(d)                   | RSS 247 5.5                 | Pass   | Alicia Liu |  |
| 6dB Bandwidth                                    | 15.247(a)(2)                | RSS 247 5.2 (a)             | Pass   | Alicia Liu |  |
| Conducted Max Output Power                       | 15.247(b)(3)                | RSS 247 5.4 (d)             | Pass   | Alicia Liu |  |
| Power Spectral Density                           | 15.247(e)                   | RSS 247 5.2 (b)             | Pass   | Alicia Liu |  |
| Transmitter Radiated Spurious                    | 15.209&15.247(d)            | RSS 247 5.5&<br>RSS-Gen 8.9 | Pass   | Alicia Liu |  |

Note: The measurement uncertainty is not included in the test result.



## 1.4. Test Facility

#### CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

#### Laboratory accreditation

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

## A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

### Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

### FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained inour files. Registration 951311, Aug 26, 2017.

## **1.5. Measurement Uncertainty**

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties radio equipment characteristics; Part 2" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.



| Test Items                              | Measurement Uncertainty | Notes |
|---|-------------------------|-------|
| Transmitter power conducted             | 0.42 dB                 | (1)   |
| Transmitter power Radiated              | 2.14 dB                 | (1)   |
| Conducted spurious emissions 9kHz~40GHz | 1.60 dB                 | (1)   |
| Radiated spurious emissions 9kHz~40GHz  | 2.20 dB                 | (1)   |
| Conducted Emissions 9kHz~30MHz          | 3.08 dB                 | (1)   |
| Radiated Emissions 30~1000MHz           | 4.51 dB                 | (1)   |
| Radiated Emissions 1~18GHz              | 5.84 dB                 | (1)   |
| Radiated Emissions 18~40GHz             | 6.12 dB                 | (1)   |
| Occupied Bandwidth                      |                         | (1)   |

**Note (1):** This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

## 1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

| Temperature:       | 21°C ~ 27°C |
|--------------------|-------------|
| Relative Humidity: | 40% ~ 60%   |
| Air Pressure:      | 101kPa      |



# 2. GENERAL INFORMATION

## 2.1. Client Information

| Applicant:    | IRay Technology Co., Ltd.   |
|---------------|---|
| Address:      | 11GUIYANG STREET, YANTAI ECONOMY AND TECHNOLOGY<br>DEVELOPMENT DISTRICT, YANTAI Shandong P.R. China |
| Manufacturer: | IRay Technology Co., Ltd.   |
| Address:      | 11GUIYANG STREET, YANTAI ECONOMY AND TECHNOLOGY<br>DEVELOPMENT DISTRICT, YANTAI Shandong P.R. China |

## 2.2. General Description of EUT

| Product Name:            | Monocular Head Mounted Thermal Imager   |
|--------------------------|---|
| Trade Mark:              | (fi) iRay   |
| Model/Type reference:    | J-YM  |
| Listed Model(s):         | J-YM316, J-YM627  |
| Model Different:         | All these models are identical in the same PCB, layout and electrical circuit, The only difference is the size of the lens. |
| Power supply:            | 5Vdc from USB Cable<br>3.7Vdc from 3400mAh Li-ion Battery   |
| Hardware version:        | /   |
| Software version:        | /   |
| WIFI 802.11b/ g/ n(HT20) |   |
| Modulation:              | 802.11b: DSSS(CCK, DQPSK, DBPSK)<br>802.11g/n: OFDM(BPSK, QPSK, 16QAM, 64QAM)   |
| Operation frequency:     | 802.11b/g/n(HT20): 2412MHz~2462MHz  |
| Channel number:          | 802.11b/g/n(HT20):11channels  |
| Channel separation:      | 5MHz  |
| Antenna type:            | FPC Antenna   |
| Antenna gain:            | 0.89dBi Max   |



## 2.3. Accessory Equipment information

| Equipment Information     |                    |              |              |  |
|---------------------------|--------------------|--------------|--------------|--|
| Name                      | Model              | S/N          | Manufacturer |  |
| Notebook                  | ThinkBook 14G3 ACL | MP246QDR     | Lenovo       |  |
| AC/DC Adapter             | A2167              |              | Apple        |  |
| Cable Information         |                    |              |              |  |
| Name                      | Shielded Type      | Ferrite Core | Length       |  |
| 1                         | 1                  | 1            | 1            |  |
| Test Software Information |                    |              |              |  |
| Name                      | Versions           | 1            | 1            |  |
| 1                         | 1                  | 1            | 1            |  |



## 2.4. Operation state

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

**Operation Frequency List:** 

| Channel | Frequency (MHz) |
|---------|-----------------|
| 01      | 2412            |
| 02      | 2417            |
| 03      | 2422            |
| 04      | 2427            |
| 05      | 2432            |
| 06      | 2437            |
| 07      | 2442            |
| 08      | 2447            |
| 09      | 2452            |
| 10      | 2457            |
| 11      | 2462            |

Note: CH 01~CH 11 for 802.11b/g/n(HT20).

#### Data Rated

Preliminary tests were performed in different data rate, and found which the below bit rate is worst case mode, so only show data which it is a worst case mode.

| Mode          | Data rate (worst mode) |
|---------------|------------------------|
| 802.11b       | 1Mbps                  |
| 802.11g       | 6Mbps                  |
| 802.11n(HT20) | HT-MCS0                |

#### Test mode

For RF test items:

The engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions:

The EUT was set to connect with the WLAN AP under large package sizes transmission.

For Radiated spurious emissions test item:

The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report.



## 2.5. Measurement Instruments List

| Tonsce | Tonscend JS0806-2 Test system          |                    |           |            |                  |
|--------|--|--------------------|-----------|------------|------------------|
| Item   | Test Equipment                         | Manufacturer       | Model No. | Serial No. | Calibrated until |
| 1      | Spectrum Analyzer                      | KEYSIGHT           | N9020A    | 100231     | Dec. 23, 2022    |
| 2      | Spectrum Analyzer                      | Rohde &<br>Schwarz | FUV40-N   | 101331     | Mar. 15, 2023    |
| 3      | MXG Vector<br>Signal Generator         | Agilent            | N5182A    | MY47420864 | Dec. 23, 2022    |
| 4      | Signal Generator                       | Agilent            | E8257D    | MY46521908 | Dec. 23, 2022    |
| 5      | Power Sensor                           | Agilent            | U2021XA   | MY5365004  | Mar. 15, 2023    |
| 6      | Power Sensor                           | Agilent            | U2021XA   | MY5365006  | Mar. 15, 2023    |
| 7      | High and low temperature box           | ESPEC              | MT3035    | N/A        | Mar. 15, 2023    |
| 8      | Wideband Radio<br>Communication Tester | Rohde &<br>Schwarz | CMW500    | 102414     | Dec. 23, 2022    |
| 9      | 300328 v2.2.2 test<br>system           | TONSCEND           | v2.6      | /          | /                |

| Radiate | Radiated emission(3m chamber 2)   |              |           |            |                  |  |  |  |  |  |  |
|---------|---|--------------|-----------|------------|------------------|--|--|--|--|--|--|
| Item    | Test Equipment  | Manufacturer | Model No. | Serial No. | Calibrated Until |  |  |  |  |  |  |
| 1       | Trilog-Broadband Antenna  | Schwarzbeck  | VULB 9168 | 9168-1013  | Jan. 12, 2023    |  |  |  |  |  |  |
| 2       | 2         Horn Antenna         Schwarzbeck         BBHA 9120D         9120D-647         Dec. 23, 2022 |              |           |            |                  |  |  |  |  |  |  |
| 3       | Spectrum Analyzer   | R&S          | FSU26     | 100105     | Dec. 23, 2022    |  |  |  |  |  |  |
| 4       | Spectrum Analyzer   | R&S          | FSV40-N   | 101331     | Mar. 15, 2023    |  |  |  |  |  |  |
| 5       | Pre-Amplifier   | SONOMA       | 310       | 186194     | Dec. 23, 2022    |  |  |  |  |  |  |
| 6       | Low Noise Pre-Amplifier   | EMCI         | EMC051835 | 980075     | Dec. 23, 2022    |  |  |  |  |  |  |
| 7       | Loop Antenna  | ETS          | 6507      | 1446       | Dec. 23, 2022    |  |  |  |  |  |  |
| 8       |   |              |           |            |                  |  |  |  |  |  |  |

| Radiate | Radiated emission(3m chamber 3) |                                    |            |                  |                  |  |  |  |  |  |  |
|---------|---------------------------------|------------------------------------|------------|------------------|------------------|--|--|--|--|--|--|
| Item    | Test Equipment                  | Manufacturer                       | Model No.  | Serial No.       | Calibrated Until |  |  |  |  |  |  |
| 1       | Trilog-Broadband<br>Antenna     | Schwarzbeck                        | VULB 9168  | 9168-759         | Mar. 30, 2023    |  |  |  |  |  |  |
| 2       | Horn Antenna                    | Schwarzbeck                        | BBHA 9120D | 9120D-647        | Dec. 23, 2022    |  |  |  |  |  |  |
| 3       | Test Receiver                   | Keysight                           | N9038A     | MY56400071       | Dec. 23, 2022    |  |  |  |  |  |  |
| 4       | Broadband Premplifier           | dband Premplifier SCHWARZBECK BBVS |            | 259              | Dec. 23, 2022    |  |  |  |  |  |  |
| 5       | Mirowave Broadband<br>Amplifier | SCHWARZBECK                        | BBV9718C   | 111              | Dec. 23, 2022    |  |  |  |  |  |  |
| 6       | Pre-Amplifier                   | R&S                                | SCU-26     | 10033            | Dec. 23, 2022    |  |  |  |  |  |  |
| 7       | Pre-Amplifier                   | R&S                                | SCU-40     | 10030            | Dec. 23, 2022    |  |  |  |  |  |  |
| 8       | Board-Band Horn<br>Antenna      | Schwarzbeck                        | BBHA 9170  | BBHA<br>9170-497 | Dec. 23, 2022    |  |  |  |  |  |  |



EN

| Condu | Conducted Emission  |     |        |        |               |  |  |  |  |  |  |
|-------|---|-----|--------|--------|---------------|--|--|--|--|--|--|
| Item  | em Test Equipment Manufacturer Model No. Serial No. Calibrated un |     |        |        |               |  |  |  |  |  |  |
| 1     | LISN  | R&S | ENV216 | 101112 | Dec. 23, 2022 |  |  |  |  |  |  |
| 2     | LISN  | R&S | ENV216 | 101113 | Dec. 23, 2022 |  |  |  |  |  |  |
| 3     | EMI Test Receiver   | R&S | ESCS30 | 100353 | Dec. 23, 2022 |  |  |  |  |  |  |

Note: 1. The Cal. Interval was one year.

2. The Cal. Interval was three year of the chamber

3. The cable loss has calculated in test result which connection between each test instruments.



# **3.TEST ITEM AND RESULTS**

## 3.1. Conducted Emission

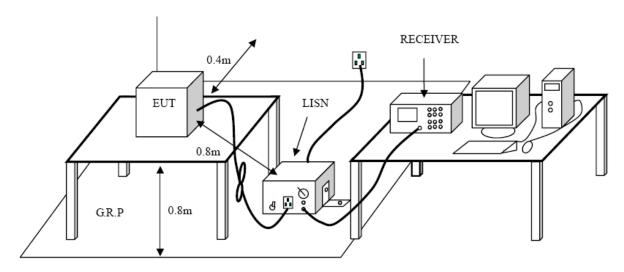
## <u>Limit</u>

## FCC CFR Title 47 Part 15 Subpart C Section 15.207/ RSS - Gen 8.8:

|                       | Limit (dBuV) |           |  |  |  |  |
|-----------------------|--------------|-----------|--|--|--|--|
| Frequency range (MHz) | Quasi-peak   | Average   |  |  |  |  |
| 0.15-0.5              | 66 to 56*    | 56 to 46* |  |  |  |  |
| 0.5-5                 | 56           | 46        |  |  |  |  |
| 5-30                  | 60           | 50        |  |  |  |  |

\* Decreases with the logarithm of the frequency.

## Test Configuration



## Test Procedure

1. The EUT was setup according to ANSI C63.10:2013 requirements.

2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.

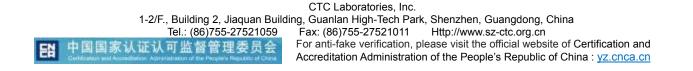
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)

4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7. During the above scans, the emissions were maximized by cable manipulation.

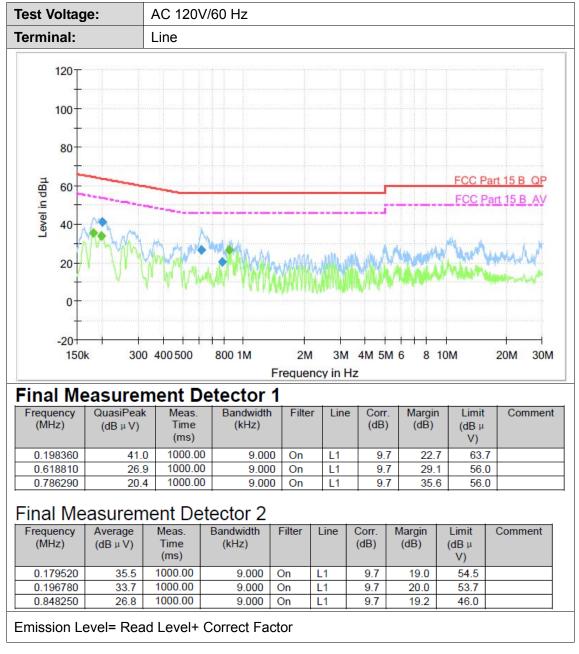




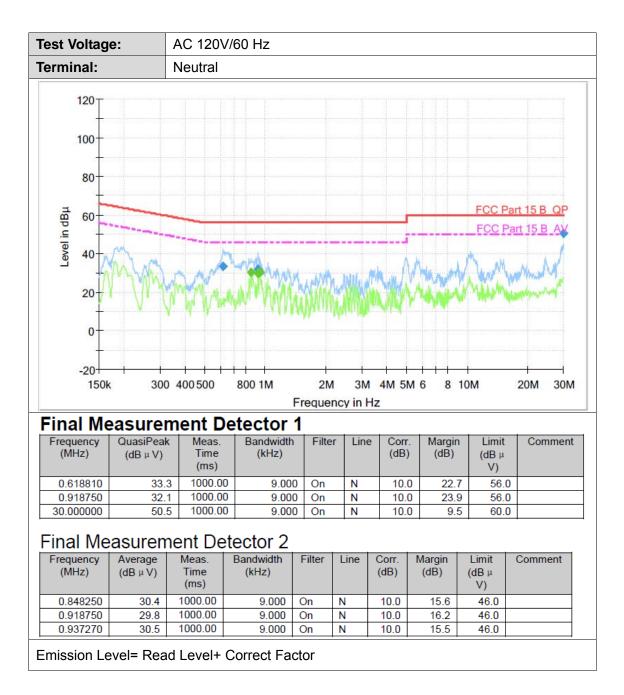
### Test Mode:

Please refer to the clause 2.4.

#### **Test Results**









## 3.2. Radiated Emission

<u>Limit</u>

## FCC CFR Title 47 Part 15 Subpart C Section 15.209/ RSS – Gen 8.9:

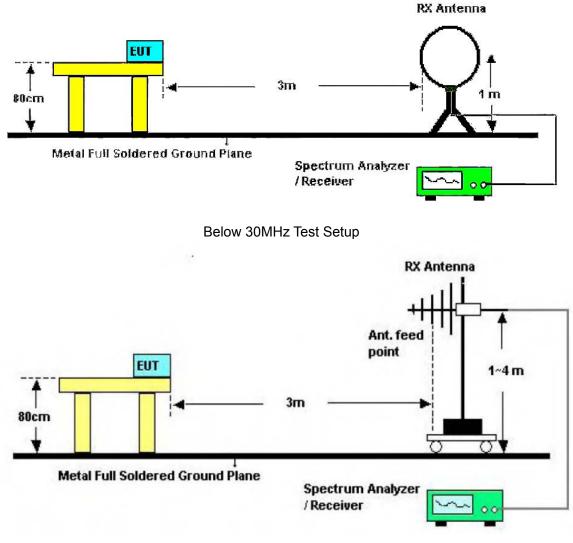
| Frequency         | Limit (dBuV/m @3m) | Value      |  |
|-------------------|--------------------|------------|--|
| 30 MHz ~ 88 MHz   | 40.00              | Quasi-peak |  |
| 88 MHz ~ 216 MHz  | 43.50              | Quasi-peak |  |
| 216 MHz ~ 960 MHz | 46.00              | Quasi-peak |  |
| 960 MHz ~ 1 GHz   | 54.00              | Quasi-peak |  |
| Above 1 GHz       | 54.00              | Average    |  |
|                   | 74.00              | Peak       |  |

#### Note:

(1) The tighter limit applies at the band edges.

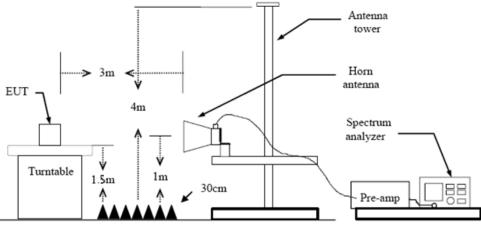
(2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

## Test Configuration



Below 1000MHz Test Setup





Above 1GHz Test Setup

### **Test Procedure**

1. The EUT was setup and tested according to ANSI C63.10:2013

2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable 3. height antenna tower.

4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.

Set to the maximum power setting and enable the EUT transmit continuously. 5.

- Use the following spectrum analyzer settings 6.
- (1) Span shall wide enough to fully capture the emission being measured;

(2) Below 1 GHz:

RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(3) From 1 GHz to 10<sup>th</sup> harmonic:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW≥1/T Peak detector for Average value.

Note 1: For the 1/T& Duty Cycle please refer to clause 3.8 Duty Cycle.

## **Test Mode**

Please refer to the clause 2.4.

