



TEST REPORT

For WiFi-2.4GHz Band

Report No. : **CHTEW2208032402** Report Verification: 

Project No. : **SHT2207115003EW**

FCC ID : **2ASWW-TAB83G**

Applicant's name : **XINCHUANGXIN INTERNATIONAL CO., LTD**

Address : **ROOM 605 6/F, FA YUEN COMMERCIAL BUILDING, 75-77 FA YUEN STREET MONGKOK KL**

Product Name : **Tablet**

Trade Mark : **CORN**

Model No. : **The leader tab8 3G**

Listed Model(s) : **-**

Standard : **FCC CFR Title 47 Part 15 Subpart C Section 15.247**

Date of receipt of test sample : **Aug.09, 2022**

Date of testing : **Aug.09, 2022-Aug.25, 2022**

Date of issue : **Aug.29, 2022**

Result : **PASS**

Compiled by
(position+printedname+signature).... : File administrators Fanghui Zhu

Fanghui Zhu

Supervised by
(position+printedname+signature).... : Project Engineer Caspar Chen

Caspar Chen

Approved by
(Position+Printed name+Signature): RF Manager Hans Hu

Hans Hu

Testing Laboratory Name : **Shenzhen Huatongwei International Inspection Co., Ltd.**

Address : **1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China**

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The test report merely correspond to the test sample.

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1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

- [FCC Rules Part 15.247](#): Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz
- [ANSI C63.10:2013](#): American National Standard for Testing Unlicensed Wireless Devices
- [KDB 558074 D01 15.247 Meas Guidance v05r02](#): Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating under Section 15.247 of The FCC Rules

1.2. Report version

| Revision No. | Date of issue | Description |
|--------------|---------------|-------------|
| N/A | 2022-08-29 | Original |
| | | |
| | | |
| | | |
| | | |

2. TEST DESCRIPTION

| Report clause | Test Items | Standard Requirement | Result | Test Engineer |
|---------------|---|-------------------------|--------------------|---------------|
| 5.1 | Antenna Requirement | 15.203/15.247(c) | PASS | Xiaoxiao Li |
| 5.2 | AC Conducted Emission | 15.207 | PASS | Junman Wang |
| 5.3 | Peak Output Power | 15.247(b)(3) | PASS | Xiaoxiao Li |
| 5.4 | Power Spectral Density | 15.247(e) | PASS | Xiaoxiao Li |
| 5.5 | 6dB Bandwidth | 15.247(a)(2) | PASS | Xiaoxiao Li |
| 5.6 | 99% Occupied Bandwidth | - | PASS ^{*1} | Xiaoxiao Li |
| 5.7 | Duty cycle | - | PASS ^{*1} | Xiaoxiao Li |
| 5.8 | Conducted Band Edge and Spurious Emission | 15.247(d)/15.205 | PASS | Xiaoxiao Li |
| 5.9 | Radiated Band Edge Emission | 15.205/15.209 | PASS | Junman Wang |
| 5.10 | Radiated Spurious Emission | 15.247(d)/15.205/15.209 | PASS | Junman Wang |

Note:

- The measurement uncertainty is not included in the test result.
- ^{*1}: No requirement on standard, only report these test data.

3. SUMMARY

3.1. Client Information

| | |
|---------------|--|
| Applicant: | XINCHUANGXIN INTERNATIONAL CO.,LTD |
| Address: | ROOM 605 6/F, FA YUEN COMMERCIAL BUILDING, 75-77 FA YUEN STREET MONGKOK KL |
| Manufacturer: | Shenzhen Chiteng Technology Co.,LTD |
| Address: | Second Floor,Area A, Building 4, Huiye Technology Workshop, Guangang Road, Tangjia Community, Gongming Street, Guangming New District, Shenzhen, Guangdong |

3.2. Product Description

| Main unit information: | |
|------------------------|---------------------------------|
| Product Name: | Tablet |
| Trade Mark: | CORN |
| Model No.: | The leader tab8 3G |
| Listed Model(s): | - |
| Power supply: | DC 3.8V from Battery |
| Hardware version: | S863T-7731E-V1.0 |
| Software version: | The leader tab8 3G_V01_20220730 |

3.3. Radio Specification Description

| | | | |
|----------------------|---|---|---|
| Support type*2: | <input checked="" type="checkbox"/> 802.11b | <input checked="" type="checkbox"/> 802.11g | <input checked="" type="checkbox"/> 802.11n |
| Support bandwidth: | <input checked="" type="checkbox"/> 20MHz | <input type="checkbox"/> 40MHz | |
| Modulation: | 802.11b: | DBPSK, DQPSK, BPSK, QPSK | |
| | 802.11g/n: | BPSK, QPSK, 16QAM, 64QAM | |
| Operation frequency: | 802.11b/g/n(HT20): | 2412MHz~2462MHz | |
| Channel number: | 802.11b/g/n(HT20): | 11 | |
| Channel separation: | 5MHz | | |
| Antenna technology: | <input checked="" type="checkbox"/> SISO | <input type="checkbox"/> MIMO | |
| Antenna type: | Interna | | |
| Antenna gain: | 1.1 dBi | | |

Note:

*2: only show the RF function associated with this report.

3.4. Testing Laboratory Information

| | | |
|----------------------|---|----------------------|
| Laboratory Name | Shenzhen Huatongwei International Inspection Co., Ltd. | |
| Laboratory Location | 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China | |
| Connect information: | Phone: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn | |
| Qualifications | Type | Accreditation Number |
| | FCC | 762235 |

4. TEST CONFIGURATION

4.1. Test frequency list

According to section 15.31(m), regards to the operating frequency range over 10 MHz, must select three channels which were tested. The Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the below blue front.

| 802.11b/g/n(HT20) | |
|-------------------|-----------------|
| Channel | Frequency (MHz) |
| 01 | 2412 |
| 02 | 2417 |
| · : | · : |
| 06 | 2437 |
| · : | · : |
| 10 | 2457 |
| 11 | 2462 |

4.2. Descriptions of Test mode

Preliminary tests were performed in different data rates, final test modes are considering the modulation and worse data rates as below table.

| Modulation | Data rate |
|---------------|-----------|
| 802.11b | 1Mbps |
| 802.11g | 6Mbps |
| 802.11n(HT20) | MCS0 |

4.3. 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 |
| 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. |

4.4. Test sample information

| Test item | HTW sample no. |
|-------------------------|--|
| RF Conducted test items | Please refer to the description in the appendix report |
| RF Radiated test items | YPHT22071150003 |
| EMI test items | YPHT22071150003 |

Note:

RF Conducted test items: Peak Output Power, Power Spectral Density, 6dB Bandwidth, 99% Occupied Bandwidth, Duty cycle, Conducted Band Edge and Spurious Emission

RF Radiated test items: Radiated Band Edge Emission, Radiated Spurious Emission

EMI test items: AC Conducted Emission

4.5. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

| Whether support unit is used? | | | |
|-------------------------------|-----------|------------|-----------|
| ✓ No | | | |
| Item | Equipment | Trade Name | Model No. |
| 1 | | | |
| 2 | | | |

4.6. Testing environmental condition

| Type | Requirement | Actual |
|--------------------|--------------|----------|
| Temperature: | 15~35°C | 25°C |
| Relative Humidity: | 25~75% | 50% |
| Air Pressure: | 860~1060mbar | 1000mbar |

4.7. Statement of the measurement uncertainty

| Test Item | Measurement Uncertainty |
|--------------------------------------|-----------------------------------|
| AC Conducted Emission (150kHz~30MHz) | 3.00 dB |
| Radiated Emission (30MHz~1000MHz) | 4.36 dB |
| Radiated Emissions (1GHz~25GHz) | 5.10 dB |
| Peak Output Power | 0.77dB |
| Power Spectral Density | 0.77dB |
| Conducted Spurious Emission | 0.77dB |
| 6dB Bandwidth | 70Hz for <1GHz 130Hz for >1GHz |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.8. Equipment Used during the Test

| ● Conducted Emission | | | | | | | |
|----------------------|---------------------|--------------------|---------------|----------------|---------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Shielded Room | Albatross projects | HTWE0114 | N/A | N/A | 2018/09/28 | 2023/09/27 |
| ● | EMI Test Receiver | R&S | HTWE0111 | ESCI | 101247 | 2021/09/14 | 2022/09/13 |
| ● | Artificial Mains | SCHWARZBECK | HTWE0113 | NNLK 8121 | 573 | 2021/09/17 | 2022/09/16 |
| ● | Pulse Limiter | R&S | HTWE0193 | ESH3-Z2 | 101447 | 2021/09/16 | 2022/09/15 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0113-02 | ENVIROFLEX 142 | EF-NM-BNCM-2M | 2021/09/17 | 2022/09/16 |
| ● | Test Software | R&S | N/A | ES-K1 | N/A | N/A | N/A |

| ● Radiated emission-6th test site | | | | | | | |
|-----------------------------------|-------------------------|--------------------|---------------|-------------|------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Semi-Anechoic Chamber | Albatross projects | HTWE0127 | SAC-3m-02 | C11121 | 2018/09/30 | 2022/09/29 |
| ● | EMI Test Receiver | R&S | HTWE0099 | ESCI | 100900 | 2021/09/14 | 2022/09/13 |
| ● | Loop Antenna | R&S | HTWE0170 | HFH2-Z2 | 100020 | 2021/04/06 | 2024/04/05 |
| ● | Ultra-Broadband Antenna | SCHWARZBECK | HTWE0123 | VULB9163 | 538 | 2021/04/06 | 2024/04/05 |
| ● | Pre-Amplifier | SCHWARZBECK | HTWE0295 | BBV 9742 | N/A | 2021/11/05 | 2022/11/04 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0062-01 | N/A | N/A | 2022/02/25 | 2023/02/24 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0062-02 | SUCOFLEX104 | 501184/4 | 2022/02/25 | 2023/02/24 |
| ● | Test Software | R&S | N/A | ES-K1 | N/A | N/A | N/A |

| ● Radiated emission-7th test site | | | | | | | |
|-----------------------------------|-------------------------|--------------------|---------------|-------------------|-------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Semi-Anechoic Chamber | Albatross projects | HTWE0122 | SAC-3m-01 | C11121 | 2018/09/27 | 2022/09/26 |
| ● | Spectrum Analyzer | R&S | HTWE0098 | FSP40 | 100597 | 2021/09/13 | 2022/09/12 |
| ● | Horn Antenna | SCHWARZBECK | HTWE0126 | 9120D | 1011 | 2020/04/01 | 2023/03/31 |
| ● | Broadband Horn Antenna | SCHWARZBECK | HTWE0103 | BBHA9170 | BBHA9170472 | 2020/04/27 | 2023/04/26 |
| ● | Pre-amplifier | CD | HTWE0071 | PAP-0102 | 12004 | 2021/11/05 | 2022/11/04 |
| ● | Broadband Pre-amplifier | SCHWARZBECK | HTWE0201 | BBV 9718 | 9718-248 | 2022/02/28 | 2023/02/27 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-01 | 6m 18GHz S Serisa | N/A | 2022/02/25 | 2023/02/24 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-02 | 6m 3GHz RG Serisa | N/A | 2022/02/25 | 2023/02/24 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0119-05 | 6m 3GHz RG Serisa | N/A | 2022/02/25 | 2023/02/24 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-04 | 6m 3GHz RG Serisa | N/A | 2022/02/25 | 2023/02/24 |
| ● | Test Software | Audix | N/A | E3 | N/A | N/A | N/A |

| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
|------|------------------------------|--------------|---------------|-----------|------------|------------------------------|------------------------------|
| ● | Signal and spectrum Analyzer | R&S | HTWE0242 | FSV40 | 100048 | 2021/09/13 | 2022/09/12 |
| ● | Signal & Spectrum Analyzer | R&S | HTWE0262 | FSW26 | 103440 | 2021/09/13 | 2022/09/12 |
| ● | Spectrum Analyzer | Agilent | HTWE0286 | N9020A | MY50510187 | 2021/09/13 | 2022/09/12 |
| ● | Radio communication tester | R&S | HTWE0287 | CMW500 | 137688-Lv | 2021/09/13 | 2022/09/12 |
| ● | Test software | Tonscend | N/A | JS1120 | N/A | N/A | N/A |

5. TEST CONDITIONS AND RESULTS

5.1. 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 an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

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

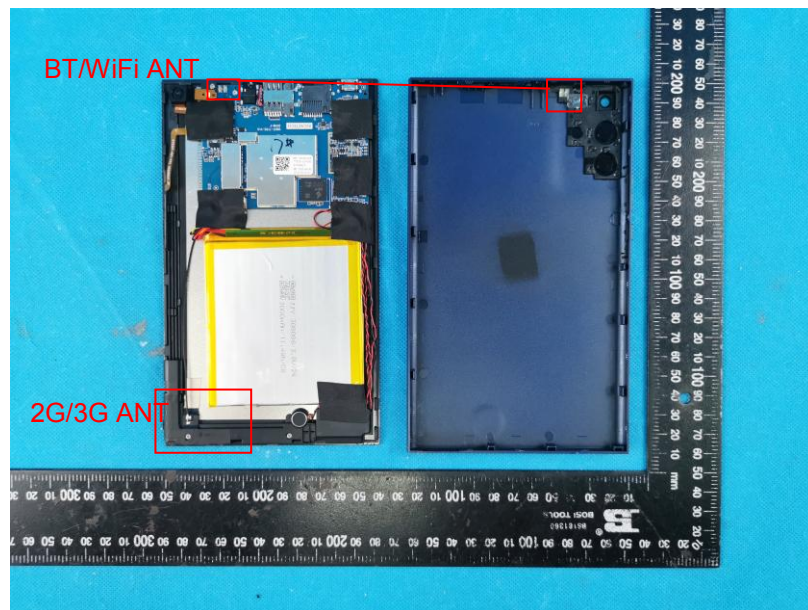
(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the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

TEST RESULT

☒ Passed

☐ Not Applicable

The antenna type is Interna antenna, the directional gain of the antenna less than 6 dBi, please refer to the below antenna photo.



5.2. AC Conducted Emission

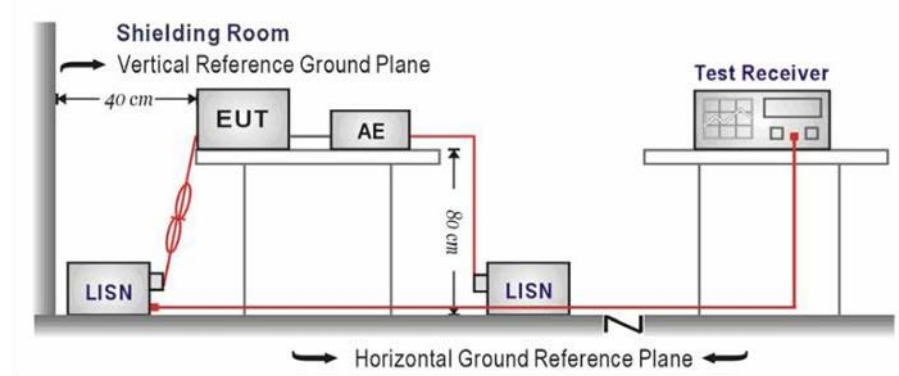
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.207

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

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup according to ANSI C63.10 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 50 ohm /50uH coupling impedance for the measuring equipment.
4. 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)
5. 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.
6. 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.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE

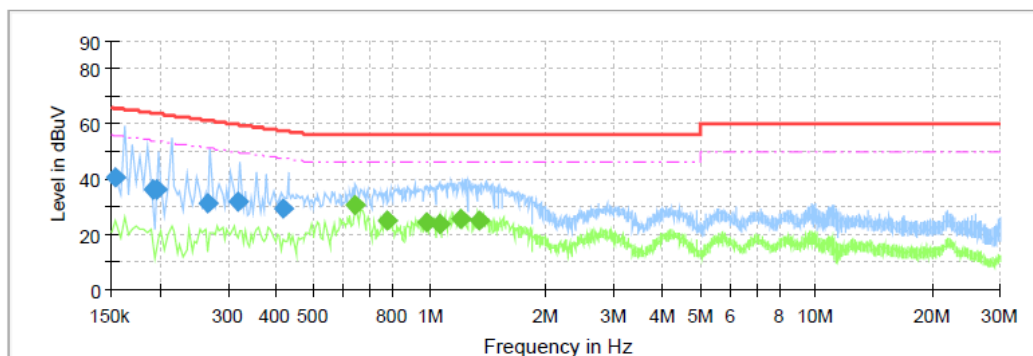
Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

Test Line:

L

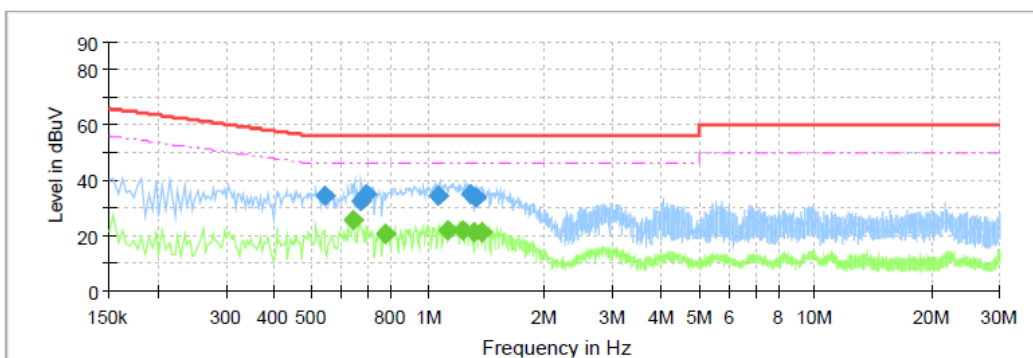


Final Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|------------|
| 0.154000 | 40.43 | --- | 65.78 | 25.35 | L1 | 10.1 |
| 0.192500 | 36.09 | --- | 63.93 | 27.84 | L1 | 10.1 |
| 0.195500 | 36.15 | --- | 63.80 | 27.65 | L1 | 10.1 |
| 0.267500 | 31.24 | --- | 61.20 | 29.96 | L1 | 10.1 |
| 0.319500 | 32.12 | --- | 59.72 | 27.60 | L1 | 10.1 |
| 0.419500 | 29.57 | --- | 57.46 | 27.88 | L1 | 10.1 |
| 0.643500 | --- | 30.39 | 46.00 | 15.61 | L1 | 10.2 |
| 0.771500 | --- | 25.07 | 46.00 | 20.93 | L1 | 10.2 |
| 0.983500 | --- | 24.60 | 46.00 | 21.40 | L1 | 10.1 |
| 1.067500 | --- | 23.47 | 46.00 | 22.53 | L1 | 10.1 |
| 1.203500 | --- | 25.57 | 46.00 | 20.43 | L1 | 10.1 |
| 1.351500 | --- | 25.28 | 46.00 | 20.72 | L1 | 10.1 |

Test Line:

N



Final Result

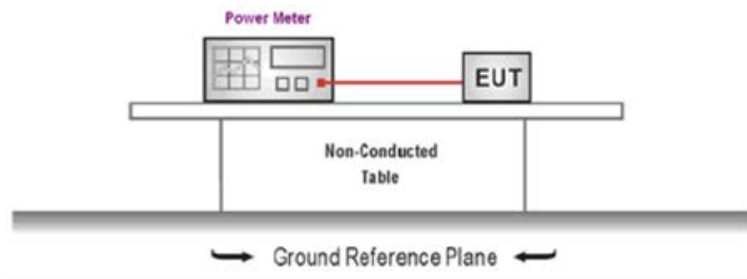
| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|------|------------|
| 0.539500 | 34.12 | --- | 56.00 | 21.88 | N | 10.1 |
| 0.643500 | --- | 25.55 | 46.00 | 20.45 | N | 10.2 |
| 0.668500 | 32.63 | --- | 56.00 | 23.37 | N | 10.2 |
| 0.691500 | 34.85 | --- | 56.00 | 21.15 | N | 10.2 |
| 0.775500 | --- | 20.33 | 46.00 | 25.67 | N | 10.2 |
| 1.067500 | 34.49 | --- | 56.00 | 21.51 | N | 10.1 |
| 1.123500 | --- | 22.04 | 46.00 | 23.96 | N | 10.1 |
| 1.228500 | --- | 21.73 | 46.00 | 24.27 | N | 10.1 |
| 1.279500 | 34.70 | --- | 56.00 | 21.30 | N | 10.1 |
| 1.315500 | --- | 21.24 | 46.00 | 24.76 | N | 10.1 |
| 1.323500 | 33.89 | --- | 56.00 | 22.11 | N | 10.1 |
| 1.375500 | --- | 21.01 | 46.00 | 24.99 | N | 10.1 |

5.3. Peak Output Power

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3): 30dBm

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was tested according to ANSI C63.10 and KDB 558074 D01 requirements.
2. The maximum peak conducted output power may be measured using a broadband peak RF power meter.
3. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.
4. Record the measurement data.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

Please refer to appendix A on the appendix report

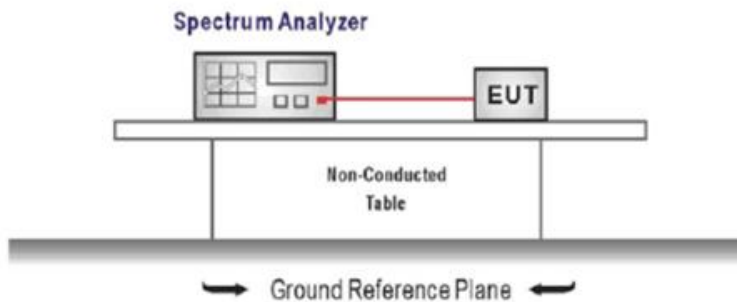
5.4. Power Spectral Density

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e):

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input,
2. Configure the spectrum analyzer as shown below:
Center frequency=DTS channel center frequency
Span =1.5 times the DTS bandwidth
 $RBW = 3 \text{ kHz} \leq RBW \leq 100 \text{ kHz}$, $VBW \geq 3 \times RBW$
Sweep time = auto couple
Detector = peak
Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter wave form on the spectrum analyzer.
4. Use the peak marker function to determine the maximum amplitude level within the RBW.
5. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

Please refer to appendix B on the appendix report

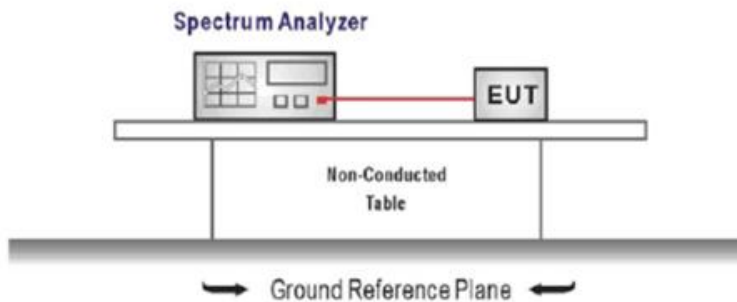
5.5. 6dB bandwidth

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2):

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).
Center Frequency = DTS channel center frequency
Span = 2 x DTS bandwidth
RBW = 100 kHz, VBW $\geq 3 \times$ RBW
Sweep time = auto couple
Detector = Peak
Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission, and record the pertinent measurements.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

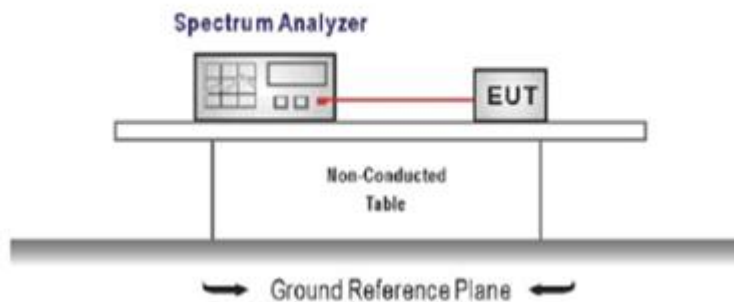
Please refer to appendix C on the appendix report

5.6. 99% Occupied Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).
Center Frequency = channel center frequency
Span $\geq 1.5 \times \text{OBW}$
RBW = 1%~5%OBW
VBW $\geq 3 \times \text{RBW}$
Sweep time = auto couple
Detector = Peak
Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

TEST DATA

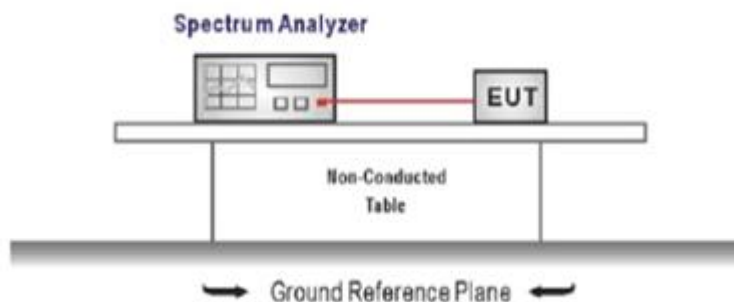
Please refer to appendix D on the appendix report

5.7. Duty Cycle

LIMIT

N/A

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
3. Use the following spectrum analyzer settings:
Span=zero span, Frequency=centered channel, RBW= 1 MHz, VBW \geq RBW
Sweep=as necessary to capture the entire dwell time,
Detector function = peak, Trigger mode
4. Measure and record the duty cycle data

TEST MODE

Please refer to the clause 4.2

TEST DATA

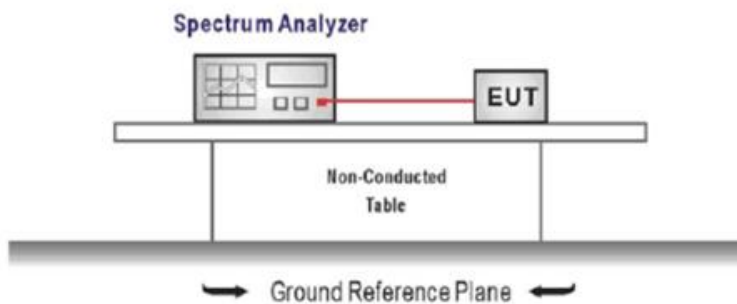
Please refer to appendix E on the appendix report

5.8. Conducted Band edge and Spurious Emission

LIMIT

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 20 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. Connect the antenna port(s) to the spectrum analyzer input.
2. Establish a reference level by using the following procedure
Center frequency=DTS channel center frequency
The span = 1.5 times the DTS bandwidth.
RBW = 100 kHz, VBW $\geq 3 \times$ RBW
Detector = peak, Sweep time = auto couple, Trace mode = max hold
Allow trace to fully stabilize
Use the peak marker function to determine the maximum PSD level

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

3. Emission level measurement
Set the center frequency and span to encompass frequency range to be measured
RBW = 100 kHz, VBW $\geq 3 \times$ RBW
Detector = peak, Sweep time = auto couple, Trace mode = max hold
Allow trace to fully stabilize
Use the peak marker function to determine the maximum amplitude level.
4. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
5. Ensure that the amplitude of all unwanted emission outside of the authorized frequency band excluding restricted frequency bands) are attenuated by at least the minimum requirements specified (at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz). Report the three highest emission relative to the limit.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ **Passed** ☐ **Not Applicable**

TEST DATA

Please refer to appendix F on the appendix report

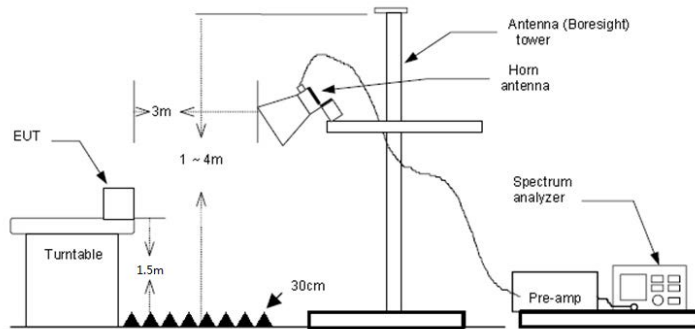
5.9. Radiated Band edge Emission

LIMIT

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 or digitally modulated intentional radiator is operating, Radiated Emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the Radiated Emissions limits specified in §15.209(a) (see §15.205(c)).