#### **Test Result**

#### 9 KHz~30 MHz

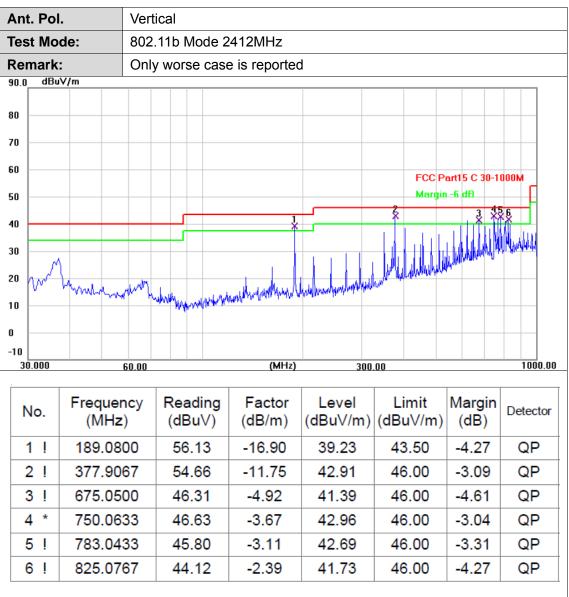
From 9 KHz to 30 MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



| nt. Pol            |   |  |  | Horizontal                            |  |  |  |                                 |                           |  |  |  |  |
|--------------------|---|--|--|---------------------------------------|--|--|--|---------------------------------|---------------------------|--|--|--|--|
| est Mo             | de:   | 802  | .11b                                   | Mode                                  | 2412MHz  |  |  |                                 |                           |  |  |  |  |
| emark              |   | Only   | y woi                                  | rse ca                                | se is reporte  | d  |  |                                 |                           |  |  |  |  |
| 0.0 dBu            | iV/m  |  |  |                                       |  |  |  |                                 |                           |  |  |  |  |
| o                  |   |  |  |                                       |  |  |  |                                 |                           |  |  |  |  |
| 0                  |   |  |  |                                       |  |  |  |                                 |                           |  |  |  |  |
| o                  |   |  |  |                                       |  |  | FCC P  | 'art15 C 30-1                   |                           |  |  |  |  |
| 0                  |   |  |  |                                       |  |  | Margir   | n -6 dB                         |                           |  |  |  |  |
| 0                  |   |  |  |                                       |  |  | ** *   |                                 | 2                         |  |  |  |  |
| 0                  |   |  |  | J                                     |  |  |  |                                 | <b>WINNIN</b>             |  |  |  |  |
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|                    |   |  |  |                                       |  | AND ALLAND                                     | Mradaharan Alis, sakadra   | <b>1</b>                        |                           |  |  |  |  |
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| 0<br>0             | ward  | mh   | Munt                                   | www.www.                              | autorom for any former off                             | MUULAUHUH                                      | Wrahmed Alla, anadar   |                                 |                           |  |  |  |  |
|                    | manymut                                       | MM   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | www.wheen                             | udered the de  | An Mar And | VP-data con 1911   |                                 |                           |  |  |  |  |
| 0                  | many  | MM<br>60.00                                      | M                                      | www.web.end                           | และการสูงการสูงได้<br>(MHz)                            | · · · ·  | ).00   |                                 | 1000.                     |  |  |  |  |
| 0                  | Freque<br>(MHz                                | 60.00  | Re                                     | adin<br>BuV)                          | (MHz)<br>g Factor                                      | · · · ·  | Limit  | Margin<br>(dB)                  |                           |  |  |  |  |
| 0<br>0<br>30.000   | Freque  | 60.00<br>ncy<br>:)                               | Re<br>(d                               | adin                                  | (MHz)<br>g Factor                                      | Level  | Limit  | -                               |                           |  |  |  |  |
| 0<br>30.000<br>No. | Freque<br>(MHz                                | 60.00<br>ncy<br>:)                               | Re<br>(d                               | eading                                | (MHz)<br>G Factor<br>(dB/m)                            | Level<br>(dBuV/m)                              | Limit<br>(dBuV/m)  | (dB)                            | Detecto                   |  |  |  |  |
| No.                | Freque<br>(MHz<br>351.07                      | 60.00<br>ncy<br>:)<br>00<br>67                   | Re<br>(d                               | eadin<br>BuV)                         | (MHz)<br>Factor<br>(dB/m)<br>-12.47                    | Level<br>(dBuV/m)<br>42.85                     | Limit<br>(dBuV/m)<br>46.00   | (dB)<br>-3.15                   | Detecto<br>QP             |  |  |  |  |
| No.                | Freque<br>(MHz<br>351.07<br>377.90            | 60.00<br>ncy<br>:)<br>00<br>67<br>00             | Re<br>(d<br>5                          | eadin<br>BuV)<br>5.32<br>4.70         | (MHz)<br>G Factor<br>(dB/m)<br>-12.47<br>-11.75        | Level<br>(dBuV/m)<br>42.85<br>42.95            | Limit<br>(dBuV/m)<br>46.00<br>46.00  | (dB)<br>-3.15<br>-3.05          | Detecto<br>QP<br>QP       |  |  |  |  |
| No.                | Frequer<br>(MHz<br>351.07<br>377.90<br>485.90 | 60.00<br>hcy<br>c)<br>00<br>67<br>00<br>00<br>00 | Re<br>(d<br>5                          | eadin<br>BuV)<br>5.32<br>4.70<br>1.92 | (MHz)<br>Factor<br>(dB/m)<br>-12.47<br>-11.75<br>-9.21 | Level<br>(dBuV/m)<br>42.85<br>42.95<br>42.71   | Limit<br>(dBuV/m)<br>46.00<br>46.00<br>46.00   | (dB)<br>-3.15<br>-3.05<br>-3.29 | Detecto<br>QP<br>QP<br>QP |  |  |  |  |





Remarks:

| est Mo      | ode:             | TX 8   | 02.11b Mod                     | le 2412MHz       | 2                 |                   |                |           |
|-------------|------------------|--------|--------------------------------|------------------|-------------------|-------------------|----------------|-----------|
| emarl       | <b>c</b> :       |        | eport for the<br>cribed limit. | emission v       | hich more tl      | nan 10 dB k       | pelow the      | !         |
| .0 dB       | JV/m             | p.00   |                                |                  |                   |                   |                |           |
|             |                  |        |                                |                  |                   |                   |                |           |
|             |                  |        |                                |                  | FUC Part          | 5 Class C 3M Abo  | ve-16 Peak     |           |
|             |                  |        |                                |                  |                   |                   |                |           |
|             |                  |        |                                |                  | FCC Part1         | 5 Class C 3M Abo  | ve-1G AV       |           |
|             | 2<br>X           |        |                                |                  |                   |                   |                |           |
|             | 1×               |        |                                |                  |                   |                   |                |           |
|             |                  |        |                                |                  |                   |                   |                |           |
|             |                  |        |                                |                  |                   |                   |                |           |
|             |                  |        |                                |                  |                   |                   |                |           |
| 0           | ) 3500.00 6      | 000.00 | 8500.00 110                    | )00.00 (MHz)     | 16000.00 18       | 3500.00 21000.    | .00 23500.0    | 0 26000.0 |
|             | <b>Fuu u u u</b> |        | Deating                        | Faster           |                   | 1 :00:14          | Marria         |           |
| No.         | Freque<br>(MHz   |        | Reading<br>(dBuV)              | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector  |
| 1 * 4823.02 |                  | 20     | 33.55                          | -2.36            | 31.19             | 54.00             | -22.81         | AVG       |
| 2           | 4823.1           | 00     | 47.05                          | -2.36            | 44.69             | 74.00             | -29.31         | peak      |
|             | -                |        |                                |                  |                   |                   |                |           |

Remarks:



| Ant      | . Pol  |                 | Verti                               | cal                            |                  |                   |                   |                |             |  |
|----------|--------|-----------------|-------------------------------------|--------------------------------|------------------|-------------------|-------------------|----------------|-------------|--|
| Tes      | t Moo  | de:             | TX 8                                | 02.11b Mod                     | de 2412MHz       | Z                 |                   |                |             |  |
| Ren      | nark:  |                 |                                     | eport for the<br>cribed limit. | e emission v     | vhich more t      | han 10 dB t       | pelow the      | !           |  |
| 90.0     | dBu¥   | /m              |                                     |                                |                  |                   |                   |                |             |  |
| 80       |        |                 | FCC Part15 Class C 3M Above-16 Peak |                                |                  |                   |                   |                |             |  |
| 70       |        |                 |                                     |                                |                  |                   |                   |                |             |  |
| 60       |        |                 |                                     |                                |                  | FCC Part          | 15 Class C 3M Abo | ve-1G AV       |             |  |
| 50       |        | 2               |                                     |                                |                  |                   |                   |                |             |  |
| 40       |        | 1<br>×          |                                     |                                |                  |                   |                   |                |             |  |
| 30       |        | ×               |                                     |                                |                  |                   |                   |                |             |  |
| 20       |        |                 |                                     |                                |                  |                   |                   |                |             |  |
| 10       |        |                 |                                     |                                |                  |                   |                   |                |             |  |
| 0<br>-10 |        |                 |                                     |                                |                  |                   |                   |                |             |  |
| L        | 00.000 | 3500.00 6       | 00.00                               | 8500.00 11                     | 000.00 (MHz)     | 16000.00 1        | 8500.00 21000     | .00 23500.     | 00 26000.00 |  |
| i—       |        |                 |                                     |                                |                  |                   |                   |                |             |  |
| N        | lo.    | Frequer<br>(MHz |                                     | Reading<br>(dBu∀)              | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector    |  |
| 1        | 1 *    | 4824.3          | 18                                  | 33.89                          | -2.36            | 31.53             | 54.00             | -22.47         | AVG         |  |
|          | 2      | 4824.4          | 38                                  | 46.95                          | -2.36            | 44.59             | 74.00             | -29.41         | peak        |  |
| Der      | narks  |                 |                                     |                                |                  |                   |                   |                |             |  |

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Remarks:



| Ant. Pol. Horizontal |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
|----------------------|--|------------------------------------|------------------|-------------------|-------------------|----------------|-------------|--|--|--|--|--|
|                      |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| Test Mode:           |  |                                    | e 2437MHz        |                   |                   |                |             |  |  |  |  |  |
| Remark:              |  | ort for the ibed limit.            | emission w       | hich more         | than 10 dB l      | below the      |             |  |  |  |  |  |
| 90.0 dBuV/m          |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 80                   |  |                                    |                  | FCC Pa            | t15 Class C 3M Ab | ove-1G Peak    |             |  |  |  |  |  |
| 70                   |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 60                   |  |                                    |                  | FCC Pa            | t15 Class C 3M Ab | ove-1G AV      |             |  |  |  |  |  |
| 50                   |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 40 2                 |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 30                   |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 20                   |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 10                   |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 0                    |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| -10                  | i000.00 8                                | 3500.00 110                        | 100.00 (MHz)     | 16000.00          | 18500.00 2100     | 0.00 23500.    | 00 26000.00 |  |  |  |  |  |
| ·                    |  |                                    |                  | I                 |                   |                |             |  |  |  |  |  |
| No. Freque<br>(MH    |  | Reading<br>(dBuV)                  | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector    |  |  |  |  |  |
| 1 4873.3             | 73.338 47.48 -2.14 45.34 74.00 -28.66 pe |                                    |                  |                   |                   |                |             |  |  |  |  |  |
| 2 * 4874.0           | 058                                      | 34.20 -2.14 32.06 54.00 -21.94 AVG |                  |                   |                   |                |             |  |  |  |  |  |
| Remarks:             |  |                                    |                  |                   |                   |                |             |  |  |  |  |  |

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| An       | t. Po  |                 | Vert   | ical  |                |                |     |       |             |          |               |                |           |      |
|----------|--------|-----------------|--------|-------|----------------|----------------|-----|-------|-------------|----------|---------------|----------------|-----------|------|
| Tes      | st Mo  | de:             | TX 8   | 302.1 | 1b Mo          | de 2437N       | ΛH: | z     |             |          |               |                |           |      |
| Rei      | mark   | :               |        |       | t for the      | e emissio      | n v | which | more        | than     | 10 dB         | below th       | ne        |      |
| 90.0     | dBu    | //m             |        |       |                |                |     |       |             |          |               |                |           |      |
| 80       |        |                 |        |       |                |                |     |       | FCC Par     | t15 Clas | ss C 3M Ab    | ove-16 Peak    |           |      |
| 70       |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
| 60       |        |                 |        |       |                |                |     |       | ECC Par     | 15 Cla   |               | ove-1G AV      |           |      |
| 50       |        | 1<br>X          |        |       |                |                |     |       | reera       |          | SS C JM AU    | OVE-TO AV      |           |      |
| 40       |        | ×               |        |       |                |                |     |       |             |          |               |                |           |      |
| 30       |        | 2<br>X          |        |       |                |                |     |       |             |          |               |                |           |      |
| 20       |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
| 10       |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
| 0        |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
| -10      |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
| 10       | 00.000 | 3500.00 6       | 000.00 | 8500  | <u>J.00 11</u> | 000.00 (M      | Hz) | 160   | 00.00       | 18500.0  | 0 2100        | 0.00 2350      | 0.00 2600 | 0.00 |
| <u> </u> |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
|          | lo.    | Frequer<br>(MHz |        |       | ading<br>BuV)  | Facto<br>(dB/m |     |       | vel<br>V/m) |          | imit<br>uV/m) | Margir<br>(dB) | Detecto   | or   |
|          | 1      | 4873.34         | 40     | 47    | 7.05           | -2.14          |     | 44    | .91         | 74       | 4.00          | -29.09         | ) peak    |      |
| 2        | 2 *    | 4874.12         | 22     | 34    | 4.01           | -2.14          |     | 31    | .87         | 54       | 4.00          | -22.13         | AVG       |      |
|          |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
|          |        |                 |        |       |                |                |     |       |             |          |               |                |           |      |
| Por      | marke  | <u>.</u>        |        |       |                |                |     |       |             |          |               |                |           |      |

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Remarks:



| Ant  | . Pol  |                 | Horiz  | zonta | al                     |                |          |       |              |             |         |                |         |                |
|------|--------|-----------------|--------|-------|------------------------|----------------|----------|-------|--------------|-------------|---------|----------------|---------|----------------|
| Tes  | t Mo   | de:             | TX 8   | 02.1  | 1b Mod                 | de 2462        | MH:      | z     |              |             |         |                |         |                |
| Rer  | nark   | :               |        |       | t for the<br>ed limit. |                | on v     | vhich | more t       | han 1       | 0 dB l  | below the      | 9       |                |
| 90.0 | dBu\   | //m             |        |       |                        |                |          |       |              |             |         |                |         |                |
| 80   |        |                 |        |       |                        |                |          |       | 500 D        |             |         | 10.0           |         |                |
| 70   |        |                 |        |       |                        |                | <u> </u> |       | FUC Par      | 15 Class    | C 3M Ab | ove-1G Peak    |         |                |
| 60   |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
|      |        |                 |        |       |                        |                |          |       | FCC Par      | 15 Class    | С ЗМ АЬ | ove-1G AV      |         |                |
| 50   |        | 1<br>X          |        |       |                        |                |          |       |              |             |         |                |         |                |
| 40   |        | Z               |        |       |                        |                |          |       |              |             |         |                |         |                |
| 30   |        | ×               |        |       |                        |                |          |       |              |             |         |                |         |                |
| 20   |        |                 |        |       |                        |                | -        |       |              |             |         |                |         |                |
| 10   |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
| 0    |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
| -10  | 00.000 | 3500.00 6       | 00.00  | 8500  | 00 11                  | 000.00 (M      | Hz)      | 100   | 00.00 1      | 8500.00     | 21000   | .00 23500      | 00 200  | D <b>O. OC</b> |
| 10   | 00.000 | 3500.00 6       | 000.00 | 8300  |                        | MJ UU.UU       | HZJ      | 160   | 00.00        | 8500.00     | 21000   | 1.00 23300.    | 00 2600 | JU.UL          |
|      |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
|      |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
| N    | lo.    | Frequer<br>(MHz |        |       | ading<br>BuV)          | Facto<br>(dB/m |          |       | vel<br>IV/m) | Lir<br>(dBu |         | Margin<br>(dB) | Detect  | or             |
|      | 1      | 4924.3          | 96     | 47    | 7.14                   | -1.93          | }        | 45    | .21          | 74.         | 00      | -28.79         | peal    | <hr/>          |
| 2    | 2 *    | 4924.6          | 04     | 33    | 3.94                   | -1.93          | }        | 32    | .01          | 54.         | 00      | -21.99         | AVG     | ;              |
|      |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
|      |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |
| Day  |        |                 |        |       |                        |                |          |       |              |             |         |                |         |                |

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Remarks:



| _         |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
|-----------|---------|----------------|-------|------|------------------------|----------------|-----|-------|--------------|------------------|----------------|----------|--------|----------|
| An        | t. Pol  | •              | Verti | cal  |                        |                |     |       |              |                  |                |          |        |          |
|           | st Mo   |                |       |      |                        | le 2462N       |     |       |              |                  |                |          |        |          |
| Re        | mark:   | :              |       |      | t for the<br>ed limit. | emissic        | n w | /hich | more th      | nan 10 d         | B below        | the      |        |          |
| 90.0      | dBuV    | 7m             | pres  | UNDE |                        |                |     |       |              |                  |                |          |        |          |
|           |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 80        |         |                |       |      |                        |                |     |       | FCC Part1    | 5 Class C 3M     | Above-1G Pe    | ak       |        |          |
| 70        |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| <b>co</b> |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 60        |         |                |       |      |                        |                |     |       | FCC Part1    | 5 Class C 3M     | Above-1G AV    |          |        |          |
| 50        |         | 1<br>X         |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 40        |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 30        |         | 2<br>×         |       |      |                        |                |     |       |              |                  |                |          |        |          |
|           |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 20        |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 10        |         |                |       |      |                        |                |     |       |              |                  |                | -        |        |          |
| 0         |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| -10       |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 10        | 000.000 | 3500.00 6      | 00.00 | 8500 | ).00 110               | 000.00 (M      | lz) | 160   | 00.00 18     | 500.00 21        | 000.00 23      | 500.0    | 0 2600 | 10.00    |
|           |         |                |       |      |                        |                |     |       |              |                  |                |          |        |          |
| 1         | No.     | Freque<br>(MHz |       |      | ading<br>BuV)          | Facto<br>(dB/m |     |       | vel<br>IV/m) | Limit<br>(dBuV/r | n) Marg<br>(dB | jin<br>) | Detect | or       |
|           | 1       | 4923.9         | 72    | 4    | 7.26                   | -1.93          | }   | 45    | .33          | 74.00            | -28.6          | 67       | peał   | C        |
|           | 2 *     | 4924.5         | 24    | 3    | 3.36                   | -1.93          | }   | 31    | .43          | 54.00            | -22.5          | 57       | AVG    | ;        |
|           | morka   |                |       |      |                        |                |     |       | I            |                  |                |          |        | <u> </u> |

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Remarks:



| Ant      | . Pol  | •              | Hori    | zont              | al            |             |        |       |               |              |        |               |       |       |       |
|----------|--------|----------------|---------|-------------------|---------------|-------------|--------|-------|---------------|--------------|--------|---------------|-------|-------|-------|
| Tes      | t Mo   | de:            | TX 8    | 302. <sup>-</sup> | 11g Mo        | de 2412     | 2MHz   | z     |               |              |        |               |       |       |       |
| Ren      | nark   | :              |         |                   | rt for the    | e emiss     | sion v | vhich | more t        | han 10       | dB b   | pelow t       | he    |       |       |
| 90.0     | dBu\   | //m            |         |                   |               |             |        |       |               |              |        |               | _     |       |       |
|          |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 80       |        |                |         |                   |               |             |        |       | FCC Part      | 15 Class C   | 3M Abo | we-1G Pea     | sk    |       |       |
| 70       |        |                |         |                   |               |             | _      |       |               |              |        |               |       |       |       |
| 60       |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
|          |        |                |         |                   |               |             |        |       | FCC Part      | 15 Class C   | 3M Abo | ve-16 AV      |       |       |       |
| 50       |        | 1×             |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 40       |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 30       |        | 2<br>X         |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 20       |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 10       |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 10       |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 0        |        |                |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| -10      | 00.000 | 3500.00        | 6000.00 | 950               | 0.00 1        | 1000.00     | (MHz)  | 160   | 00.00 1       | 8500.00      | 21000  | 00 225        | 500.0 | 0 260 | 00.00 |
|          | 0.000  |                |         |                   |               |             |        |       |               |              | 21000  |               |       |       |       |
| <u> </u> |        |                |         |                   |               | 1           |        |       |               |              |        |               |       |       |       |
| N        | lo.    | Freque<br>(MHz | -       |                   | ading<br>BuV) | Fac<br>(dB/ |        |       | evel<br>ıV/m) | Lim<br>(dBu\ |        | Margi<br>(dB) |       | Detec | tor   |
| -        | 1      | 4824.7         | 00      | 4                 | 6.49          | -2.3        | 36     | 44    | .13           | 74.(         | 00     | -29.8         | 7     | pea   | k     |
| 2        | *      | 4828.0         | 96      | 3                 | 3.97          | -2.3        | 34     | 31    | .63           | 54.0         | 00     | -22.3         | 7     | AVC   | 3     |
| Ren      | narks  | :              |         |                   |               |             |        |       |               |              |        |               |       |       |       |
| 1.Fa     | actor  | (dB/m) =       | Anten   | ina F             | actor (       | dB/m)+      | Cabl   | e Fac | tor (dB       | )-Pre-a      | ampli  | fier Fa       | cto   | r     |       |

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| A .n.4    | . Pol. |           | Verti  |     |           |            |       |      |          |                 |              |       |         |     |
|-----------|--------|-----------|--------|-----|-----------|------------|-------|------|----------|-----------------|--------------|-------|---------|-----|
|           | t Mod  |           |        |     |           | 0 24121    | 11-   |      |          |                 |              |       |         |     |
|           | nark:  | ie:       |        |     | -         | e 2412N    |       |      | more t   | han 10 dl       | 3 helow f    | he    |         |     |
| i.ci      |        |           |        |     | ed limit. | CIIII33IO  | 11 V. | mon  | more t   |                 | 5 6010 10    | inc.  |         |     |
| 90.0      | dBuV.  | /m        |        |     |           |            |       |      |          |                 |              |       |         |     |
| 80        |        |           |        |     |           |            |       |      |          |                 |              | -     |         |     |
| 70        |        |           |        |     |           |            |       |      | FCC Part | 15 Class C 3M . | Above-1G Pea | ik    |         |     |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
| 60        |        |           |        |     |           |            |       |      | FCC Part | 15 Class C 3M   | Above-1G AV  |       |         |     |
| 50        |        | 1<br>X    |        |     |           |            |       |      |          |                 |              |       |         |     |
| 40        |        | ×         |        |     |           |            |       |      |          |                 |              |       |         |     |
| 30        |        | 2<br>×    |        |     |           |            |       |      |          |                 |              |       |         |     |
| 20        |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
| 10        |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
| 0         |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
| -10<br>10 | 00.000 | 3500.00 6 | 000.00 | 850 | 0.00 110  | )00.00 (MI | lz)   | 160  | 00.00 1  | 8500.00 21      | 000.00 235   | 00.00 | 26000   | .00 |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
|           |        | Freque    | ncy    | Re  | ading     | Facto      | or    | Le   | evel     | Limit           | Marg         | in ,  |         |     |
|           | No.    | (MHz      | :)     | (d  | BuV)      | (dB/m      | I)    | (dBu | ıV/m)    | (dBuV/n         | n) (dB)      | )  '  | Detecto | pr  |
|           | 1      | 4823.3    | 32     | 4   | 5.98      | -2.36      | ;     | 43   | .62      | 74.00           | -30.3        | 8     | peak    | 1   |
|           | 2 *    | 4824.0    | 18     | 3   | 3.48      | -2.36      | ;     | 31   | .12      | 54.00           | -22.8        | 8     | AVG     | 1   |
|           |        |           | I      |     |           |            |       |      |          |                 |              |       |         | _   |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
|           |        |           |        |     |           |            |       |      |          |                 |              |       |         |     |
| Rer       | narks  | :         |        | _   |           |            |       | _    |          |                 |              |       |         |     |

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| Ant  | . Pol  |                 | Horiz  | zontal            |                  |                   |                   |                |             |
|------|--------|-----------------|--------|-------------------|------------------|-------------------|-------------------|----------------|-------------|
|      | t Mo   |                 |        |                   | le 2437MHz       | 2                 |                   |                |             |
|      | nark:  |                 | No re  |                   |                  | which more t      | han 10 dB t       | pelow the      | ;           |
| 90.0 | dBuV   | //m             | p      |                   | 1                |                   |                   |                |             |
| 80   |        |                 |        |                   |                  | FCC Parl          | 15 Class C 3M Abo | ve-16 Peak     |             |
| 70   |        |                 |        |                   |                  |                   |                   |                |             |
| 60   |        |                 |        |                   |                  | ECC Part          | 15 Class C 3M Abo | we 16 AV       |             |
| 50   |        |                 |        |                   |                  |                   | TO CIOSS C OM ADU | Ve-IG AV       |             |
| 40   |        | X               |        |                   |                  |                   |                   |                |             |
| 30   |        | 2<br>X          |        |                   |                  |                   |                   |                |             |
| 20   |        |                 |        |                   |                  |                   |                   |                |             |
| 10   |        |                 |        |                   |                  |                   |                   |                |             |
| 0    |        |                 |        |                   |                  |                   |                   |                |             |
| -10  | 00.000 | 3500.00 6       | 000.00 | 8500.00 11        | 000.00 (MHz)     | 16000.00 1        | 8500.00 21000     | .00 23500.     | 00 26000.00 |
|      |        |                 |        |                   |                  |                   |                   |                |             |
| N    | lo.    | Frequer<br>(MHz |        | Reading<br>(dBuV) | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector    |
| •    | 1      | 4873.1          | 94     | 44.43             | -2.14            | 42.29             | 74.00             | -31.71         | peak        |
| 2    | 2 *    | 4874.9          | 30     | 34.08             | -2.14            | 31.94             | 54.00             | -22.06         | AVG         |
| Der  | narka  |                 |        |                   |                  |                   |                   |                |             |

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Remarks:



| Δn        | t. Pol |                 | Verti | ral    |             |                |     |     |               |                  |             |       |            |
|-----------|--------|-----------------|-------|--------|-------------|----------------|-----|-----|---------------|------------------|-------------|-------|------------|
|           | st Mo  |                 |       |        | a Mor       | de 24371       | ин- | 7   |               |                  |             |       |            |
|           | mark   |                 | No re | eport  | -           |                |     |     | more t        | han 10 d         | B below     | the   |            |
| 90.0      | dBuV   | //m             |       |        |             |                |     |     |               |                  | 1           |       |            |
| 80        |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| 70        |        |                 |       |        |             |                |     |     | FCC Part      | 15 Class C 3M    | Above-1G Pe | eak   |            |
|           |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| 60        |        |                 |       |        |             |                |     |     | FCC Part      | 15 Class C 3M    | Above-1G AV | /     |            |
| 50        |        | 1               |       |        |             |                |     |     |               |                  |             |       |            |
| 40        |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| 30        |        | 2<br>X          |       |        |             |                |     |     |               |                  |             |       |            |
| 20        |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
|           |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| 10        |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| 0         |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| -10<br>10 | 00.000 | 3500.00 60      | 00.00 | 8500.0 | 0 11        | 000.00 (M      | Hz) | 160 | 00.00 1       | 8500.00 2        | 1000.00 23  | 500.0 | 0 26000.00 |
|           |        |                 |       |        |             |                |     |     |               |                  |             |       |            |
| 1         | No.    | Frequer<br>(MHz |       |        | ding<br>uV) | Facto<br>(dB/n |     |     | evel<br>uV/m) | Limit<br>(dBuV/i |             |       | Detector   |
|           | 1      | 4873.9          | 18    | 47     | .18         | -2.14          | 1   | 45  | .04           | 74.00            | -28.9       | 96    | peak       |
|           | 2 *    | 4874.5          | 44    | 34     | .00         | -2.14          | 1   | 31  | .86           | 54.00            | -22.1       | 14    | AVG        |
|           |        |                 |       |        |             | -              |     | -   |               |                  |             |       |            |

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Remarks:



|      | . Pol.   |                |    | zontal                         |                  |                   |                   |                |          |
|------|----------|----------------|----|--------------------------------|------------------|-------------------|-------------------|----------------|----------|
|      | t Moo    |                |    | 802.11g Moc                    |                  |                   |                   |                |          |
| Ren  | nark:    |                |    | eport for the<br>cribed limit. | emission v       | vhich more t      | han 10 dB t       | pelow the      | ;        |
| 90.0 | dBuV     | //m            |    |                                |                  |                   |                   | 1              |          |
| 80   |          |                |    |                                |                  | FCC Par           | 15 Class C 3M Abo | ove-16 Peak    |          |
| 70   |          |                |    |                                |                  |                   |                   |                |          |
| 60   |          |                |    |                                |                  |                   |                   |                |          |
| 50   |          | 1              |    |                                |                  | FCC Par           | 15 Class C 3M Abo | ove-16 AV      |          |
| 40   |          | X              |    |                                |                  |                   |                   |                |          |
| 30   |          | 2<br>X         |    |                                |                  |                   |                   |                |          |
| 20   |          |                |    |                                |                  |                   |                   |                |          |
| 10   |          |                |    |                                |                  |                   |                   |                |          |
| 0    |          |                |    |                                |                  |                   |                   |                |          |
| 10   | 00.000   |                |    |                                |                  | 16000.00          |                   | .00 23500.     |          |
|      |          |                |    |                                |                  |                   |                   |                |          |
| N    | lo.      | Freque<br>(MHz |    | Reading<br>(dBuV)              | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector |
|      | 1        | 4923.1         | 04 | 46.80                          | -1.93            | 44.87             | 74.00             | -29.13         | peak     |
|      | <u> </u> |                |    | 33.95                          | -1.93            | 32.02             | 54.00             | -21.98         | AVG      |

Remarks:



| Ant  | . Pol  | •            | Vert    | ical  |                       |             |       |       |               |              |       |              |       |       |       |
|------|--------|--------------|---------|-------|-----------------------|-------------|-------|-------|---------------|--------------|-------|--------------|-------|-------|-------|
| Tes  | t Mo   | de:          | TX 8    | 302.1 | 1g Moo                | de 2462     | 2MHz  | z     |               |              |       |              |       |       |       |
| Ren  | nark   | :            |         |       | t for the<br>d limit. | e emiss     | ion v | vhich | more t        | han 10       | dB b  | pelow t      | he    |       |       |
| 90.0 | dBu\   | //m          |         |       |                       |             |       |       |               |              |       |              |       |       | 1     |
|      |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 80   |        |              |         |       |                       |             |       |       | FCC Part      | 15 Class C 3 | M Abo | ve-1G Pea    | ık    |       |       |
| 70   |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 60   |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
|      |        |              |         |       |                       |             |       |       | FCC Part      | 15 Class C   | M Abo | ve-1G AV     |       |       |       |
| 50   |        | 1            |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 40   |        |              | •       |       |                       |             |       |       |               |              |       |              |       |       |       |
| 30   |        | 2            |         |       |                       |             |       |       |               |              |       |              |       |       |       |
|      |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 20   |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 10   |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 0    |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| -10  |        |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |
| 10   | 00.000 | 3500.00      | 6000.00 | 8500  | ).00 11               | 000.00      | (MHz) | 160   | 00.00 1       | 8500.00      | 21000 | .00 235      | 00.00 | ) 260 | 00.00 |
| N    | lo.    | Frequ<br>(Mł | -       |       | ading<br>BuV)         | Fac<br>(dB/ |       |       | evel<br>iV/m) | Lim<br>(dBuV |       | Marg<br>(dB) |       | Detec | tor:  |
|      | 1      | 4923         | .376    | 46    | 3.49                  | -1.9        | 93    | 44    | .56           | 74.0         | 0     | -29.4        | 4     | pea   | k     |
| 2    | 2 *    | 4924         | .886    | 33    | 3.64                  | -1.9        | 93    | 31    | .71           | 54.0         | 0     | -22.2        | 9     | AV    | G     |
|      | narks  |              |         |       |                       |             |       |       |               |              |       |              |       |       |       |

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|                  | eport for the scribed limit. | emission v  |  | than 10 dB t   |  | ;   |
|------------------|------------------------------|---|--|--|--|---|
|                  |                              |   | FCC Par  | t15 Class C 3M Abo   | 10 D - h   |   |
| 2×               |                              |   | FCC Par  | t15 Class C 3M Abo   | 10 P h   |   |
| 2×               |                              |   |  |  |  |   |
| 2<br>X           |                              |   |  |  |  |   |
| 2<br>X           |                              |   |  |  | 10.44  |   |
| 2<br>X           |                              |   | FLL Par  | t15 Class C 3M Abo   | We-TG AV   |   |
|                  |                              |   |  |  |  |   |
| 1×               |                              |   |  |  |  |   |
| ×                |                              |   |  |  |  |   |
|                  |                              |   |  |  |  |   |
|                  |                              |   |  |  |  |   |
|                  |                              |   |  |  |  |   |
|                  |                              |   |  |  |  |   |
|                  |                              | -   |  |  |  |   |
| equency<br>(MHz) | Reading<br>(dBuV)            | Factor<br>(dB/m)                                    |  |  | Margin<br>(dB)   | Detector  |
| 323.240          | 33.74                        | -2.36   | 31.38  | 54.00  | -22.62   | AVG   |
| 324.830          | 47.31                        | -2.36   | 44.95  | 74.00  | -29.05   | peak  |
|                  | 323.240                      | equency<br>(MHz) Reading<br>(dBuV)<br>323.240 33.74 | equency Reading Factor<br>(MHz) (dBuV) (dB/m)<br>323.240 33.74 -2.36 | equency Reading Factor Level (dBuV) (dBuV) (dB/m) 2323.240 33.74 -2.36 31.38 | equency Reading Factor Level Limit (dBuV) (dB/m) (dBuV/m) (dBuV/m) 323.240 33.74 -2.36 31.38 54.00 | equency Reading Factor Level Limit (dBuV) (dB/m) (dBuV/m) (dBuV/m) (dB)<br>323.240 33.74 -2.36 31.38 54.00 -22.62 |



| Ant      | t. Pol. |                 | Vertica | al                |                  |                   |                   |                |             |
|----------|---------|-----------------|---------|-------------------|------------------|-------------------|-------------------|----------------|-------------|
| Tes      | t Mod   | de:             | TX 80   | 2.11n(HT2         | 0) Mode 24       | 12MHz             |                   |                |             |
|          | nark:   |                 | No rep  | •                 | ,                | vhich more t      | han 10 dB t       | pelow the      | ;           |
| 90.0     | dBuV    | /m              |         |                   |                  |                   |                   |                |             |
| 80       |         |                 |         |                   |                  | 500 B .           |                   | 10.0           |             |
| 70       |         |                 |         |                   |                  | FUC Part          | 15 Class C 3M Abo | ve-16 Peak     |             |
|          |         |                 |         |                   |                  |                   |                   |                |             |
| 60       |         |                 |         |                   |                  | FCC Part          | 15 Class C 3M Abo | ve-1G AV       |             |
| 50       |         | 2<br>X          |         |                   |                  |                   |                   |                |             |
| 40       |         |                 |         |                   |                  |                   |                   |                |             |
| 30       |         | X               |         |                   |                  |                   |                   |                |             |
| 20       |         |                 |         |                   |                  |                   |                   |                |             |
| 10       |         |                 |         |                   |                  |                   |                   |                |             |
|          |         |                 |         |                   |                  |                   |                   |                |             |
| 0<br>-10 |         |                 |         |                   |                  |                   |                   |                |             |
|          | 00.000  | 3500.00 6       | 00.00   | 8500.00 110       | )00.00 (MHz)     | 16000.00 1        | 8500.00 21000     | .00 23500.     | 00 26000.00 |
|          |         |                 |         |                   |                  |                   |                   |                |             |
| Ţ        |         |                 |         |                   |                  |                   |                   |                |             |
| 1        | No.     | Frequer<br>(MHz |         | Reading<br>(dBuV) | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector    |
|          | 1 *     | 4823.4          | 46      | 33.71             | -2.36            | 31.35             | 54.00             | -22.65         | AVG         |
|          | 2       | 4824.4          | 64      | 46.02             | -2.36            | 43.66             | 74.00             | -30.34         | peak        |
|          |         |                 |         |                   |                  |                   |                   |                | L           |
|          |         |                 |         |                   |                  |                   |                   |                |             |
|          |         |                 |         |                   |                  |                   |                   |                |             |