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10 .
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 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 on radiated measurement.
5. Use the following spectrum analyzer settings:
 - a) Span shall wide enough to fully capture the emission being measured
 - b) Set RBW=100kHz for <1GHz, VBW=3*RBW, Sweep time=auto, Detector=peak, Trace=max hold
 - c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement

For average measurement:

 - VBW=10Hz, When duty cycle is no less than 98 percent
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation, so refer to this clause 5.6 duty cycle.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

Note:

- 1) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
- 2) Over Limit = Level– Limit
- 3) Average measurement was not performed if peak level is lower than average limit(54 dBuV/m).

| Type | 802.11b | | Test channel | | CH01 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 31.72 | 27.96 | 5.95 | 37.56 | 20.00 | 48.07 | 54.00 | -5.93 | Average |
| 2 | 2390.01 | 30.98 | 27.72 | 6.19 | 37.45 | 20.00 | 47.44 | 54.00 | -6.56 | Average |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 37.36 | 27.96 | 5.95 | 37.56 | 20.00 | 53.71 | 74.00 | -20.29 | Peak |
| 2 | 2390.01 | 37.15 | 27.72 | 6.19 | 37.45 | 20.00 | 53.61 | 74.00 | -20.39 | Peak |
| Type | 802.11b | | Test channel | | CH01 | | Polarity | | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 31.24 | 27.96 | 5.95 | 37.56 | 20.00 | 47.59 | 54.00 | -6.41 | Average |
| 2 | 2390.01 | 30.84 | 27.72 | 6.19 | 37.45 | 20.00 | 47.30 | 54.00 | -6.70 | Average |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 37.62 | 27.96 | 5.95 | 37.56 | 20.00 | 53.97 | 74.00 | -20.03 | Peak |
| 2 | 2390.01 | 37.91 | 27.72 | 6.19 | 37.45 | 20.00 | 54.37 | 74.00 | -19.63 | Peak |

| Type | 802.11b | | Test channel | | CH11 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 38.66 | 27.43 | 6.16 | 37.26 | 20.00 | 54.99 | 74.00 | -19.01 | Peak |
| 2 | 2500.00 | 38.43 | 27.40 | 6.15 | 37.26 | 20.00 | 54.72 | 74.00 | -19.28 | Peak |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 32.01 | 27.43 | 6.16 | 37.26 | 20.00 | 48.34 | 54.00 | -5.66 | Average |
| 2 | 2500.00 | 30.79 | 27.40 | 6.15 | 37.26 | 20.00 | 47.08 | 54.00 | -6.92 | Average |
| Type | 802.11b | | Test channel | | CH11 | | Polarity | | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 38.61 | 27.43 | 6.16 | 37.26 | 20.00 | 54.94 | 74.00 | -19.06 | Peak |
| 2 | 2500.00 | 37.43 | 27.40 | 6.15 | 37.26 | 20.00 | 53.72 | 74.00 | -20.28 | Peak |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 32.25 | 27.43 | 6.16 | 37.26 | 20.00 | 48.58 | 54.00 | -5.42 | Average |
| 2 | 2500.00 | 30.59 | 27.40 | 6.15 | 37.26 | 20.00 | 46.88 | 54.00 | -7.12 | Average |

| Type | 802.11g | | Test channel | | CH01 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 38.05 | 27.96 | 5.95 | 37.56 | 20.00 | 54.40 | 74.00 | -19.60 | Peak |
| 2 | 2390.01 | 38.20 | 27.72 | 6.19 | 37.45 | 20.00 | 54.66 | 74.00 | -19.34 | Peak |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 26.87 | 27.96 | 5.95 | 37.56 | 20.00 | 43.22 | 54.00 | -10.78 | Average |
| 2 | 2390.01 | 26.93 | 27.72 | 6.19 | 37.45 | 20.00 | 43.39 | 54.00 | -10.61 | Average |
| Type | 802.11g | | Test channel | | CH01 | | Polarity | | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 37.19 | 27.96 | 5.95 | 37.56 | 20.00 | 53.54 | 74.00 | -20.46 | Peak |
| 2 | 2390.01 | 37.68 | 27.72 | 6.19 | 37.45 | 20.00 | 54.14 | 74.00 | -19.86 | Peak |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 26.95 | 27.96 | 5.95 | 37.56 | 20.00 | 43.30 | 54.00 | -10.70 | Average |
| 2 | 2390.01 | 27.02 | 27.72 | 6.19 | 37.45 | 20.00 | 43.48 | 54.00 | -10.52 | Average |

| Type | 802.11g | | Test channel | | CH11 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 29.74 | 27.43 | 6.16 | 37.26 | 20.00 | 46.07 | 54.00 | -7.93 | Average |
| 2 | 2500.00 | 27.27 | 27.40 | 6.15 | 37.26 | 20.00 | 43.56 | 54.00 | -10.44 | Average |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 39.33 | 27.43 | 6.16 | 37.26 | 20.00 | 55.66 | 74.00 | -18.34 | Peak |
| 2 | 2500.00 | 37.04 | 27.40 | 6.15 | 37.26 | 20.00 | 53.33 | 74.00 | -20.67 | Peak |
| Type | 802.11g | | Test channel | | CH11 | | Polarity | | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 28.96 | 27.43 | 6.16 | 37.26 | 20.00 | 45.29 | 54.00 | -8.71 | Average |
| 2 | 2500.00 | 27.08 | 27.40 | 6.15 | 37.26 | 20.00 | 43.37 | 54.00 | -10.63 | Average |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 39.68 | 27.43 | 6.16 | 37.26 | 20.00 | 56.01 | 74.00 | -17.99 | Peak |
| 2 | 2500.00 | 38.14 | 27.40 | 6.15 | 37.26 | 20.00 | 54.43 | 74.00 | -19.57 | Peak |

| Type | 802.11n(HT20) | | Test channel | | CH01 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 26.94 | 27.96 | 5.95 | 37.56 | 20.00 | 43.29 | 54.00 | -10.71 | Average |
| 2 | 2390.01 | 27.06 | 27.72 | 6.19 | 37.45 | 20.00 | 43.52 | 54.00 | -10.48 | Average |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 37.51 | 27.96 | 5.95 | 37.56 | 20.00 | 53.86 | 74.00 | -20.14 | Peak |
| 2 | 2390.01 | 37.40 | 27.72 | 6.19 | 37.45 | 20.00 | 53.86 | 74.00 | -20.14 | Peak |
| Type | 802.11n(HT20) | | Test channel | | CH01 | | Polarity | | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 26.99 | 27.96 | 5.95 | 37.56 | 20.00 | 43.34 | 54.00 | -10.66 | Average |
| 2 | 2390.01 | 27.05 | 27.72 | 6.19 | 37.45 | 20.00 | 43.51 | 54.00 | -10.49 | Average |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2310.00 | 38.70 | 27.96 | 5.95 | 37.56 | 20.00 | 55.05 | 74.00 | -18.95 | Peak |
| 2 | 2390.01 | 37.81 | 27.72 | 6.19 | 37.45 | 20.00 | 54.27 | 74.00 | -19.73 | Peak |

| Type | 802.11n(HT20) | | Test channel | | CH11 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 43.98 | 27.43 | 6.16 | 37.26 | 20.00 | 60.31 | 74.00 | -13.69 | Peak |
| 2 | 2500.00 | 38.06 | 27.40 | 6.15 | 37.26 | 20.00 | 54.35 | 74.00 | -19.65 | Peak |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 29.94 | 27.43 | 6.16 | 37.26 | 20.00 | 46.27 | 54.00 | -7.73 | Average |
| 2 | 2500.00 | 27.08 | 27.40 | 6.15 | 37.26 | 20.00 | 43.37 | 54.00 | -10.63 | Average |
| Type | 802.11n(HT20) | | Test channel | | CH11 | | Polarity | | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 41.26 | 27.43 | 6.16 | 37.26 | 20.00 | 57.59 | 74.00 | -16.41 | Peak |
| 2 | 2500.00 | 37.77 | 27.40 | 6.15 | 37.26 | 20.00 | 54.06 | 74.00 | -19.94 | Peak |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Aux dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 2483.49 | 29.46 | 27.43 | 6.16 | 37.26 | 20.00 | 45.79 | 54.00 | -8.21 | Average |
| 2 | 2500.00 | 27.10 | 27.40 | 6.15 | 37.26 | 20.00 | 43.39 | 54.00 | -10.61 | Average |

5.10. Radiated Spurious Emission

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

| Frequency | Limit (dBuV/m) | Value |
|----------------------|-------------------|------------|
| 0.009 MHz ~0.49 MHz | 2400/F(kHz) @300m | Quasi-peak |
| 0.49 MHz ~ 1.705 MHz | 24000/F(kHz) @30m | Quasi-peak |
| 1.705 MHz ~30 MHz | 30 @30m | Quasi-peak |

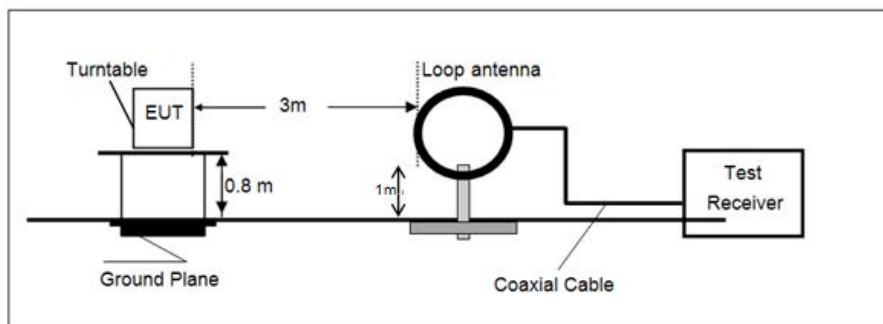
Note: Limit dBuV/m @3m = Limit dBuV/m @300m + $40 \cdot \log(300/3)$ = Limit dBuV/m @300m + 80,

Limit dBuV/m @3m = Limit dBuV/m @30m + $40 \cdot \log(30/3)$ = Limit dBuV/m @30m + 40.