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Remarks:



|         | Pol.          |          | izontal   |                 |                   |                    |                |           |
|---------|---------------|----------|---|-----------------|-------------------|--------------------|----------------|-----------|
|         | Mode:<br>ark: | No       | 802.11n(HT)<br>report for the<br>scribed limit. | e emission v    |                   | than 10 dB l       | below the      | ;         |
| 0.0     | dBuV/m        | p.e.     |   |                 |                   |                    |                |           |
| 80 -    |               |          |   |                 | ECC Pa            | rt15 Class C 3M Ab | ove 16 Pest    |           |
| 70      |               |          |   |                 |                   |                    |                |           |
| :0 -    |               |          |   |                 |                   |                    |                |           |
| io –    |               |          |   |                 | FCC Pa            | rt15 Class C 3M Ab | ove-1G AV      |           |
| 10  -   | Ś             | 2        |   |                 |                   |                    |                |           |
| 30 -    | 1             | <b>،</b> |   |                 |                   |                    |                |           |
| 20      |               |          |   |                 |                   |                    |                |           |
|         |               |          |   |                 |                   |                    |                |           |
| ,  _    |               |          |   |                 |                   |                    |                |           |
| 10      | 0.000 3500.00 | 6000.00  | 8500.00 11                                      | 1000.00 (MHz)   | 16000.00          | 18500.00 2100      | 0.00 23500     | 00 26000. |
|         | Frequ         | lency    | Reading   | Factor          | Level             | Limit              | Margin         | Detector  |
| Nc      | D. (MI        |          | (dBuV)  | (dB/m)          | (dBuV/m)          | (dBuV/m)           | (dB)           |           |
| Nc<br>1 |               | Hz)      | (dBuV)<br>34.12                                 | (dB/m)<br>-2.14 | (dBuV/m)<br>31.98 | (dBuV/m)<br>54.00  | (dB)<br>-22.02 | AVG       |



| \nt | . Pol  | -              | Vert   | cal   |                        |                |          |       |             |          |       |               |         |        |
|-----|--------|----------------|--------|-------|------------------------|----------------|----------|-------|-------------|----------|-------|---------------|---------|--------|
| es  | t Mo   | de:            | TX 8   | 302.1 | l1n(HT2                | 20) Mode       | e 24     | 137MF | Ιz          |          |       |               |         |        |
| Ren | nark:  | :              |        |       | t for the<br>ed limit. | e emissio      | on v     | vhich | more t      | han 1    | ) dB  | below t       | he      |        |
| 0.0 | dBu\   | //m            |        |       |                        |                |          |       |             |          |       |               |         |        |
| 10  |        |                |        |       |                        |                |          |       |             |          |       | 10.0          |         |        |
| ~o  |        |                |        |       |                        |                |          |       | FCC Part    | 15 Class | 3M AL | ove-16 Pea    | ik      | _      |
|     |        |                |        |       |                        |                |          |       |             |          |       |               |         |        |
| 0   |        |                |        |       |                        |                |          |       | FCC Part    | 15 Class | 3M AI | ove-16 AV     |         |        |
| 0   |        | 1<br>X         | _      |       |                        |                |          |       |             |          |       |               |         |        |
| 10  |        |                |        |       |                        |                |          |       |             |          |       |               |         | _      |
| 10  |        | 2<br>X         | _      |       |                        |                |          |       |             |          |       |               |         | _      |
| 0   |        |                |        |       |                        |                |          |       |             |          |       |               |         |        |
| 0   |        |                |        |       |                        |                |          |       |             |          |       |               |         |        |
|     |        |                |        |       |                        |                |          |       |             |          |       |               |         |        |
| 10  |        |                |        |       |                        |                |          |       |             |          |       |               |         |        |
|     | 00.000 | 3500.00 6      | 000.00 | 850   | 0.00 11                | 000.00 (M      | Hz)      | 160   | 00.00 1     | 8500.00  | 2100  | 0.00 235      | 00.00 2 | 6000.0 |
| N   | lo.    | Freque<br>(MHz |        |       | ading<br>BuV)          | Facto<br>(dB/m |          |       | vel<br>V/m) | Lin      |       | Margi<br>(dB) |         | ctor   |
|     |        |                | ·      | `     | · ·                    |                | <u> </u> |       |             |          |       | · · ·         |         |        |
|     | 1      | 4874.2         |        |       | 6.74                   | -2.14          |          |       | .60         | 74.      |       | -29.4         | _ ·     |        |
| 2   | *      | 4874.6         | 80     | 3     | 3.85                   | -2.14          |          | 31    | .71         | 54.      | 00    | -22.2         | 9 AV    | 'G     |
|     |        |                |        |       |                        |                |          |       |             |          |       |               |         |        |

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| A          |        |                 | Llaria |                           |                      |                |              |                 |                |            |
|------------|--------|-----------------|--------|---------------------------|----------------------|----------------|--------------|-----------------|----------------|------------|
|            | t. Po  |                 |        | zontal                    |                      |                |              |                 |                |            |
|            | st Mo  |                 |        |                           | T20) Mode            |                |              |                 |                |            |
| Rei        | mark   | :               |        | eport for 1<br>cribed lim | the emissior<br>hit. | which mo       | ore than     | 10 dB b         | elow the       | !          |
| 90.0       | dBu    | //m             |        |                           |                      | Î              |              |                 |                |            |
|            |        |                 |        |                           |                      |                |              |                 |                |            |
| 80         |        |                 |        |                           |                      | FC             | C Part15 Cl  | ass C 3M Abo    | ve-1G Peak     |            |
| 70         |        |                 |        |                           |                      |                |              |                 |                |            |
| 60         |        |                 |        |                           |                      |                |              |                 |                |            |
| 50         |        |                 |        |                           |                      | FC             | C Part15 Cla | ass C 3M Abo    | ve-1G AV       |            |
| 50         |        | 2<br>X          |        |                           |                      |                |              |                 |                |            |
| 40         |        |                 |        |                           |                      |                |              |                 |                |            |
| 30         |        | 1<br>×          |        |                           |                      |                |              |                 |                |            |
| 20         |        |                 |        |                           |                      |                |              |                 |                |            |
| 10         |        |                 |        |                           |                      |                |              |                 |                |            |
|            |        |                 |        |                           |                      |                |              |                 |                |            |
| 0          |        |                 |        |                           |                      |                |              |                 |                |            |
| -10<br>10  | 00.000 | 3500.00 6       | 000.00 | 8500.00                   | 11000.00 (MHz        | ) 16000.0      | D 18500.     | .00 21000.      | 00 23500.0     | 0 26000.00 |
| . <u> </u> |        |                 |        |                           |                      |                |              |                 |                |            |
|            | lo.    | Frequer<br>(MHz |        | Reading<br>(dBuV)         |                      | Leve<br>(dBuV/ |              | Limit<br>BuV/m) | Margin<br>(dB) | Detector   |
| 1          | *      | 4923.2          | 96     | 33.83                     | -1.93                | 31.90          | ) 5          | 54.00           | -22.10         | AVG        |
|            | 2      | 4924.1          | 06     | 46.76                     | -1.93                | 44.83          | 3 7          | 74.00           | -29.17         | peak       |
|            | morle  |                 |        |                           |                      |                |              |                 |                |            |

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Remarks:



| Ant. Po | ol.         | Verti  | cal                            |              |              |                    |            |            |
|---------|-------------|--------|--------------------------------|--------------|--------------|--------------------|------------|------------|
| est M   | ode:        | TX 8   | 02.11n(HT2                     | 20) Mode 24  | 462MHz       |                    |            |            |
| Remar   | k:          |        | eport for the<br>cribed limit. | e emission v | vhich more t | han 10 dB t        | elow the   | ;          |
| 0.0 dB  | uV/m        |        |                                |              |              |                    |            |            |
|         |             |        |                                |              |              |                    |            |            |
| 0       |             |        |                                |              | FCC Par      | t15 Class C 3M Abo | ve-16 Peak |            |
| o ⊨     |             |        |                                |              |              |                    |            |            |
|         |             |        |                                |              |              |                    |            |            |
| 0       |             |        |                                |              |              |                    |            |            |
| o ⊨     |             |        |                                |              | FLL Par      | t15 Class C 3M Abo | Ve-IG AV   |            |
|         | X           |        |                                |              |              |                    |            |            |
| 0       |             |        |                                |              |              |                    |            |            |
| 0       | 2<br>X      |        |                                |              |              |                    |            |            |
|         |             |        |                                |              |              |                    |            |            |
| 20      |             |        |                                |              |              |                    |            |            |
| 0       |             |        |                                |              |              |                    |            |            |
|         |             |        |                                |              |              |                    |            |            |
| ·       |             |        |                                |              |              |                    |            |            |
| 10      | 0 3500.00 6 | 000.00 | 8500.00 11                     | 000.00 (MHz) | 16000.00     | 18500.00 21000     | .00 23500. | 00 26000.0 |
|         | Frequer     | ncy    | Reading                        | Factor       | Level        | Limit              | Margin     |            |
| No.     | (MHz        | )      | (dBuV)                         | (dB/m)       | (dBuV/m)     | (dBuV/m)           | (dB)       | Detector   |
| 1       | 4923.1      | 06     | 47.78                          | -1.93        | 45.85        | 74.00              | -28.15     | peak       |
| 2 *     | 4923.4      | 20     | 33.84                          | -1.93        | 31.91        | 54.00              | -22.09     | AVG        |
| Remark  |             |        |                                |              |              |                    |            |            |

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2.Margin value = Level -Limit value



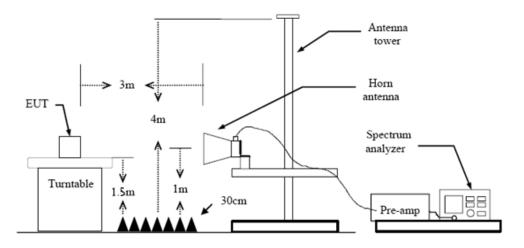
# 3.3. Band Edge Emissions (Radiated)

Limit

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d)/ RSS 247 5.5:

| Restricted Frequency Band | (dBuV/m | n)(at 3m) |
|---------------------------|---------|-----------|
| (MHz)                     | Peak    | Average   |
| 2310 ~2390                | 74      | 54        |
| 2483.5 ~2500              | 74      | 54        |

#### **Test Configuration**



#### **Test Procedure**

- 1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
- The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 2. degrees to determine the position of the maximum emission level.
- 3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
- The receiver set as follow: 5.
  - RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.8 Duty Cycle.

#### **Test Mode**

Please refer to the clause 2.4.

#### **Test Results**



| nt.  | Pol.      |                | Hori   | zontal  |                                    |  |                   |                |          |
|------|-----------|----------------|--------|---|------------------------------------|--|-------------------|----------------|----------|
| est  | Mode:     |                | 802.   | 11b Mode 2  | 412MHz                             |  |                   |                |          |
| 10.0 | dBuV/m    |                |        |   |                                    |  |                   |                |          |
| 00   |           |                |        |   |                                    |  |                   | 20             |          |
|      |           |                |        |   |                                    |  | ^                 | $\bigwedge$    |          |
| )    |           |                |        |   |                                    |  | FCC Part15        | C - Above 10   | GIPK     |
|      |           |                |        |   |                                    |  |                   |                |          |
| D    |           |                |        |   |                                    |  | FQC Part15        | C - Above 10   | L<br>KAR |
|      |           |                |        |   |                                    |  | ×/                |                |          |
|      |           | -              | yan me | an in species to be a state of the state of | a and a construction of the second | -<br>Marine -<br>M | ž                 |                |          |
| )    |           |                |        |   |                                    |  |                   |                |          |
| )    |           |                |        |   |                                    |  |                   |                |          |
| 0.0  | 7.600 231 | 0 60 2         | 331.60 | 2343.60 23  | 55.60 (MHz)                        | 2379.60 2  | 2391.60 2403.     | 60 2415.6      | 0 2427.0 |
|      |           |                |        |   |                                    |  |                   |                |          |
| No   | 5. F      | requer<br>(MHz |        | Reading<br>(dBuV)   | Factor<br>(dB/m)                   | Level<br>(dBuV/m)  | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector |
| NU   |           |                | /      |   |                                    |  |                   |                |          |
| 1    | 2         | 390.0          |        | 20.00   | 30.84                              | 50.84  | 74.00             | -23.16         | peak     |

#### Remarks:



| :<br>m   | 802.                                | 11b Mc                                     | ode 2  | 412M   | IHz  |   |  |   |   |   |  |
|----------|-------------------------------------|--|--|--|--|---|--|---|---|---|--|
| m        |                                     |  |  |  |  |   |  |   |   |   |  |
|          |                                     |  |  |  |  |   |  |   |   |   |  |
|          |                                     |  |  |  |  |   |  |   |   | N   |  |
|          |                                     |  |  |  |  |   |  |   |   | $\bigwedge$   | -h   |
|          |                                     |  |  |  |  |   |  | FCC   | Part15  | C - Above   | e 1G PK  |
|          |                                     |  |  |  |  |   |  |   | ~ (   |   |  |
|          |                                     |  |  |  |  | X   |  | 3EdC  | Part15  | C - Ahove   |  |
|          |                                     |  |  |  |  | 2<br>N  | . ^ .  | × j   |   |   |  |
| ** ****  |                                     | Addression                                 | وسيريد   | MAN  | m  | N <sup>A</sup>  | ww   | ~~×   |   |   |  |
|          | Iber al accord                      |  | -  |  |  |   |  | _   |   |   |  |
|          |                                     |  |  |  |  |   |  |   |   |   |  |
| 217.00 0 | 200.00                              | 0241.0                                     | 0 02   | 52.00  |  | 0.0   | 7.00   | 2200.00   | 0.401   | 00 041  | 3.20 2425.   |
|          | -                                   |  | -  |  |  |   |  |   |   | Margir<br>(dB)  | n <sub>Detector</sub>  |
| 2375.7   | 60                                  | 26.5                                       | i9   | 30   | .78  | 57  | .37  | 74.   | 00  | -16.63  | 3 peak   |
| 2375.7   | 60                                  | 19.1                                       | 5  | 30   | .78  | 49  | .93  | 54.   | 00  | -4.07   | AVG  |
| 2390.0   | 00                                  | 23.0                                       | 8(   | 30   | .84  | 53  | .92  | 74.   | 00  | -20.08  | 3 peak   |
| 2390.0   | 00                                  | 12.3                                       | 7  | 30   | .84  | 43  | 21   | 54.   | 00  | -10.79  | AVG  |
|          | -requer<br>(MHz<br>2375.7<br>2375.7 | Frequency<br>(MHz)<br>2375.760<br>2375.760 | Trequency<br>(MHz)<br>2375.760<br>2375.760<br>2375.760<br>2375.760<br>26.5<br>2375.760<br>19.1 | 317.20         2329.20         2341.20         23           Frequency<br>(MHz)         Reading<br>(dBuV)         2375.760         26.59           2375.760         19.15         19.15 | 317.20         2329.20         2341.20         2353.20           Frequency<br>(MHz)         Reading<br>(dBuV)         Fa<br>(dBuV)           2375.760         26.59         30           2375.760         19.15         30 | Frequency<br>(MHz)Reading<br>(dBuV)Factor<br>(dB/m)2375.76026.5930.782375.76019.1530.78 | Trequency<br>(MHz)         Reading<br>(dBuV)         Factor<br>(dB/m)         Le<br>(dBu           2375.760         26.59         30.78         57           2375.760         19.15         30.78         49 | Trequency<br>(MHz)       Reading<br>(dBuV)       Factor<br>(dB/m)       Level<br>(dBuV/m)         2375.760       26.59       30.78       57.37         2375.760       19.15       30.78       49.93 | Image: state stat | Reading<br>(MHz)         Factor<br>(dBuV)         Level<br>(dB/m)         Limit<br>(dBuV/m)           2375.760         26.59         30.78         57.37         74.00           2375.760         19.15         30.78         49.93         54.00 | Reading<br>(MHz)         Factor<br>(dBuV)         Level<br>(dBn)         Limit<br>(dBuV/m)         Margin<br>(dBuV/m)           2375.760         26.59         30.78         57.37         74.00         -16.63           2375.760         19.15         30.78         49.93         54.00         -4.07 |



| nt. Pol         |                 | Horiz  | zontal            |                  |                       |   |                |                 |
|-----------------|-----------------|--------|-------------------|------------------|-----------------------|---|----------------|-----------------|
| est Mo          | de:             | 802.   | 11b Mode 2        | 462 MHz          |                       |   |                |                 |
| 10.0 dBu        | iV/m            |        | 1                 |                  |                       |   |                |                 |
|                 | M               |        |                   |                  |                       | FCC Part15  | 0.41-0-0-1     |                 |
| ,o 🕇            |                 |        |                   |                  |                       | FUC Partis  | C-Above II     |                 |
| io              |                 | h      | 1.                |                  |                       | FCC Part15  | C - Above 1    | GAV             |
| io 🕴            |                 | ľ      | ×<br>V            |                  |                       |   |                |                 |
| 0               |                 |        | Burnan            | manna            | hat scherichaess, and | a hat a har a h | man Manna Sa   | many            |
| 0               |                 |        |                   |                  |                       |   |                |                 |
| :0              |                 |        |                   |                  |                       |   |                |                 |
| 0.0<br>2448-800 | ) 2460.80 2     | 472.80 | 2484.80 24        | 196.80 (MHz)     | 2520.80 2             | 2532.80 2544  | .80 2556.8     | 30 2568         |
|                 |                 |        |                   |                  |                       |   |                |                 |
| No.             | Frequer<br>(MHz |        | Reading<br>(dBuV) | Factor<br>(dB/m) | Level<br>(dBuV/m)     | Limit<br>(dBuV/m)   | Margin<br>(dB) | Detecto         |
| No.             |                 | )      |                   |                  |                       |   |                | Detecto<br>peak |