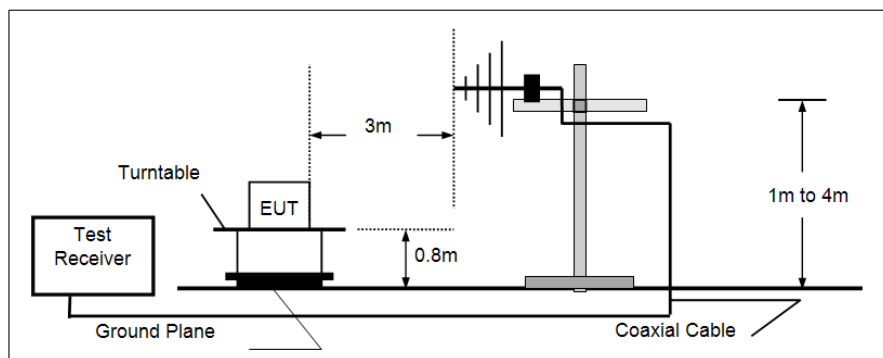
| Frequency | Limit (dBuV/m @3m) | Value |
|---------------|--------------------|------------|
| 30MHz~88MHz | 40.00 | Quasi-peak |
| 88MHz~216MHz | 43.50 | Quasi-peak |
| 216MHz~960MHz | 46.00 | Quasi-peak |
| 960MHz~1GHz | 54.00 | Quasi-peak |
| Above 1GHz | 54.00 | Average |
| | 74.00 | Peak |

TEST CONFIGURATION

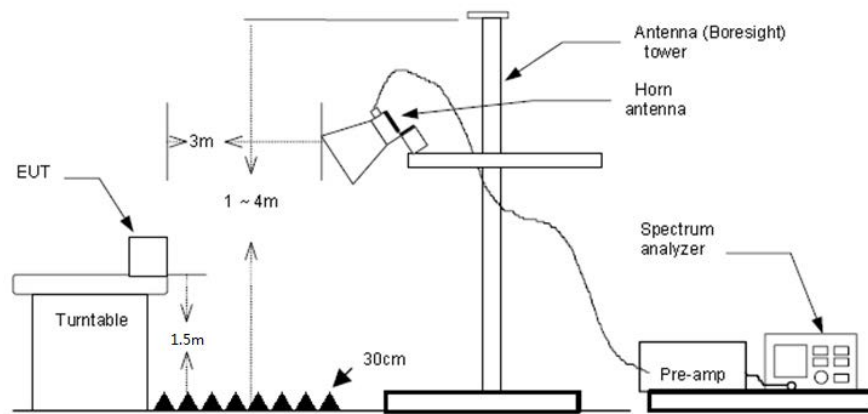
- 9 kHz ~ 30 MHz



- 30 MHz ~ 1 GHz



- Above 1 GHz



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10 .
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.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable 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.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - a) Span shall wide enough to fully capture the emission being measured;
 - b) 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.
 - c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement
 For average measurement:
 - VBW=10Hz, When duty cycle is no less than 98 percent
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation, so refer to this clause 5.6 duty cycle.

TEST MODE

Please refer to the clause 4.2

TEST RESULT

☒ Passed ☐ Not Applicable

Note:

- 1) Level= Reading + Factor/Transd; Factor/Transd =Antenna Factor+ Cable Loss- Preamp Factor
- 2) Over Limit = Level– Limit
- 3) Average measurement was not performed if peak level is lower than average limit(54 dBuV/m) for above 1GHz.

For 9 kHz ~ 30 MHz

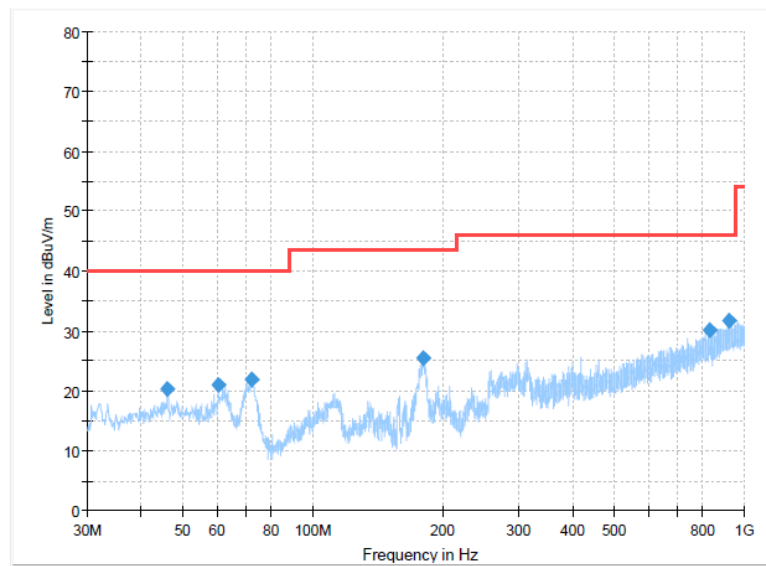
The EUT was pre-scanned this frequency band, found the radiated level 20dB lower than the limit, so don't show data on this report.

For 30 MHz ~ 1000 MHz

Have pre-scan all test channel, found CH06 of 802.11B which it was worst case, so only show the worst case's data on this report.

Polarization:

Horizontal

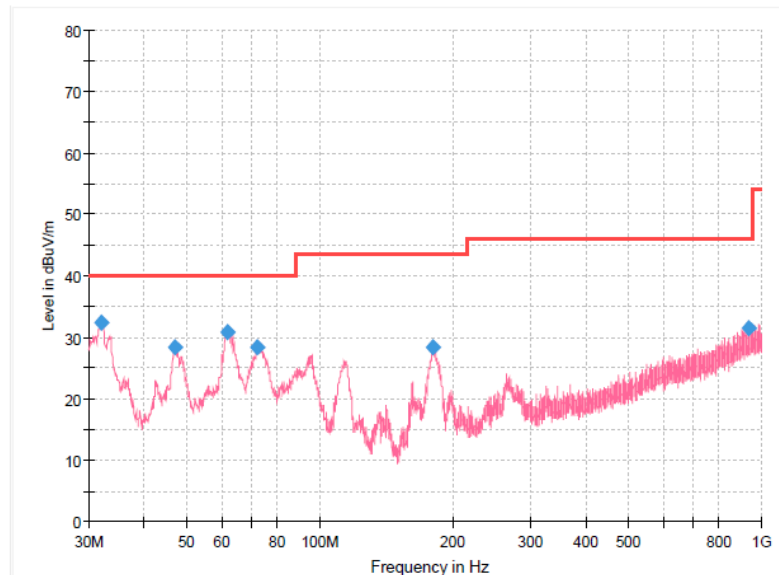


Final Result

| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 46.126250 | 20.27 | 40.00 | 19.73 | 100.0 | H | 134.0 | -9.3 |
| 60.555000 | 21.00 | 40.00 | 19.00 | 100.0 | H | 134.0 | -10.2 |
| 72.316250 | 21.95 | 40.00 | 18.05 | 100.0 | H | 292.0 | -13.8 |
| 179.986250 | 25.47 | 43.50 | 18.03 | 100.0 | H | 87.0 | -12.4 |
| 830.007500 | 30.27 | 46.00 | 15.73 | 100.0 | H | 350.0 | 4.9 |
| 918.641250 | 31.73 | 46.00 | 14.27 | 100.0 | H | 116.0 | 6.8 |

Polarization:

Vertical



Final Result

| Frequency (MHz) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 32.061250 | 32.39 | 40.00 | 7.61 | 100.0 | V | 332.0 | -12.0 |
| 47.096250 | 28.38 | 40.00 | 11.62 | 100.0 | V | 68.0 | -9.3 |
| 61.767500 | 30.91 | 40.00 | 9.09 | 100.0 | V | 32.0 | -10.5 |
| 72.437500 | 28.38 | 40.00 | 11.62 | 100.0 | V | 50.0 | -13.9 |
| 180.713750 | 28.47 | 43.50 | 15.03 | 100.0 | V | 149.0 | -12.3 |
| 937.920000 | 31.45 | 46.00 | 14.55 | 100.0 | V | 21.0 | 7.1 |

For 1 GHz ~ 25 GHz

| Type | 802.11b | | Test channel | CH01 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 1326.51 | 37.97 | 26.16 | 4.39 | 36.36 | 32.16 | 74.00 | -41.84 | Peak |
| 2 | 3834.51 | 38.91 | 29.74 | 7.95 | 36.93 | 39.67 | 74.00 | -34.33 | Peak |
| 3 | 4821.76 | 46.56 | 31.40 | 9.01 | 35.24 | 51.73 | 74.00 | -22.27 | Peak |
| 4 | 4821.76 | 45.11 | 31.40 | 9.01 | 35.24 | 50.28 | 54.00 | -3.72 | Average |
| 5 | 7245.81 | 35.30 | 36.41 | 11.32 | 34.06 | 48.97 | 74.00 | -25.03 | Peak |

| Type | 802.11b | | Test channel | CH01 | | Polarity | | Vertical | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|--------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 3653.46 | 39.25 | 29.40 | 7.64 | 37.02 | 39.27 | 74.00 | -34.73 | Peak |
| 2 | 4821.76 | 42.55 | 31.40 | 9.01 | 35.24 | 47.72 | 74.00 | -26.28 | Peak |
| 3 | 7245.81 | 35.45 | 36.41 | 11.32 | 34.06 | 49.12 | 74.00 | -24.88 | Peak |
| 4 | 9228.06 | 34.48 | 38.91 | 14.00 | 36.04 | 51.35 | 74.00 | -22.65 | Peak |

| Type | 802.11b | | Test channel | CH06 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 1299.77 | 38.53 | 26.00 | 4.37 | 36.29 | 32.61 | 74.00 | -41.39 | Peak |
| 2 | 3463.29 | 38.99 | 28.95 | 7.42 | 36.56 | 38.80 | 74.00 | -35.20 | Peak |
| 3 | 4871.10 | 45.65 | 31.40 | 9.08 | 35.16 | 50.97 | 74.00 | -23.03 | Peak |
| 4 | 9759.59 | 35.11 | 39.60 | 13.92 | 36.29 | 52.34 | 74.00 | -21.66 | Peak |
| 5 | 9759.59 | 33.64 | 39.60 | 13.92 | 36.29 | 50.87 | 54.00 | -3.13 | Average |

| Type | 802.11b | | Test channel | CH06 | | Polarity | | Vertical | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|--------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4024.52 | 38.14 | 29.95 | 8.29 | 36.29 | 40.09 | 74.00 | -33.91 | Peak |
| 2 | 4871.10 | 45.20 | 31.40 | 9.08 | 35.16 | 50.52 | 74.00 | -23.48 | Peak |
| 3 | 7319.96 | 36.06 | 36.44 | 11.40 | 34.10 | 49.80 | 74.00 | -24.20 | Peak |
| 4 | 9685.35 | 34.21 | 39.54 | 13.93 | 36.65 | 51.03 | 74.00 | -22.97 | Peak |

| Type | 802.11b | | Test channel | CH11 | | Polarity | | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 1313.08 | 39.09 | 26.08 | 4.38 | 36.33 | 33.22 | 74.00 | -40.78 | Peak |
| 2 | 4933.50 | 46.38 | 31.47 | 9.20 | 35.20 | 51.85 | 74.00 | -22.15 | Peak |
| 3 | 4933.50 | 44.76 | 31.47 | 9.20 | 35.20 | 50.23 | 54.00 | -3.77 | Average |
| 4 | 7394.88 | 36.00 | 36.59 | 11.47 | 34.02 | 50.04 | 74.00 | -23.96 | Peak |
| 5 | 9859.47 | 33.52 | 39.50 | 13.94 | 36.65 | 50.31 | 54.00 | -3.69 | Average |
| 6 | 9859.47 | 35.59 | 39.50 | 13.94 | 36.65 | 52.38 | 74.00 | -21.62 | Peak |

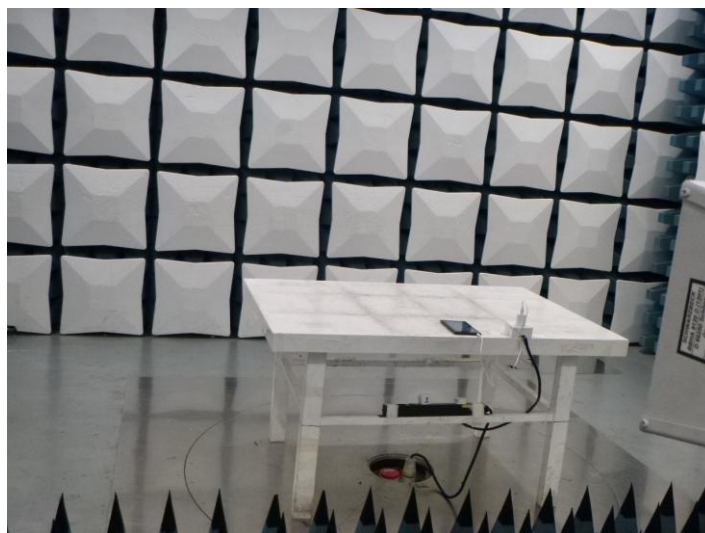
| Type | 802.11b | | Test channel | CH11 | | Polarity | | Vertical | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 1201.15 | 39.06 | 25.61 | 4.10 | 36.64 | 32.13 | 74.00 | -41.87 | Peak |
| 2 | 3480.97 | 38.69 | 29.02 | 7.43 | 36.59 | 38.55 | 74.00 | -35.45 | Peak |
| 3 | 4920.96 | 46.36 | 31.44 | 9.17 | 35.21 | 51.76 | 74.00 | -22.24 | Peak |
| 4 | 4920.96 | 45.22 | 31.44 | 9.17 | 35.21 | 50.62 | 54.00 | -3.38 | Average |
| 5 | 7394.88 | 36.26 | 36.59 | 11.47 | 34.02 | 50.30 | 74.00 | -23.70 | Peak |

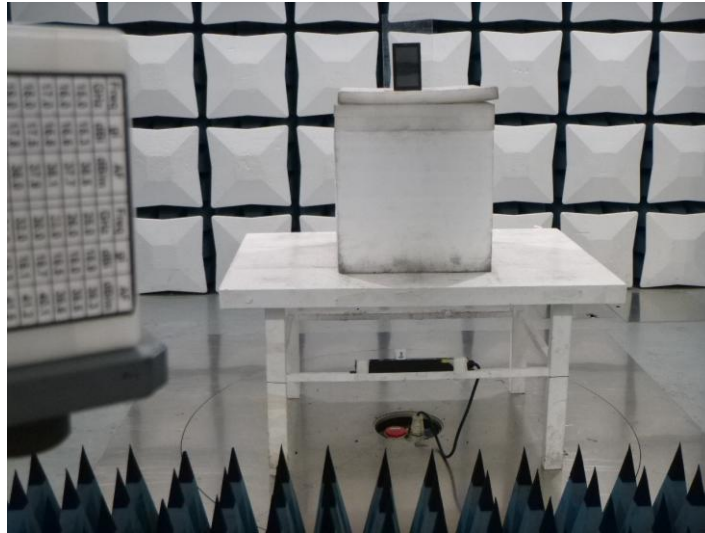
| Type | 802.11g | | Test channel | CH01 | | | Polarity | Horizontal | |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|--------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4366.07 | 36.01 | 30.53 | 8.59 | 36.16 | 38.97 | 74.00 | -35.03 | Peak |
| 2 | 5674.90 | 35.95 | 31.90 | 9.83 | 34.95 | 42.73 | 74.00 | -31.27 | Peak |
| 3 | 7981.72 | 32.75 | 37.03 | 12.16 | 33.31 | 48.63 | 74.00 | -25.37 | Peak |
| 4 | 9685.35 | 33.25 | 39.54 | 13.93 | 36.65 | 50.07 | 74.00 | -23.93 | Peak |
| Type | 802.11g | | Test channel | CH01 | | | Polarity | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4107.32 | 37.36 | 30.00 | 8.38 | 36.30 | 39.44 | 74.00 | -34.56 | Peak |
| 2 | 5164.81 | 35.93 | 31.91 | 9.30 | 35.44 | 41.70 | 74.00 | -32.30 | Peak |
| 3 | 7566.25 | 33.08 | 36.47 | 11.63 | 33.44 | 47.74 | 74.00 | -26.26 | Peak |
| 4 | 8973.25 | 34.15 | 37.89 | 14.06 | 35.95 | 50.15 | 74.00 | -23.85 | Peak |
| Type | 802.11g | | Test channel | CH06 | | | Polarity | Horizontal | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4871.10 | 38.83 | 31.40 | 9.08 | 35.16 | 44.15 | 74.00 | -29.85 | Peak |
| 2 | 7319.96 | 33.99 | 36.44 | 11.40 | 34.10 | 47.73 | 74.00 | -26.27 | Peak |
| 3 | 9809.40 | 33.80 | 39.58 | 13.91 | 36.19 | 51.10 | 74.00 | -22.90 | Peak |
| 4 | 11486.41 | 32.49 | 40.86 | 14.48 | 36.38 | 51.45 | 74.00 | -22.55 | Peak |
| Type | 802.11g | | Test channel | CH06 | | | Polarity | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 3561.64 | 38.39 | 29.32 | 7.54 | 36.83 | 38.42 | 74.00 | -35.58 | Peak |
| 2 | 4871.10 | 37.57 | 31.40 | 9.08 | 35.16 | 42.89 | 74.00 | -31.11 | Peak |
| 3 | 8042.90 | 33.15 | 37.19 | 12.20 | 33.31 | 49.23 | 74.00 | -24.77 | Peak |
| 4 | 9710.03 | 33.67 | 39.60 | 13.93 | 36.53 | 50.67 | 74.00 | -23.33 | Peak |
| Type | 802.11g | | Test channel | CH11 | | | Polarity | Horizontal | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4920.96 | 40.41 | 31.44 | 9.17 | 35.21 | 45.81 | 74.00 | -28.19 | Peak |
| 2 | 8022.46 | 33.14 | 37.14 | 12.21 | 33.31 | 49.18 | 74.00 | -24.82 | Peak |
| 3 | 9759.59 | 34.04 | 39.60 | 13.92 | 36.29 | 51.27 | 74.00 | -22.73 | Peak |
| 4 | 10916.26 | 32.83 | 40.60 | 14.54 | 36.74 | 51.23 | 74.00 | -22.77 | Peak |
| Type | 802.11g | | Test channel | CH11 | | | Polarity | Vertical | |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4014.29 | 37.51 | 29.93 | 8.28 | 36.31 | 39.41 | 74.00 | -34.59 | Peak |
| 2 | 5112.49 | 36.07 | 32.15 | 9.35 | 35.47 | 42.10 | 74.00 | -31.90 | Peak |
| 3 | 8145.93 | 33.34 | 37.02 | 12.21 | 33.40 | 49.17 | 74.00 | -24.83 | Peak |
| 4 | 9834.41 | 33.63 | 39.53 | 13.93 | 36.42 | 50.67 | 74.00 | -23.33 | Peak |