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#### Remarks:



| Ant       | . Pol.    |                 | Verti  | cal    |               |                |           |     |                         |              |        |                |            |           |
|-----------|-----------|-----------------|--------|--------|---------------|----------------|-----------|-----|-------------------------|--------------|--------|----------------|------------|-----------|
| Tes       | t Moo     | de:             | 802.   | 11b    | Mode 2        | 462 MH         | z         |     |                         |              |        |                |            |           |
| 110.      | ) dBu\    | //m             |        |        |               |                |           |     |                         |              |        |                |            |           |
| 100<br>90 | Ą         | M               |        |        |               |                |           |     |                         |              |        |                |            |           |
| 80        |           |                 |        |        |               |                | -         |     |                         | FCC          | Part15 | C - Above      | 1G PK      |           |
| 70        |           |                 |        |        |               |                |           |     |                         |              |        |                |            |           |
| 60        | $\bigvee$ |                 | h      | 1      | 3             |                |           |     |                         | FCC          | Part15 | C - Above      | 1G AV      |           |
| 50        | •         |                 | ۳V     | ×<br>v | 3<br>×<br>4   |                |           |     |                         |              |        |                |            |           |
| 40        |           |                 |        | ş      | wh            | maria          | -<br>Ayre | m   | dimension of the second | man          | mont   | unound,        | more       |           |
| 30        |           |                 |        |        |               |                | _         |     |                         |              |        |                |            |           |
| 20        |           |                 |        |        |               |                |           |     |                         |              |        |                |            |           |
| 10.0      |           |                 |        |        |               |                |           |     |                         |              |        |                |            |           |
| 24        | 148.800   | 2460.80 2       | 472.80 | 248    | 34.80 24      | 96.80 (M       | IHz)      | 252 | 0.80 2                  | 532.80       | 2544   | .80 2556       | .80 2568.8 | <u>su</u> |
| 1         | ۱o.       | Frequer<br>(MHz | -      |        | ading<br>BuV) | Facto<br>(dB/m |           |     | vel<br>IV/m)            | Lin<br>(dBu) |        | Margin<br>(dB) | Detector   |           |
|           | 1         | 2483.5          | 00     | 2      | 1.68          | 31.24          | 1         | 52  | .92                     | 74.          | 00     | -21.08         | peak       | Ť         |
|           | 2         | 2483.5          | 00     |        | 7.88          | 31.24          | 1         | 39  | .12                     | 54.          | 00     | -14.88         | AVG        | T         |
|           | 3         | 2490.2          | 40     | 2      | 1.29          | 31.27          | 7         | 52  | .56                     | 74.          | 00     | -21.44         | peak       | T         |
| 4         | 4 *       | 2490.2          | 40     | 1      | 4.85          | 31.27          | 7         | 46  | .12                     | 54.          | 00     | -7.88          | AVG        | Τ         |
| Rer       | narks     | :               |        |        |               |                |           |     |                         |              |        | ifior Eac      |            |           |

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| Ant. Po         | l.                    | Hori      | zontal                  |   |   |  |                |                         |
|-----------------|-----------------------|-----------|-------------------------|---|---|--|----------------|-------------------------|
| est Mo          | de:                   | 802       | .11g Mode               | 2412MHz   |   |  |                |                         |
| 10.0 dB         | JV/m                  |           |                         |   |   |  |                |                         |
| 00              |                       |           |                         |   |   |  |                |                         |
| 0               |                       |           |                         |   |   |  | $\bigwedge$    |                         |
| 0               |                       |           |                         |   |   | FCC Part   | 15 C - Above 1 | G PK                    |
| 0               |                       |           |                         |   |   |  | /              | Lange Com               |
| 0               |                       |           |                         |   |   | FCC Part   | 15 C - Above 1 | GAV                     |
| 0               |                       |           |                         |   |   | - X  |                |                         |
| 0               |                       |           |                         | water a construction of the construction of the | - Martin and and and and and and and and and an | and a second sec |                |                         |
|                 | all offer and the sea | mand      | www.reale-epiceushecher | Cherry Comments                                 | <u> </u>  |  |                |                         |
|                 |                       |           |                         |   |   |  |                |                         |
| 0.0             |                       |           |                         |   |   |  |                |                         |
|                 | 0 2317.80             | 2329.80   | 2341.80 2               | 2353.80 (MHz)                                   | 2377.80   | 2389.80 24   | 01.80 2413.    | 80 2425.                |
|                 |                       |           |                         |   |   |  |                |                         |
| No.             | Freque                |           | Reading                 | Factor  | Level   |  | Margin         | Detector                |
|                 | (MH                   | z)        | (dBuV)                  | (dB/m)  | (dBuV/r   | n) (dBuV/m   | n) (dB)        | Detector                |
| No.<br>1<br>2 * |                       | z)<br>000 |                         |   |   | n) (dBuV/m<br>74.00  |                | Detector<br>peak<br>AVG |

#### Remarks:



| 4nt        | . Pol. |                     | Verti   | cal   |                             |                   |                   |                |          |
|------------|--------|---------------------|---------|---|-----------------------------|-------------------|-------------------|----------------|----------|
|            | t Mod  |                     | 802.    | 11g Mode 24   | 412MHz                      |                   |                   |                |          |
| 110.(<br>  | ) dBu∖ | //m                 |         |   |                             |                   |                   |                |          |
| 100        |        |                     |         |   |                             |                   |                   |                |          |
| 90         |        |                     |         |   |                             |                   |                   | $\bigwedge$    | $\gamma$ |
| 80         |        |                     |         |   |                             |                   |                   |                |          |
| 70         |        |                     |         |   |                             |                   | FCC Part15        | C - Above 1    |          |
| 60         |        |                     |         |   |                             |                   | ×                 |                |          |
|            |        |                     |         |   |                             |                   | FCC Part15        | C - Above 1    | GAV      |
| 50         |        |                     |         |   |                             | and much measure  | ~                 |                |          |
| 40         | -      | hannan hann han der | mannama | and an and a start of the second start of the | Mader-Japaneter and a state | - And and the     |                   |                |          |
| 30         |        |                     |         |   |                             |                   |                   |                |          |
| 20         |        |                     |         |   |                             |                   |                   |                |          |
| 10.0<br>23 | 04.000 | 2316.00             | 2328.00 | 2340.00 23  | 52.00 (MHz)                 | 2376.00 2         | 388.00 2400.      | 00 2412.0      | 10 2424. |
|            |        |                     |         |   |                             |                   |                   |                |          |
| 1          | No.    | Freque<br>(MH       |         | Reading<br>(dBuV)   | Factor<br>(dB/m)            | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detecto  |
|            | 1      | 2390.               | 000     | 32.60   | 30.84                       | 63.44             | 74.00             | -10.56         | peak     |
|            | 2 *    | 2390.               | 000     | 21.52   | 30.84                       | 52.36             | 54.00             | -1.64          | AVG      |

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#### Remarks:



| nt. Pol            |                 | Horiz    | zontal            |                  |                   |                   |                |           |
|--------------------|-----------------|----------|-------------------|------------------|-------------------|-------------------|----------------|-----------|
| est Mo             | de:             | 802.     | 11g Mode 2        | 2462MHz          |                   |                   |                |           |
| 10.0 dBu           | V/m             |          |                   |                  |                   |                   |                |           |
|                    |                 |          |                   |                  |                   |                   |                |           |
| '   <del>  [</del> |                 |          |                   |                  |                   |                   |                |           |
|                    |                 |          |                   |                  |                   | FCC Part15 (      | C - Above 10   | G PK      |
| ' <del> </del>     |                 |          | 1                 |                  |                   |                   |                |           |
| )                  |                 | Jan Mark | ^                 |                  |                   | FCC Part15        | C - Above 10   |           |
| )                  |                 |          | ¥.                |                  |                   |                   |                |           |
| ı                  |                 |          | townorm           | mprover marked   | www.www.          | www.mar           | mannen         | Manthomas |
| ·                  |                 |          |                   |                  |                   |                   |                |           |
| ı —                |                 |          |                   |                  |                   |                   |                |           |
| ).0<br>2449.400    | 2461.40 2       | 473.40   | 2485.40 24        | 97.40 (MHz)      | 2521.40 2         | 533.40 2545.      | 40 2557.4      | 0 2569.   |
|                    |                 |          |                   |                  |                   |                   |                |           |
| No.                | Frequer<br>(MHz |          | Reading<br>(dBuV) | Factor<br>(dB/m) | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detecto   |
| 1                  | 2483.5          | 00       | 32.80             | 31.24            | 64.04             | 74.00             | -9.96          | peak      |
| 2 *                | 2483.5          | 00       | 17.77             | 31.24            | 49.01             | 54.00             | -4.99          | AVG       |
|                    |                 |          |                   |                  |                   |                   |                |           |

Remarks:

EN



| Ant. Pol | -              | Vert    | ical              |                                   |                                     |                   |   |             |
|----------|----------------|---------|-------------------|-----------------------------------|-------------------------------------|-------------------|---|-------------|
| est Mo   |                | 802.    | 11g Mode 2        | 2462MHz                           |                                     |                   |   |             |
| 10.0 dBu | V/m            |         | -                 |                                   |                                     |                   |   |             |
|          |                |         |                   |                                   |                                     | FCC Part15 (      | C - Above 10  | <u>G PK</u> |
| 0        |                |         | ×                 |                                   |                                     | FCC Part15 (      | C - Above 10  | G AV        |
| 10       |                |         | N & more manual   | hange he same a production of the | مستعم ومنعط منع المسيط معاد المعالي |                   | الم المعود معرف المراجع الموالية المور  |             |
| 0        |                |         |                   |                                   |                                     |                   | and the second secon |             |
| 0.0      | 2461.40 2      | 2473.40 | 2485.40 24        | 197.40 (MHz)                      | 2521.40 2                           | 533.40 2545.      | 40 2557.4   | 10 2569.4   |
|          |                |         | 1                 | 1                                 |                                     |                   |   |             |
| No.      | Freque<br>(MHz |         | Reading<br>(dBuV) | Factor<br>(dB/m)                  | Level<br>(dBuV/m)                   | Limit<br>(dBuV/m) | Margin<br>(dB)  | Detector    |
|          |                |         |                   |                                   |                                     | 74.00             | 44.05   |             |
| 1        | 2483.5         | 500     | 28.51             | 31.24                             | 59.75                               | 74.00             | -14.25  | peak        |

Remarks:



| nt. Po  | Ι.                     | Horiz   | zontal            |                  |   |                   |                |           |
|---------|------------------------|---------|-------------------|------------------|---|-------------------|----------------|-----------|
| est Mo  | de:                    | 802.    | 11n(HT20)         | Mode 2412        | MHz                                     |                   |                |           |
| 10.0 dB | uV/m                   |         |                   |                  |   |                   |                |           |
| 00      |                        |         |                   |                  |   |                   |                |           |
|         |                        |         |                   |                  |   |                   |                |           |
|         |                        |         |                   |                  |   | (                 | $\sim$         |           |
| 0       |                        |         |                   |                  |   | FCC Part15        | C - Above 1    | G PK      |
|         |                        |         |                   |                  |   |                   |                |           |
| D       |                        |         |                   |                  |   | + FCC Part15      |                |           |
|         |                        |         |                   |                  |   | × FCC Part15      | C - Above 1    | G AV      |
|         |                        |         |                   |                  | and | X                 |                |           |
| D when  | and the second desires | mount   | monument          | reducenower      | how when a straight the                 |                   |                |           |
|         |                        |         |                   |                  |   |                   |                |           |
| 0       |                        |         |                   |                  |   |                   |                |           |
| 2207.60 | 0 2319.60              | 2331.60 | 2343.60 2         | 355.60 (MHz)     | 2379.60                                 | 2391.60 2403      | .60 2415.1     | 60 2427.0 |
| No.     | Freque<br>(MH          |         | Reading<br>(dBuV) | Factor<br>(dB/m) | Level                                   | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector  |
| 1       | 2390.                  | ,       | 25.88             | 30.84            | 56.72                                   | 74.00             | -17.28         | peak      |
|         | 2390.                  |         | 15.04             | 30.84            | 45.88                                   | 54.00             | -8.12          | AVG       |
| 2 *     | 2390.                  | 000     | 15.04             | 30.84            | 45.88                                   | 54.00             | -8.12          | AVG       |

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Remarks:



| nt. Po        | I.   | Verti      | cal                               |                            |                   |                   |                |          |
|---------------|--|------------|-----------------------------------|----------------------------|-------------------|-------------------|----------------|----------|
| est Mo        |  | 802.       | 11n(HT20) I                       | Mode 2412                  | ЛНz               |                   |                |          |
| 0.0 dB        | uV/m   |            |                                   |                            | 1                 |                   | 1              |          |
|               |  |            |                                   |                            |                   |                   |                |          |
| 0             |  |            |                                   |                            |                   |                   |                |          |
|               |  |            |                                   |                            |                   | (                 | $\sim$         |          |
|               |  |            |                                   |                            |                   | FCC Part15 (      | C. About 10    |          |
|               |  |            |                                   |                            |                   | FCC Partis        | - ADOVE TO     |          |
|               |  |            |                                   |                            |                   | 1                 |                |          |
|               |  |            |                                   |                            |                   | FCC Part15        | C-Above 1      | GAV      |
|               |  |            |                                   |                            |                   | 3                 |                |          |
|               |  |            |                                   | Market and American Street | mannahuman        | M                 |                |          |
| hanna         | have been and the second s | -Murathank | and a star when the second second |                            |                   |                   |                |          |
|               |  |            |                                   |                            |                   |                   |                |          |
|               |  |            |                                   |                            |                   |                   |                |          |
| .0<br>2305.80 | 0 2317.80 2  | 329.80     | 2341.80 23                        | 53.80 (MHz)                | 2377.80 2         | 389.80 2401.      | 80 2413.8      | 0 2425.0 |
| No.           | Frequer<br>(MHz  |            | Reading<br>(dBuV)                 | Factor<br>(dB/m)           | Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detecto  |
| 1             | 2390.0   | 00         | 30.29                             | 30.84                      | 61.13             | 74.00             | -12.87         | peak     |
| 2 *           | 2390.0   | 00         | 17.36                             | 30.84                      | 48.20             | 54.00             | -5.80          | AVG      |
|               |  |            |                                   |                            | -                 |                   |                |          |



| nt. Po               | l.           | Hori          | zontal                                  |  |                   |                                   |                    |          |
|----------------------|--------------|---------------|---|--|-------------------|-----------------------------------|--------------------|----------|
| est Mo               | ode:         | 802.          | 11n(HT20) I                             | Mode 2462  | ИНz               |                                   |                    |          |
| 0.0 dB               | uV/m         | _             |   |  |                   |                                   |                    |          |
|                      |              |               |   |  |                   |                                   |                    |          |
| 0                    |              |               |   |  |                   |                                   |                    |          |
|                      | $\sim n$     | $\sim$        |   |  |                   |                                   |                    |          |
|                      |              |               |   |  |                   |                                   |                    |          |
| $ \vdash \downarrow$ |              | $\rightarrow$ |   |  |                   | FCC Part15                        | C - Above 1        | G PK     |
|                      |              |               | 1×                                      |  |                   |                                   |                    |          |
|                      |              | have          | ×                                       |  |                   |                                   |                    |          |
|                      |              |               | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |  |                   | FCC Part15                        | C - Above 1        | GAV      |
|                      |              |               |   |  |                   |                                   |                    |          |
|                      |              |               | mound                                   | and the second and the second se | mumhamen Munn     | glanglowarderhand and any advised | and the season and | montest  |
|                      |              |               |   |  |                   |                                   |                    |          |
|                      |              |               |   |  |                   |                                   |                    |          |
| .0                   |              |               |   |  |                   |                                   |                    |          |
| 2448.20              | 0 2460.20    | 2472.20       | 2484.20 24                              | 196.20 (MHz)   | 2520.20           | 2532.20 2544.                     | 20 2556.           | 20 2568. |
| No.                  | Frequ<br>(Mł |               | Reading<br>(dBu∀)                       | Factor<br>(dB/m)   | Level<br>(dBuV/m) | Limit<br>(dBuV/m)                 | Margin<br>(dB)     | Detector |
| 1                    | 2483         | .500          | 31.86                                   | 31.24  | 63.10             | 74.00                             | -10.90             | peak     |
| 2 *                  | 2483         | .500          | 18.98                                   | 31.24  | 50.22             | 54.00                             | -3.78              | AVG      |
|                      |              |               |   |  |                   |                                   |                    |          |

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| nt. Pol  | I.            | Verti   | cal               |                  |                       |                   |   |             |
|----------|---------------|---------|-------------------|------------------|-----------------------|-------------------|---|-------------|
| st Mo    | de:           | 802.    | 11n(HT20)         | Mode 2462        | 2MHz                  |                   |   |             |
| 0.0 dBu  | iV/m          |         | , ,               |                  |                       |                   |   |             |
|          | ~~~           |         |                   |                  |                       |                   |   |             |
|          |               |         |                   |                  |                       | FCC Part15        | C - Above 1   | G PK        |
|          |               | L       | *                 |                  |                       |                   |   |             |
|          |               |         |                   |                  |                       | FCC Part15        | <u>C - Above 1</u>  | <u>G AV</u> |
|          |               |         |                   | Mananananana     | marine and and proved | montanthin        | or the production of the second se |             |
| .0       |               |         |                   |                  |                       |                   |   |             |
| 2448.200 | ) 2460.20     | 2472.20 | 2484.20 2         | 496.20 (MHz      | ) 2520.20             | 2532.20 2544.     | 20 2556.3   | 20 2568.2   |
| No.      | Freque<br>(MH |         | Reading<br>(dBu∀) | Factor<br>(dB/m) | Level<br>(dBuV/m)     | Limit<br>(dBuV/m) | Margin<br>(dB)  | Detector    |
| 1        | 2483.         | 500     | 33.65             | 31.24            | 64.89                 | 74.00             | -9.11   | peak        |
| 2 *      | 2483.         | 500     | 20.84             | 31.24            | 52.08                 | 54.00             | -1.92   | AVG         |
|          |               |         |                   |                  |                       |                   |   |             |

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#### Remarks:

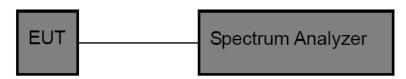


# 3.4. Band edge and Spurious Emissions (Conducted)

### <u>Limit</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

### Test Configuration



#### Test Procedure

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- Use the following spectrum analyzer settings: RBW = 100 kHz, VBW ≥ RBW, scan up through 10<sup>th</sup> harmonic. Sweep = auto, Detector function = peak, Trace = max hold
- Measure and record the results in the test report.