| Type | 802.11n(HT20) | | Test channel | | CH01 | | Polarity | | Horizontal |
|------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|------------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 3681.47 | 38.53 | 29.40 | 7.67 | 37.04 | 38.56 | 74.00 | -35.44 | Peak |
| 2 | 4821.76 | 38.50 | 31.40 | 9.01 | 35.24 | 43.67 | 74.00 | -30.33 | Peak |
| 3 | 7961.43 | 33.27 | 36.95 | 12.09 | 33.32 | 48.99 | 74.00 | -25.01 | Peak |
| 4 | 9734.78 | 33.39 | 39.60 | 13.92 | 36.41 | 50.50 | 74.00 | -23.50 | Peak |
| Type | 802.11n(HT20) | | Test channel | | CH01 | | Polarity | | Vertical |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4278.06 | 37.89 | 30.26 | 8.47 | 36.11 | 40.51 | 74.00 | -33.49 | Peak |
| 2 | 7154.17 | 33.95 | 36.32 | 11.21 | 33.96 | 47.52 | 74.00 | -26.48 | Peak |
| 3 | 8042.90 | 33.85 | 37.19 | 12.20 | 33.31 | 49.93 | 74.00 | -24.07 | Peak |
| 4 | 9759.59 | 33.22 | 39.60 | 13.92 | 36.29 | 50.45 | 74.00 | -23.55 | Peak |
| Type | 802.11n(HT20) | | Test channel | | CH06 | | Polarity | | Horizontal |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 3472.12 | 39.25 | 28.99 | 7.43 | 36.58 | 39.09 | 74.00 | -34.91 | Peak |
| 2 | 4871.10 | 36.92 | 31.40 | 9.08 | 35.16 | 42.24 | 74.00 | -31.76 | Peak |
| 3 | 7781.10 | 32.56 | 36.56 | 11.79 | 33.19 | 47.72 | 74.00 | -26.28 | Peak |
| 4 | 9181.20 | 34.11 | 38.72 | 14.07 | 35.96 | 50.94 | 74.00 | -23.06 | Peak |
| Type | 802.11n(HT20) | | Test channel | | CH06 | | Polarity | | Vertical |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 3973.62 | 39.09 | 29.90 | 8.18 | 36.43 | 40.74 | 74.00 | -33.26 | Peak |
| 2 | 5689.36 | 34.94 | 31.90 | 9.85 | 34.93 | 41.76 | 74.00 | -32.24 | Peak |
| 3 | 8104.56 | 32.78 | 37.18 | 12.18 | 33.33 | 48.81 | 74.00 | -25.19 | Peak |
| 4 | 9759.59 | 33.47 | 39.60 | 13.92 | 36.29 | 50.70 | 74.00 | -23.30 | Peak |
| Type | 802.11n(HT20) | | Test channel | | CH11 | | Polarity | | Horizontal |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4014.29 | 37.24 | 29.93 | 8.28 | 36.31 | 39.14 | 74.00 | -34.86 | Peak |
| 2 | 5086.52 | 35.52 | 32.20 | 9.36 | 35.46 | 41.62 | 74.00 | -32.38 | Peak |
| 3 | 8022.46 | 32.98 | 37.14 | 12.21 | 33.31 | 49.02 | 74.00 | -24.98 | Peak |
| 4 | 9710.03 | 34.34 | 39.60 | 13.93 | 36.53 | 51.34 | 74.00 | -22.66 | Peak |
| Type | 802.11n(HT20) | | Test channel | | CH11 | | Polarity | | Vertical |
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 4712.55 | 35.90 | 31.40 | 9.39 | 35.68 | 41.01 | 74.00 | -32.99 | Peak |
| 2 | 8042.90 | 32.23 | 37.19 | 12.20 | 33.31 | 48.31 | 74.00 | -25.69 | Peak |
| 3 | 9710.03 | 33.53 | 39.60 | 13.93 | 36.53 | 50.53 | 74.00 | -23.47 | Peak |
| 4 | 10860.83 | 32.76 | 40.48 | 14.52 | 36.78 | 50.98 | 74.00 | -23.02 | Peak |

6. TEST SETUP PHOTOS

Radiated Emission





AC Conducted Emission



7. EXTERNAL AND INTERNAL PHOTOS

Refer to the test report No.: CHTEW22080324

8. APPENDIX REPORT

APPENDIX REPORT

| | | | |
|-----------------|-----------------|---------------------|--------------------|
| Project No. | SHT2207115001EW | Radio Specification | WIFI 2.4G |
| Test sample No. | YPHT22071150003 | Model No. | The leader tab8 3G |
| Start test date | 2022-08-15 | Finish date | 2022-08-15 |
| Temperature | 25.7℃ | Humidity | 31% |
| Test Engineer | Xiaoxiao Li | Auditor | Xiaodong Zhe |

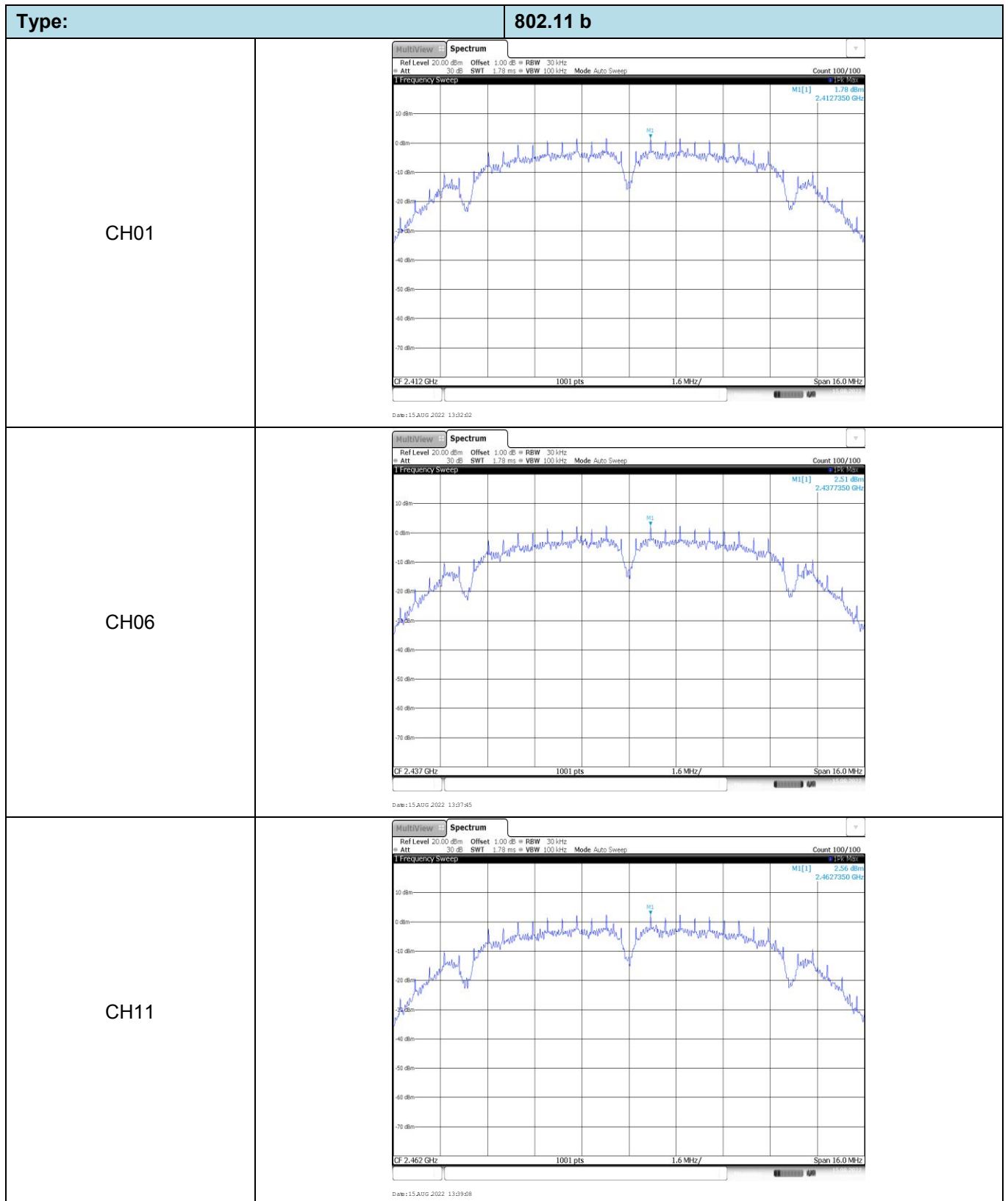
| Appendix clause | Test item | Result |
|-----------------|--|--------|
| A | Conducted Peak Output Power | PASS |
| B | Power Spectral Density | PASS |
| C | 6 dB Bandwidth | PASS |
| D | 99% Occupied Bandwidth | PASS |
| E | Duty Cycle | PASS |
| F | Band edge and Spurious Emissions (conducted) | PASS |