#### Test Mode

Please refer to the clause 2.4.

#### Test Results



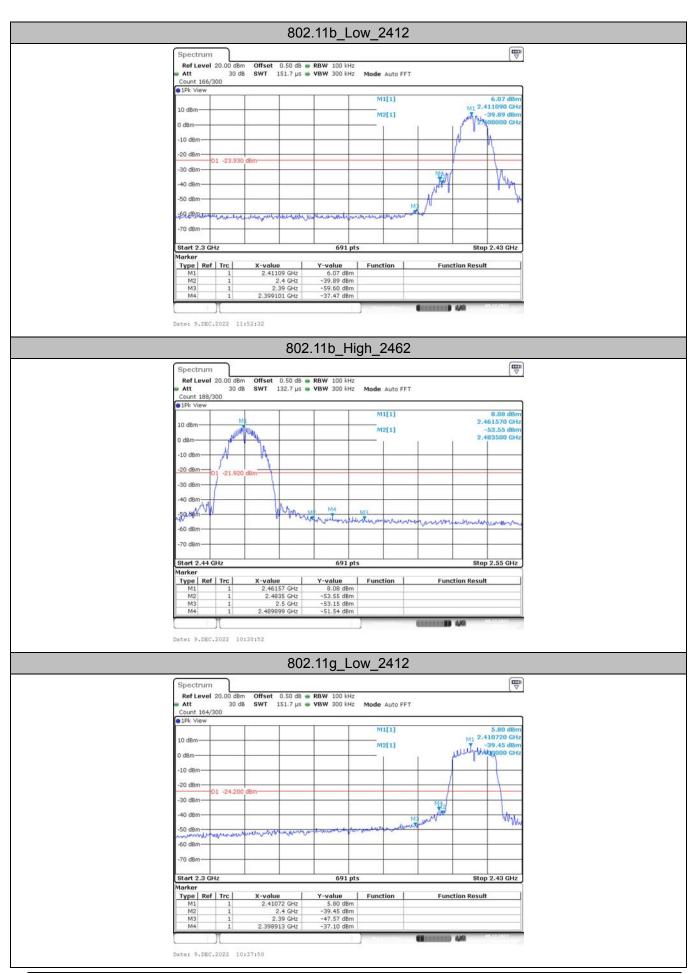
EN

## (1) Band edge Conducted Test

| Test Mode     | Test Frequency | Ref Level[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|---------------|----------------|----------------|-------------|------------|---------|
| 802.11b       | 2412           | 6.07           | -37.47      | ≤-23.93    | PASS    |
| 002.110       | 2462           | 8.08           | -51.54      | ≤-21.92    | PASS    |
| 902 11 a      | 2412           | 5.80           | -37.10      | ≤-24.20    | PASS    |
| 802.11g       | 2462           | 4.51           | -46.51      | ≤-25.49    | PASS    |
| 802.11n(HT20) | 2412           | 4.44           | -37.71      | ≤-25.56    | PASS    |
|               | 2462           | 2.14           | -46.92      | ≤-27.86    | PASS    |



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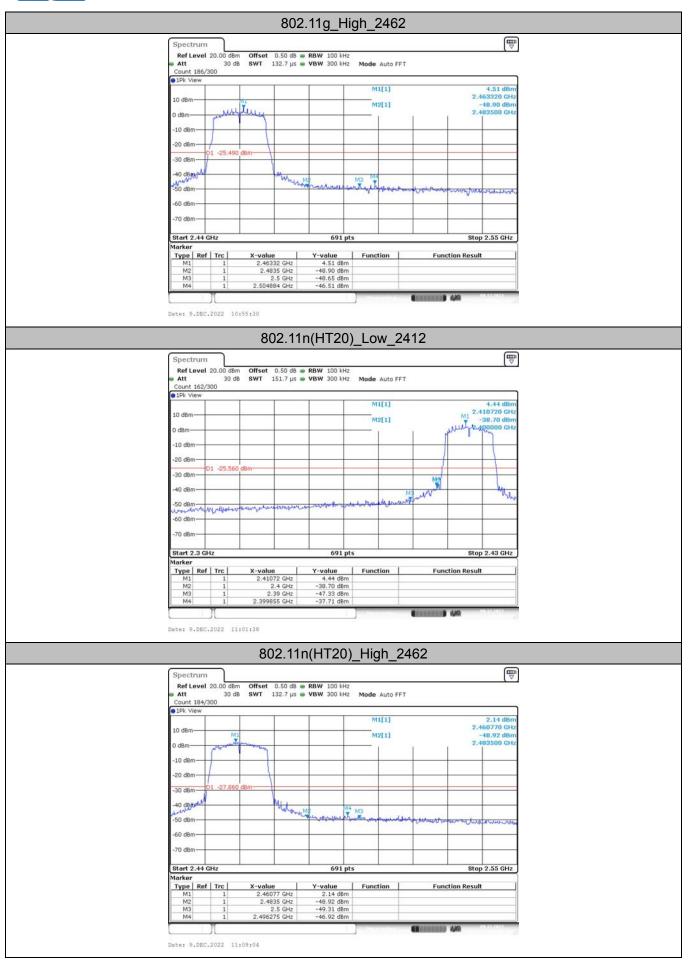


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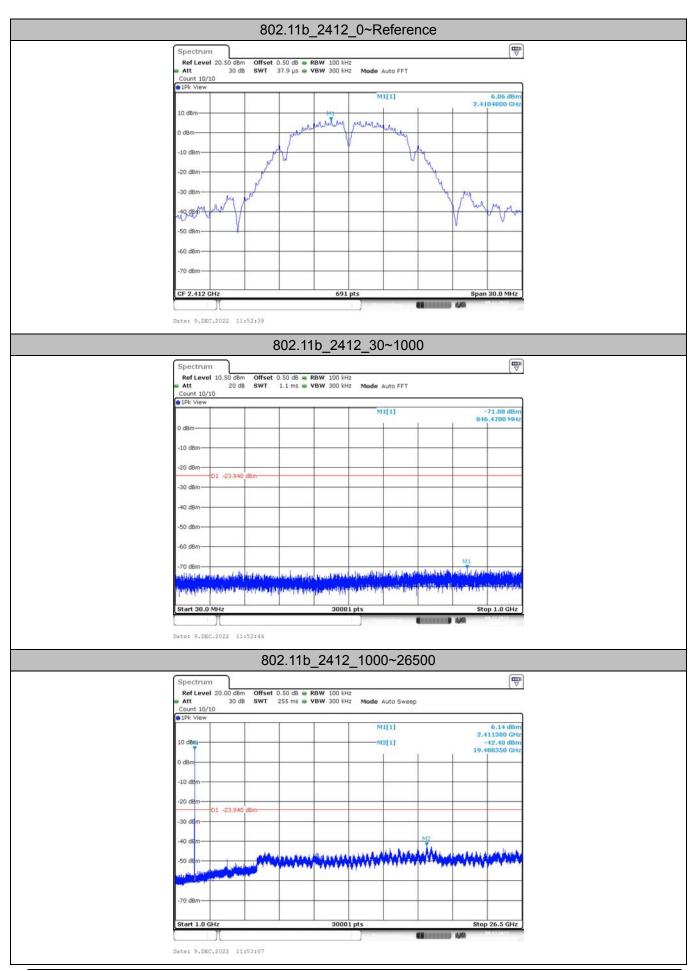
EN

## (2) Conducted Spurious Emissions Test

| Test Mode     | Test<br>Frequency | Freq Range<br>[Mhz] | Ref Level<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|---------------|-------------------|---------------------|--------------------|-----------------|----------------|---------|
|               |                   | Reference           | 6.06               | 6.06            |                | PASS    |
|               | 2412              | 30~1000             | 6.06               | -71.08          | ≤-23.94        | PASS    |
|               |                   | 1000~26500          | 6.06               | -42.4           | ≤-23.94        | PASS    |
|               |                   | Reference           | 8.25               | 8.25            |                | PASS    |
| 802.11b       | 2437              | 30~1000             | 8.25               | -70.46          | ≤-21.75        | PASS    |
|               |                   | 1000~26500          | 8.25               | -41.17          | ≤-21.75        | PASS    |
|               |                   | Reference           | 7.82               | 7.82            |                | PASS    |
|               | 2462              | 30~1000             | 7.82               | -65.00          | ≤-22.18        | PASS    |
|               |                   | 1000~26500          | 7.82               | -40.93          | ≤-22.18        | PASS    |
|               |                   | Reference           | 1.95               | 1.95            |                | PASS    |
|               | 2412              | 30~1000             | 1.95               | -70.64          | ≤-28.05        | PASS    |
|               |                   | 1000~26500          | 1.95               | -42.14          | ≤-28.05        | PASS    |
|               | 2437              | Reference           | 5.50               | 5.50            |                | PASS    |
| 802.11g       |                   | 30~1000             | 5.50               | -69.73          | ≤-24.50        | PASS    |
|               |                   | 1000~26500          | 5.50               | -41.56          | ≤-24.50        | PASS    |
|               | 2462              | Reference           | 5.15               | 5.15            |                | PASS    |
|               |                   | 30~1000             | 5.15               | -67.33          | ≤-24.85        | PASS    |
|               |                   | 1000~26500          | 5.15               | -41.82          | ≤-24.85        | PASS    |
|               |                   | Reference           | 5.15               | 5.15            |                | PASS    |
|               | 2412              | 30~1000             | 5.15               | -69.69          | ≤-24.85        | PASS    |
|               |                   | 1000~26500          | 5.15               | -42.24          | ≤-24.85        | PASS    |
|               |                   | Reference           | 5.21               | 5.21            |                | PASS    |
| 802.11n(HT20) | 2437              | 30~1000             | 5.21               | -67.82          | ≤-24.79        | PASS    |
|               |                   | 1000~26500          | 5.21               | -42.08          | ≤-24.79        | PASS    |
|               |                   | Reference           | 4.89               | 4.89            |                | PASS    |
|               | 2462              | 30~1000             | 4.89               | -63.61          | ≤-25.11        | PASS    |
|               |                   | 1000~26500          | 4.89               | -41.52          | ≤-25.11        | PASS    |



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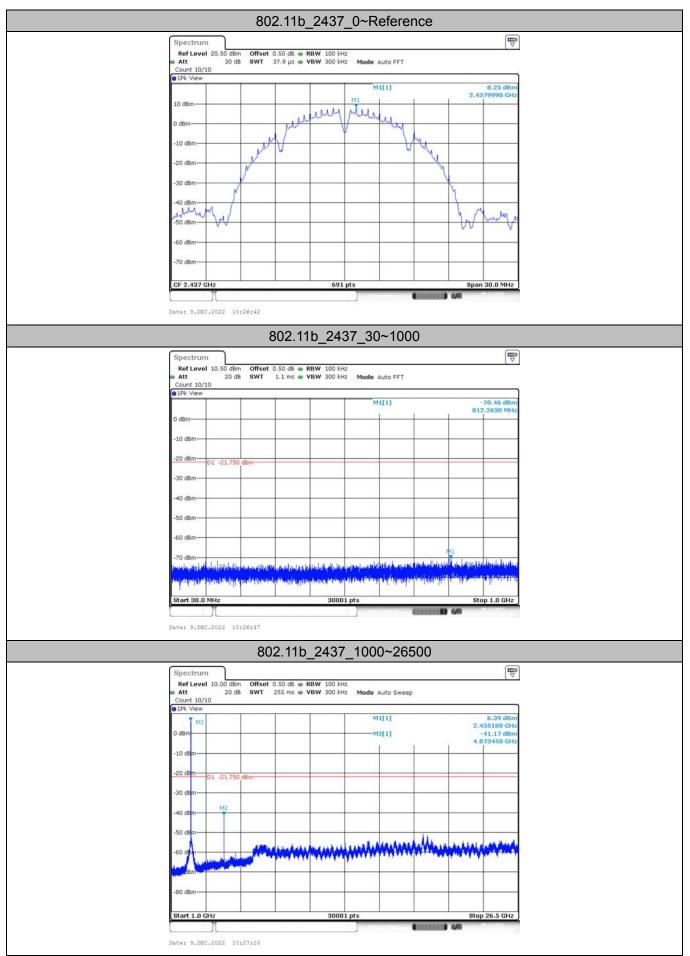
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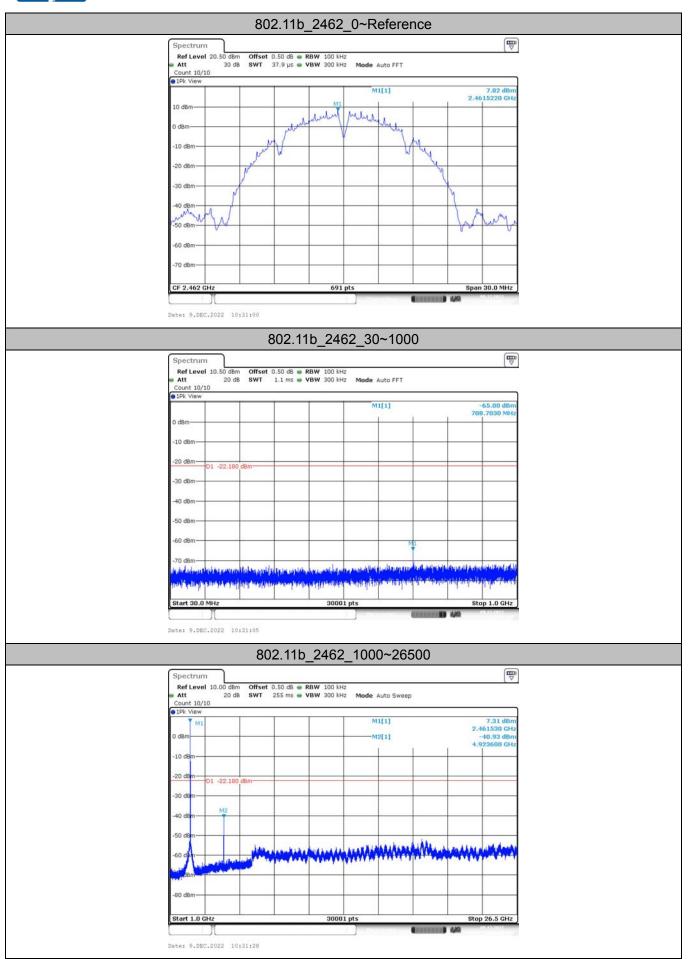
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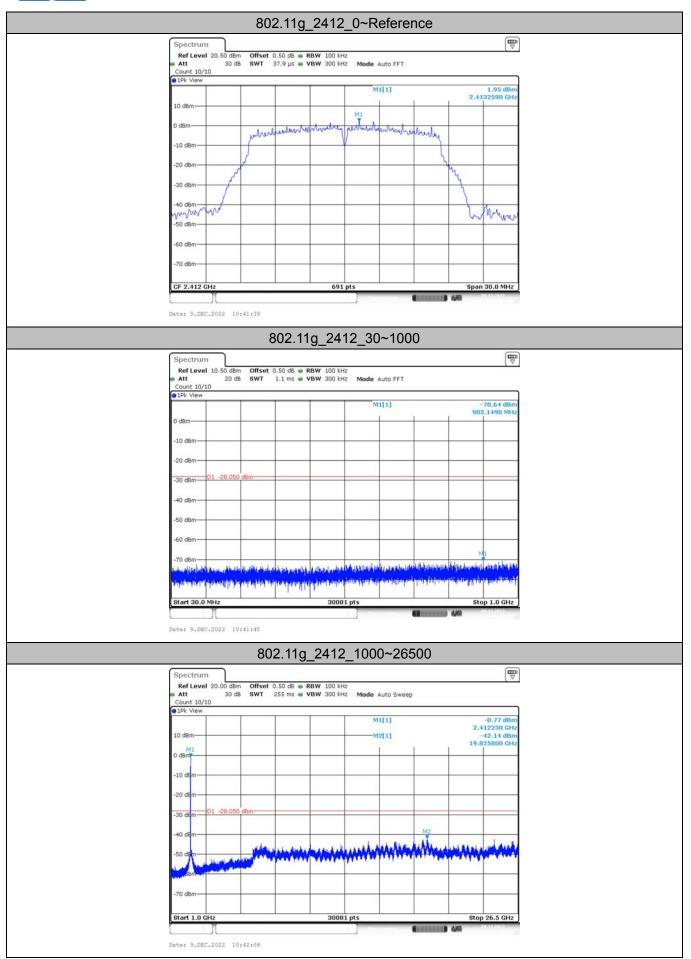


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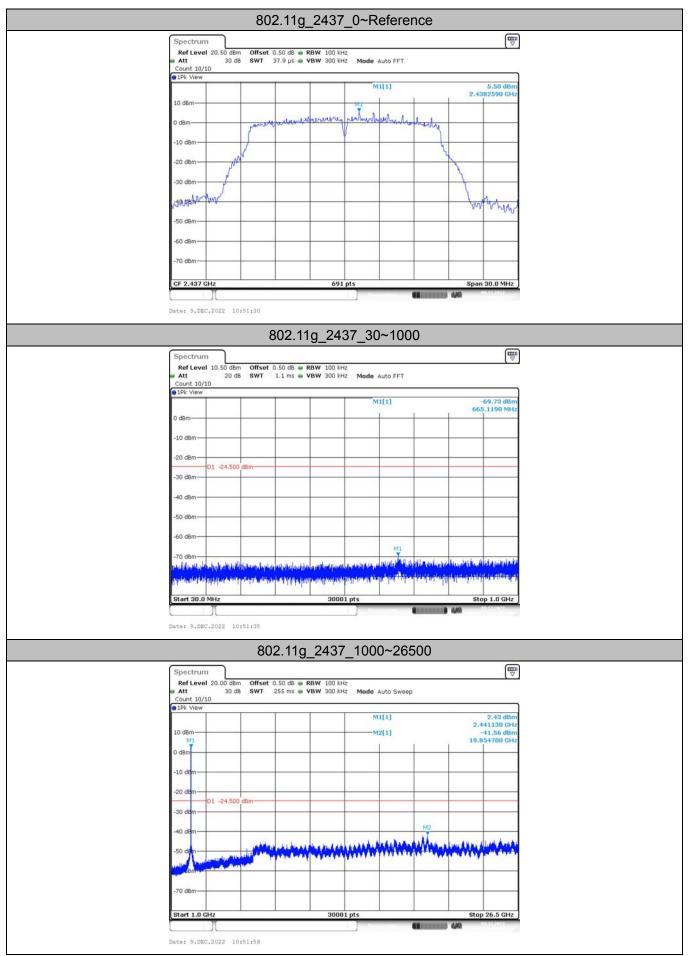


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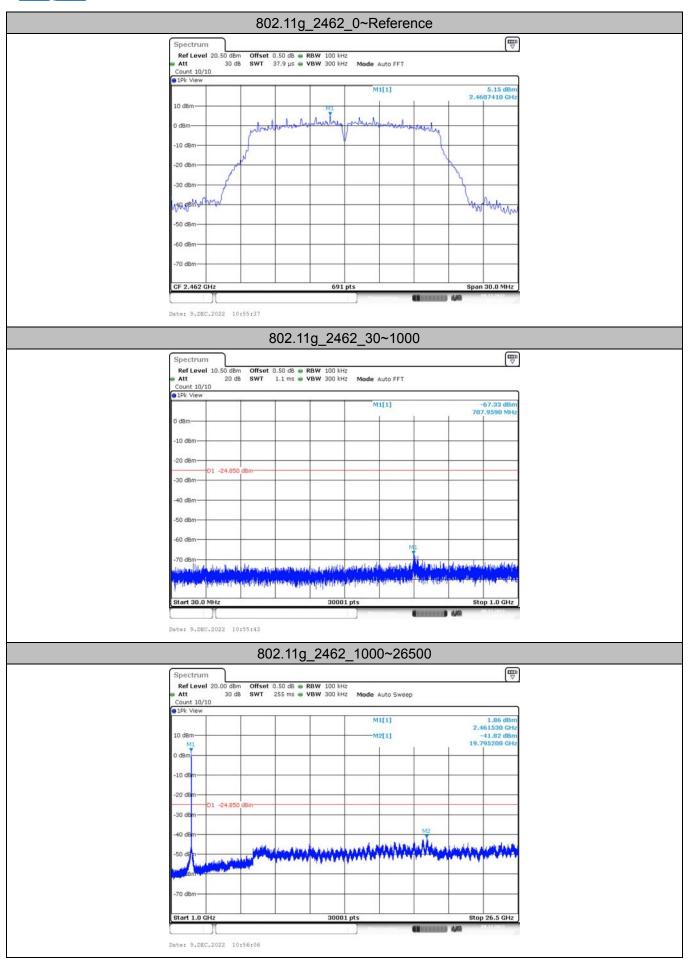


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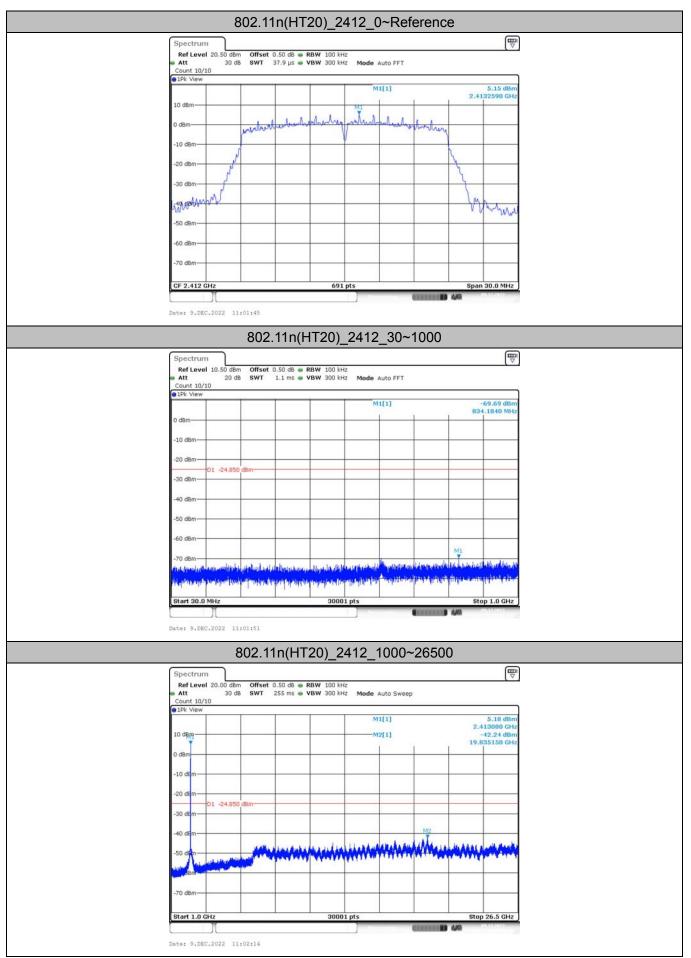


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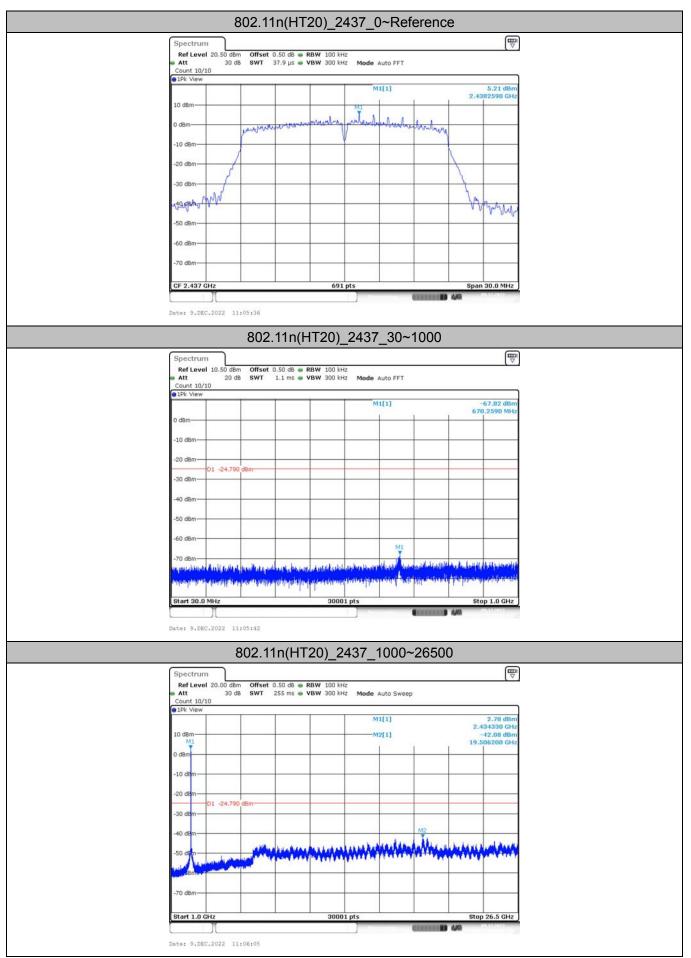


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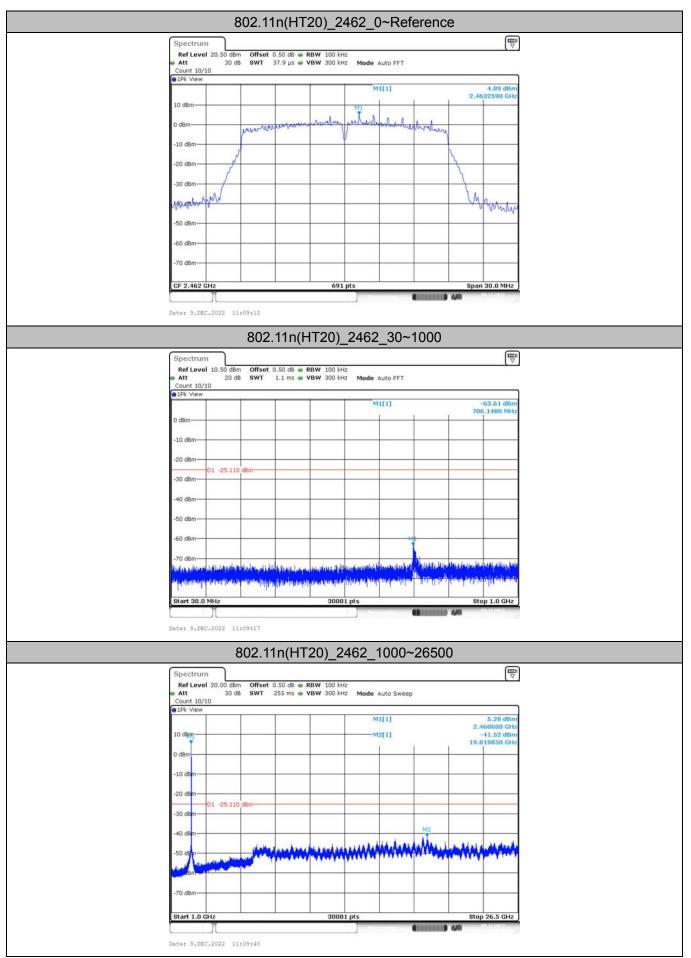


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# 3.5. DTS Bandwidth

<u>Limit</u>

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2)/ RSS-247 5.2 a:

| Test Item     | Limit                        | Frequency Range(MHz) |
|---------------|------------------------------|----------------------|
| DTS Bandwidth | >=500 KHz<br>(6dB bandwidth) | 2400~2483.5          |

#### Test Configuration



#### Test Procedure

- 5. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- 6. DTS Spectrum Setting:
  - (1) Set RBW = 100 kHz.
  - (2) Set the video bandwidth (VBW)  $\geq$  3 RBW.
  - (3) Detector = Peak.
  - (4) Trace mode = Max hold.
  - (5) Sweep = Auto couple.
  - OCB Spectrum Setting:
  - (1) Set RBW =  $1\% \sim 5\%$  occupied bandwidth.
  - (2) Set the video bandwidth (VBW)  $\ge$  3 RBW.
  - (3) Detector = Peak.
  - (4) Trace mode = Max hold.
  - (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

#### Test Mode

Please refer to the clause 2.4.



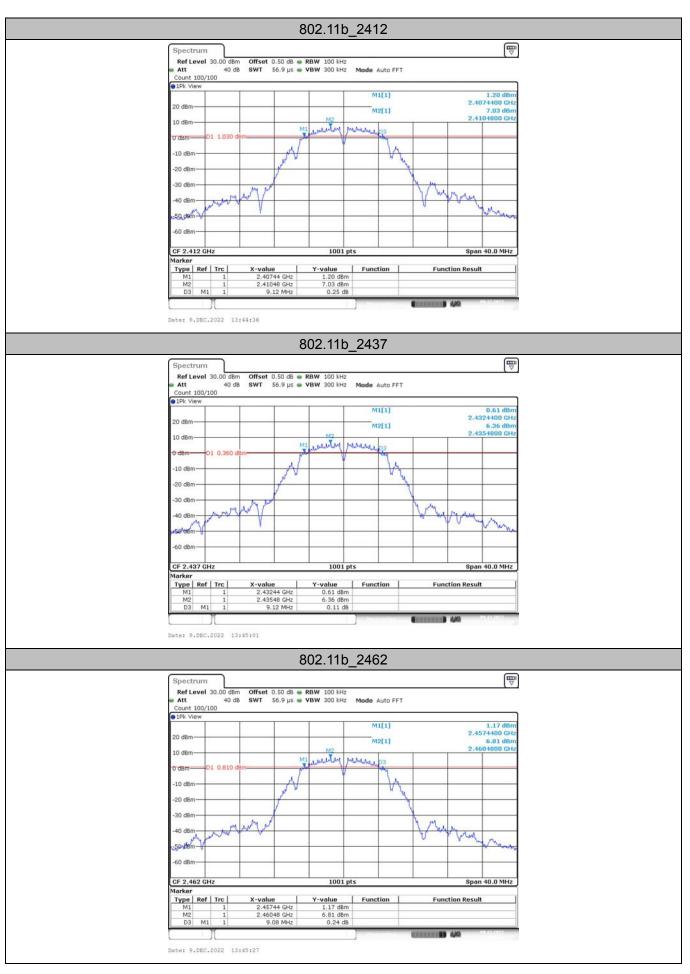
#### **Test Results**

EN

| Test Mode     | Channel | DTS BW [MHz] Limit [MHz] |       | Verdict |
|---------------|---------|--------------------------|-------|---------|
|               | 2412    | 9.12                     | >=0.5 | PASS    |
| 802.11b       | 2437    | 9.12                     | >=0.5 | PASS    |
|               | 2462    | 9.08                     | >=0.5 | PASS    |
|               | 2412    | 15.68                    | >=0.5 | PASS    |
| 802.11g       | 2437    | 15.12                    | >=0.5 | PASS    |
|               | 2462    | 15.04                    | >=0.5 | PASS    |
|               | 2412    | 15.12                    | >=0.5 | PASS    |
| 802.11n(HT20) | 2437    | 15.64                    | >=0.5 | PASS    |
|               | 2462    | 15.08                    | >=0.5 | PASS    |



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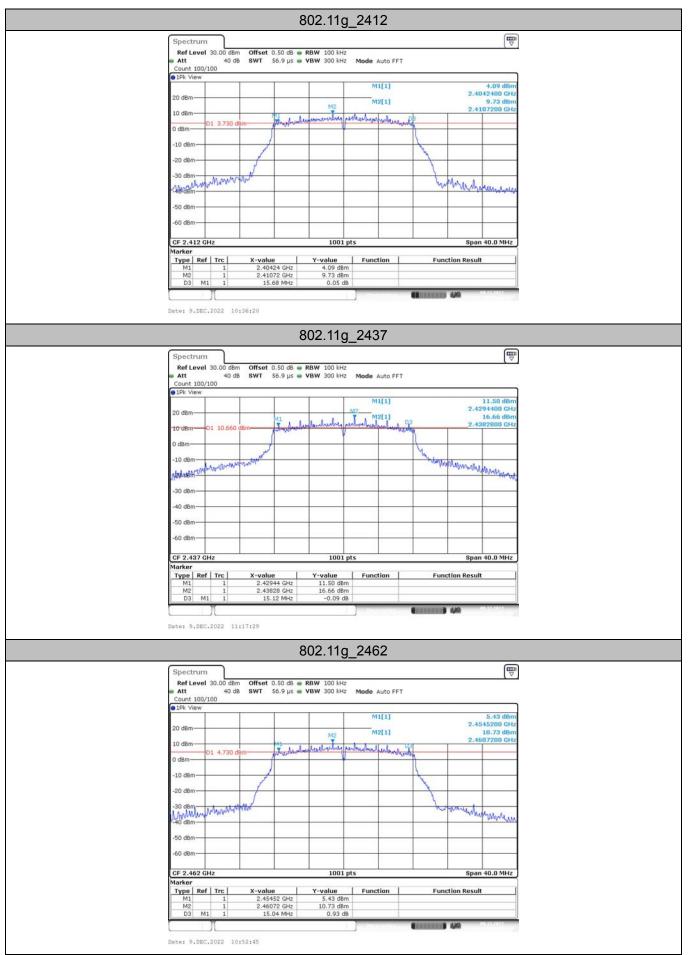


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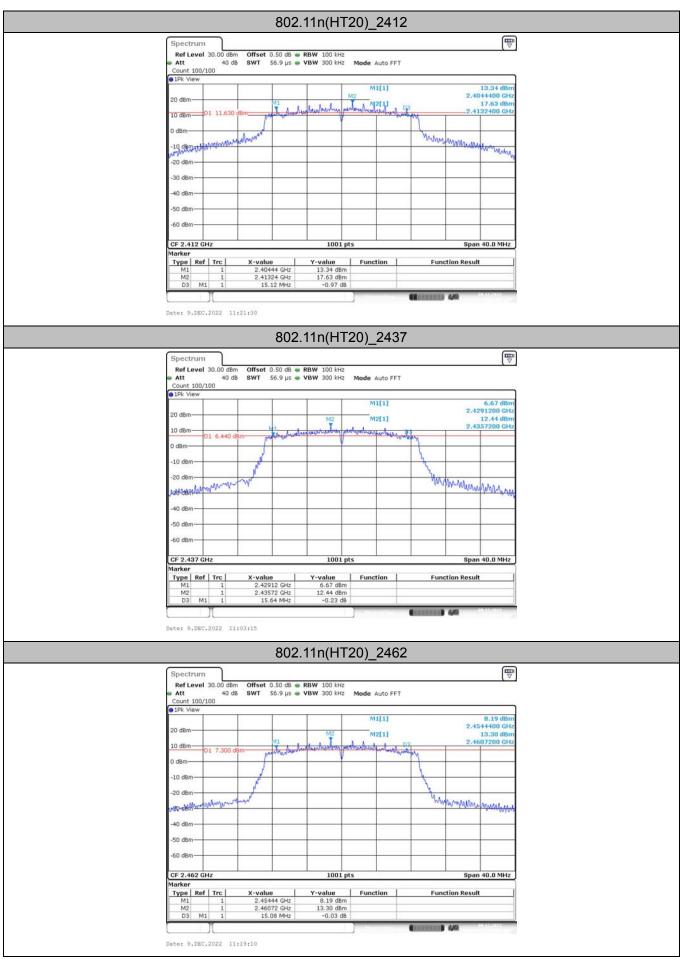
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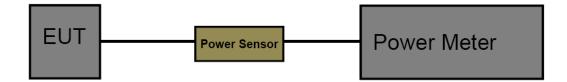
# 3.6. Maximum Conducted Output Power

<u>Limit</u>

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)/ RSS-247 5.4:

| Section                 | Test Item                         | Limit           | Frequency Range(MHz) |
|-------------------------|-----------------------------------|-----------------|----------------------|
| CFR 47 FCC 15.247(b)(3) | Maximum conducted<br>output power | 1 Watt or 30dBm | 2400~2483.5          |
| ISED RSS-247 5.4 d      | EIRP                              | 4 Watt or 36dBm | 2400~2483.5          |

#### **Test Configuration**



#### Test Procedure

- 1. The maximum conducted output power may be measured using a broadband RF power meter.
- 2. Power measurements were performed only when the EUT was transmitting at its AVG power control level using a broadband power meter with a pulse sensor.
- 3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
- 4. Record the measurement data.

#### Test Mode

Please refer to the clause 2.4.

#### Test Result



| Test Mode     | Channel | Result Avg [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------------|-------------|---------|
|               | 2412    | 13.56            | <=30        | PASS    |
| 802.11b       | 2437    | 13.74            | <=30        | PASS    |
|               | 2462    | 13.63            | <=30        | PASS    |
|               | 2412    | 13.24            | <=30        | PASS    |
| 802.11g       | 2437    | 13.26            | <=30        | PASS    |
|               | 2462    | 13.06            | <=30        | PASS    |
|               | 2412    | 13.11            | <=30        | PASS    |
| 802.11n(HT20) | 2437    | 13.16            | <=30        | PASS    |
|               | 2462    | 13.20            | <=30        | PASS    |

Note: Test results increased RF cable loss by 0.5dB and Duty Cycle Factor.



# 3.7. Power Spectral Density

### <u>Limit</u>

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)/ RSS-247 5.2 b:

| Test Item              | Limit              | Frequency Range(MHz) |  |
|------------------------|--------------------|----------------------|--|
| Power Spectral Density | 8dBm(in any 3 kHz) | 2400~2483.5          |  |

#### **Test Configuration**



#### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.

3. Spectrum Setting:

Set analyzer center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: 3 kHz

Set the VBW to: 10 kHz

Detector: PK

Sweep time: Auto

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

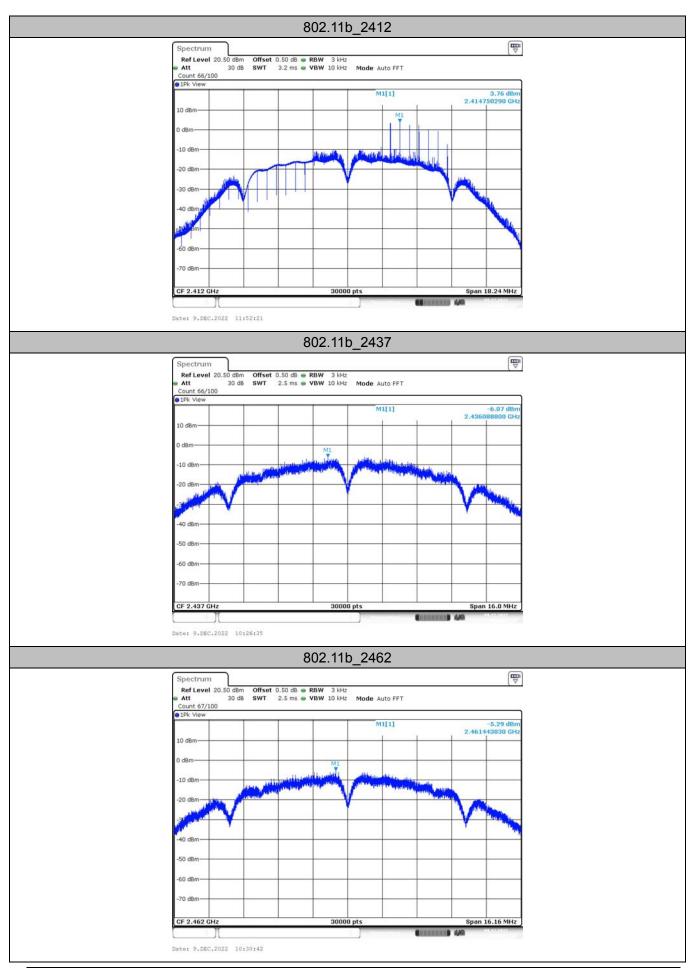
#### Test Mode

Please refer to the clause 2.4.



| Test Mode     | Channel | Result [dBm/3kHz] | Limit [dBm/3kHz] | Verdict |
|---------------|---------|-------------------|------------------|---------|
|               | 2412    | 3.76              | <=8              | PASS    |
| 802.11b       | 2437    | -6.07             | <=8              | PASS    |
|               | 2462    | -5.29             | <=8              | PASS    |
|               | 2412    | -7.42             | <=8              | PASS    |
| 802.11g       | 2437    | -7.60             | <=8              | PASS    |
|               | 2462    | -9.00             | <=8              | PASS    |
|               | 2412    | -9.19             | <=8              | PASS    |
| 802.11n(HT20) | 2437    | -8.63             | <=8              | PASS    |
|               | 2462    | -9.13             | <=8              | PASS    |





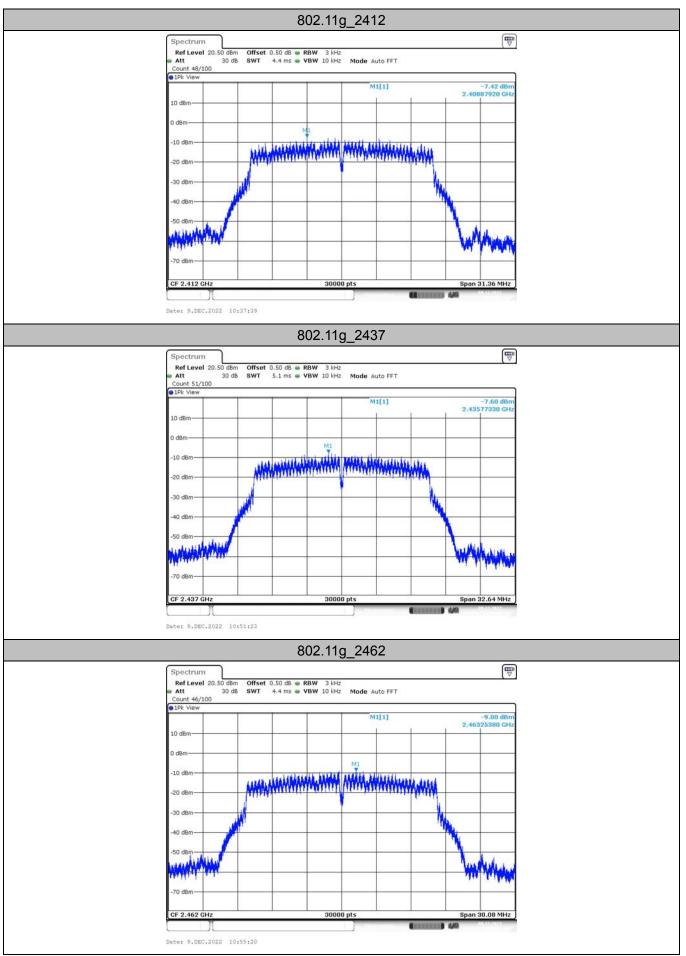
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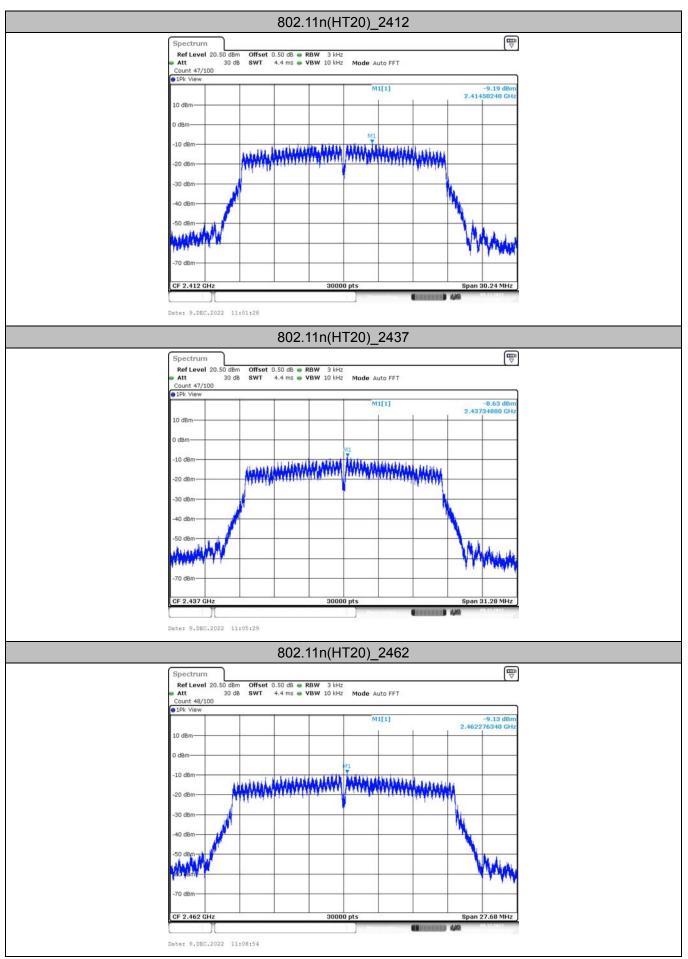


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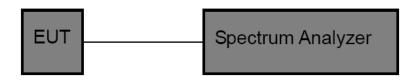


# 3.8. Duty Cycle

Limit

None, for report purposes only.

#### **Test Configuration**



#### **Test Procedure**

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.

Spectrum Setting: 3.

Set analyzer center frequency to DTS channel center frequency. Set the span to 0Hz Set the RBW to 8MHz Set the VBW to 8MHz Detector: peak Sweep time: auto Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

#### **Test Mode**

Please refer to the clause 2.4.

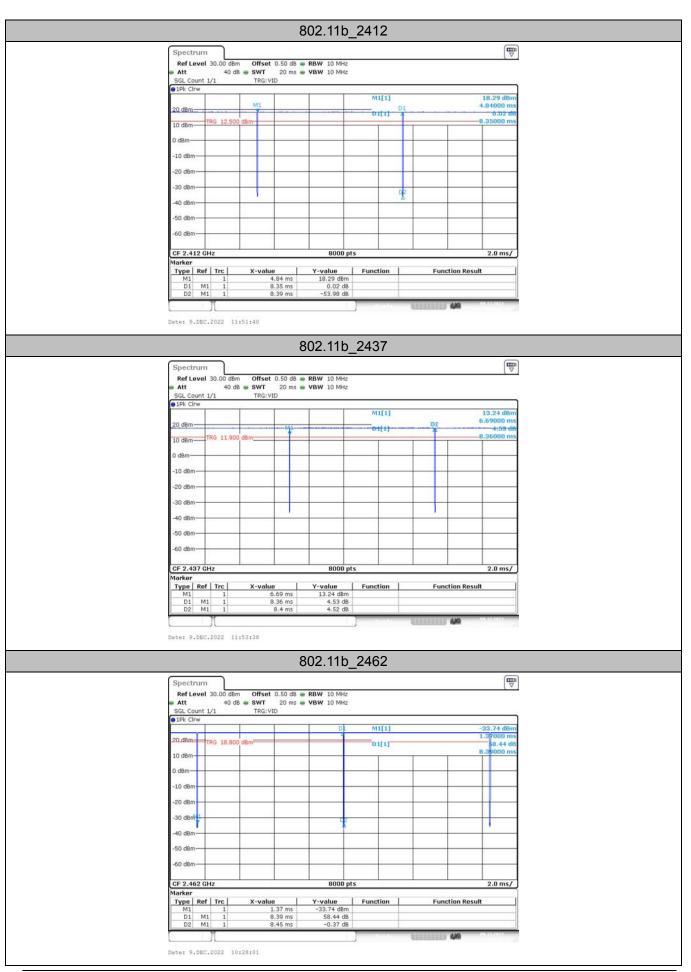
#### **Test Result**

| Test Mode     | Channel | Transmission<br>Duration<br>[ms] | Transmission<br>Period [ms] | Duty<br>Cycle [%] | Duty<br>Cycle<br>Factor | 1/T<br>Minimum<br>VBW<br>(kHz) | Final<br>setting<br>For VBW<br>(kHz) |
|---------------|---------|----------------------------------|-----------------------------|-------------------|-------------------------|--------------------------------|--------------------------------------|
|               | 2412    | 8.35                             | 8.39                        | 99.52             | 0.02                    | 0.12                           | 1                                    |
| 802.11b       | 2437    | 8.36                             | 8.40                        | 99.52             | 0.02                    | 0.12                           | 1                                    |
|               | 2462    | 8.39                             | 8.45                        | 99.29             | 0.03                    | 0.12                           | 1                                    |
|               | 2412    | 1.38                             | 1.44                        | 95.83             | 0.18                    | 0.72                           | 1                                    |
| 802.11g       | 2437    | 1.39                             | 1.44                        | 96.53             | 0.15                    | 0.72                           | 1                                    |
|               | 2462    | 1.38                             | 1.44                        | 95.83             | 0.18                    | 0.72                           | 1                                    |
| 802.11n(HT20) | 2412    | 1.30                             | 1.36                        | 95.59             | 0.20                    | 0.77                           | 1                                    |
|               | 2437    | 1.30                             | 1.36                        | 95.59             | 0.20                    | 0.77                           | 1                                    |
|               | 2462    | 1.30                             | 1.36                        | 95.59             | 0.20                    | 0.77                           | 1                                    |

Note: Duty Cycle Factor = 10\*Log10(1/ Duty Cycle)

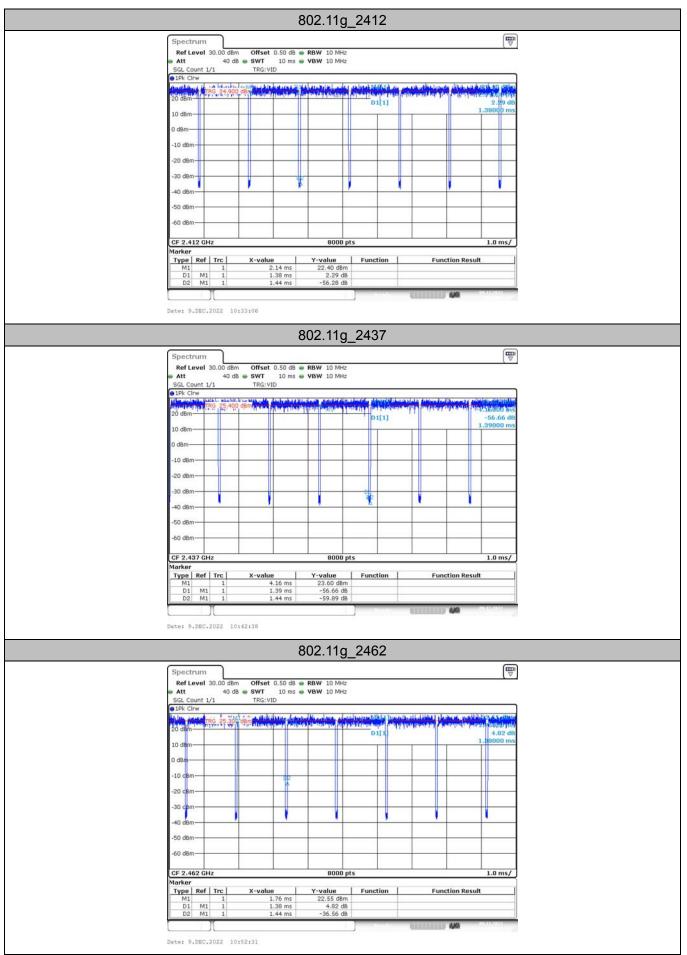


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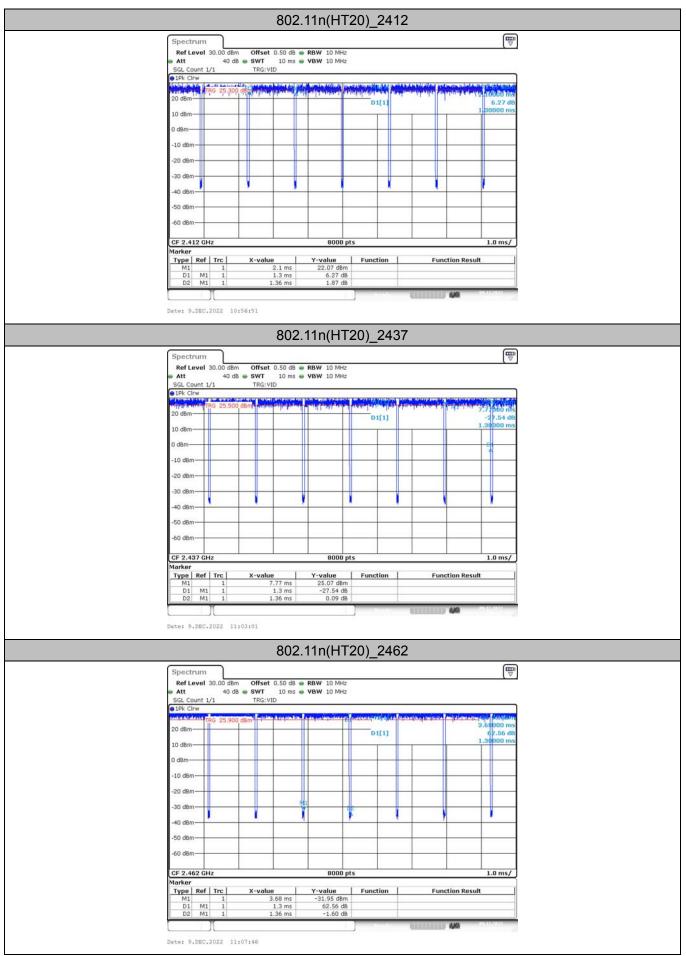














# 3.9. Antenna requirement

#### **Requirement**

#### FCC CFR Title 47 Part 15 Subpart C Section 15.203:

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 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.

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

#### <u>Test Result</u>

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.