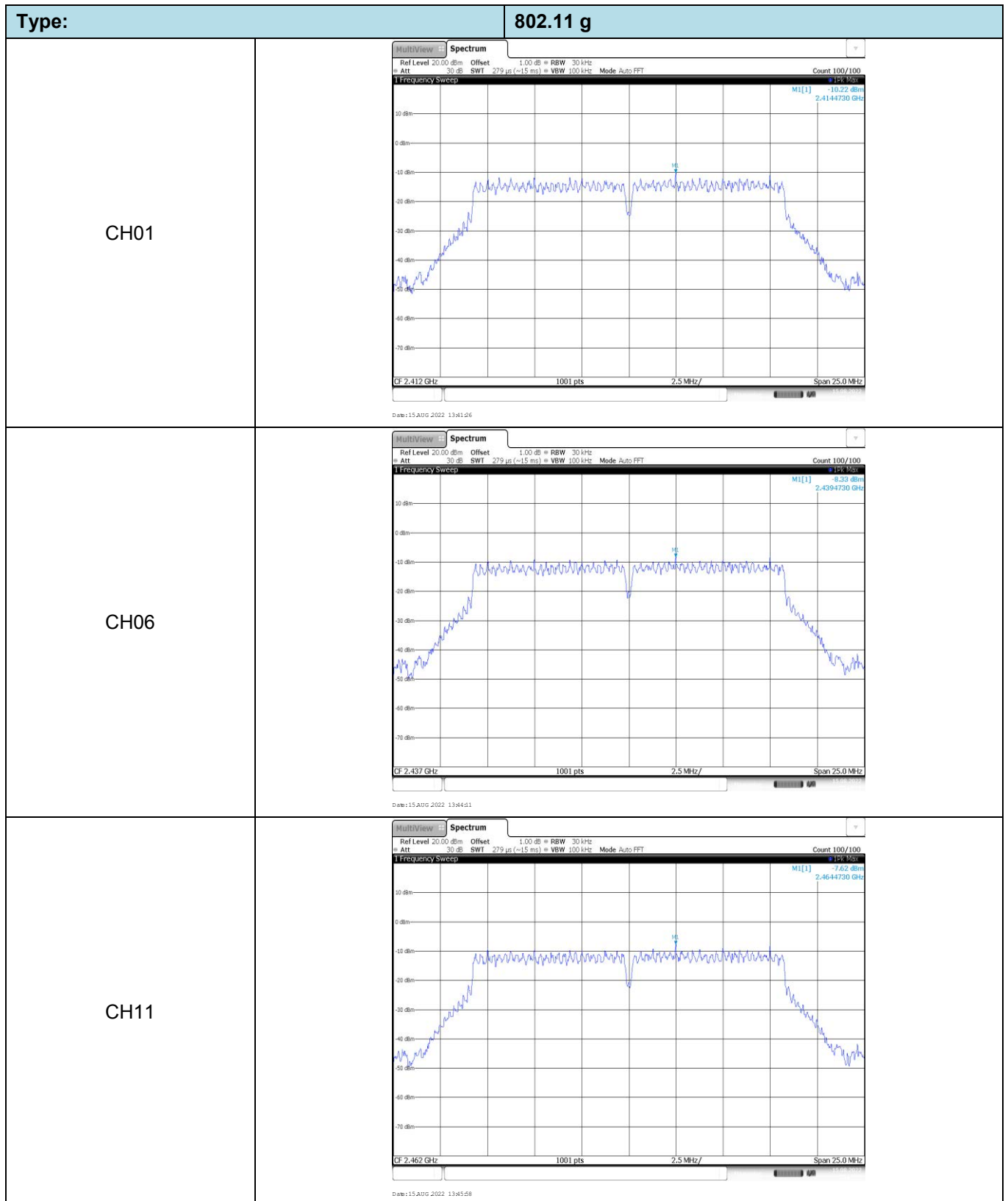
Appendix A: Conducted Peak Output Power

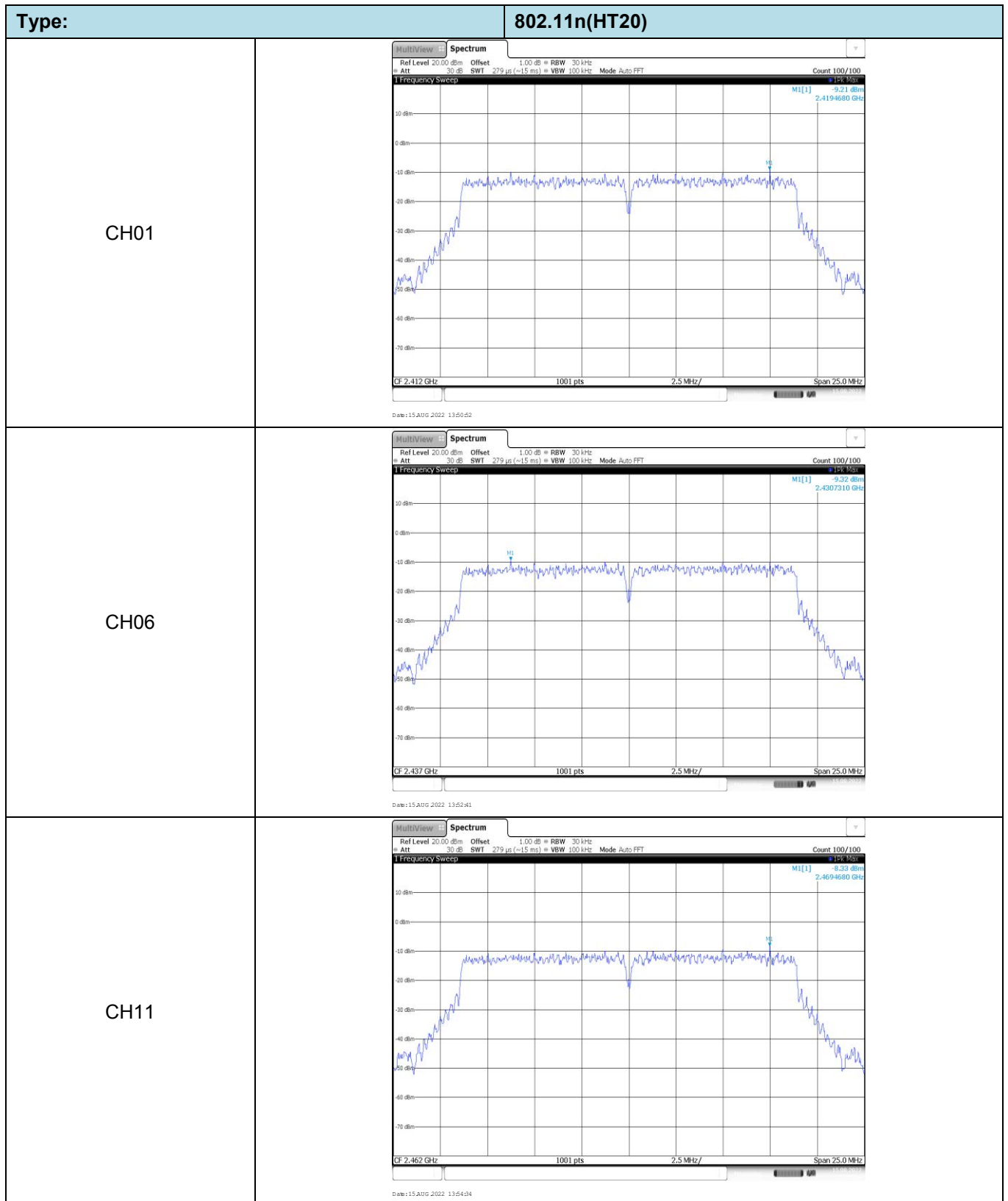
| Type | Channel | Peak Output power (dBm) | Average Output power (dBm) | Limit (dBm) | Result |
|----------------|---------|-------------------------|----------------------------|-------------|--------|
| 802.11b | 01 | 15.33 | 12.84 | ≤ 30.00 | Pass |
| | 06 | 16.43 | 13.96 | | |
| | 11 | 16.22 | 13.75 | | |
| 802.11g | 01 | 15.12 | 12.20 | ≤ 30.00 | Pass |
| | 06 | 16.28 | 13.57 | | |
| | 11 | 15.87 | 13.06 | | |
| 802.11n (HT20) | 01 | 15.22 | 13.36 | ≤ 30.00 | Pass |
| | 06 | 16.34 | 14.51 | | |
| | 11 | 16.19 | 14.42 | | |

Appendix B: Power Spectral Density

| Type | Channel | Power Spectral Density (dBm/30KHz) | Limit (dBm/3KHz) | Result |
|---------------|---------|------------------------------------|------------------|--------|
| 802.11b | 01 | 1.78 | ≤8.00 | Pass |
| | 06 | 2.51 | | |
| | 11 | 2.56 | | |
| 802.11g | 01 | -10.22 | ≤8.00 | Pass |
| | 06 | -8.33 | | |
| | 11 | -7.62 | | |
| 802.11n(HT20) | 01 | -9.21 | ≤8.00 | Pass |
| | 06 | -9.32 | | |
| | 11 | -8.33 | | |







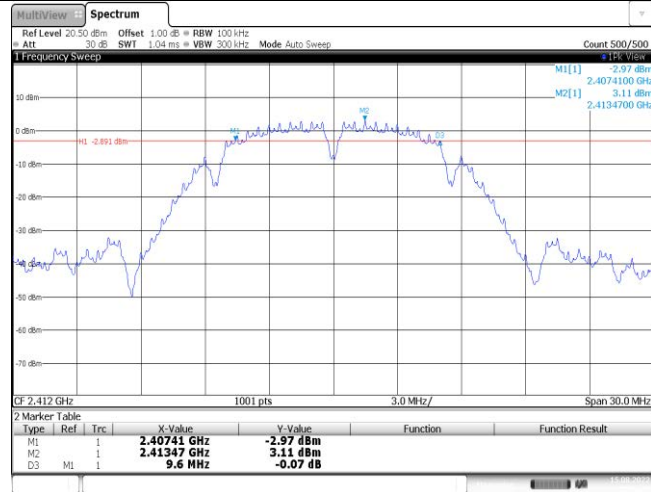
Appendix C: 6dB bandwidth

| Type | Channel | 6dB Bandwidth (MHz) | Limit (MHz) | Result |
|---------------|---------|---------------------|-------------|--------|
| 802.11b | 01 | 9.60 | ≥0.5 | Pass |
| | 06 | 9.84 | | |
| | 11 | 9.81 | | |
| 802.11g | 01 | 16.41 | ≥0.5 | Pass |
| | 06 | 16.41 | | |
| | 11 | 16.41 | | |
| 802.11n(HT20) | 01 | 17.61 | ≥0.5 | Pass |
| | 06 | 17.67 | | |
| | 11 | 17.64 | | |

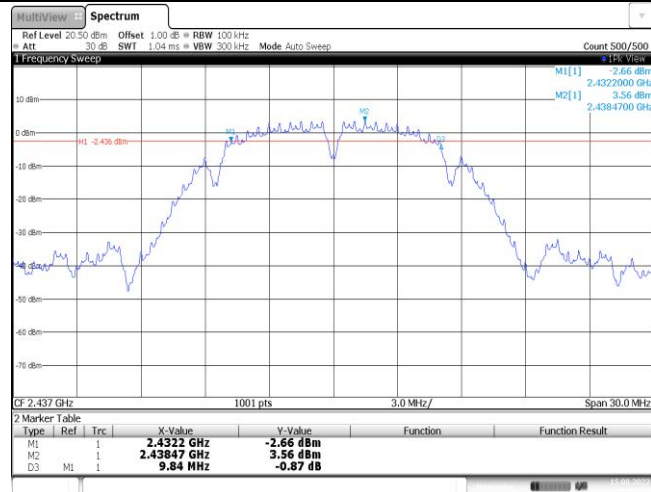
Type:

802.11 b

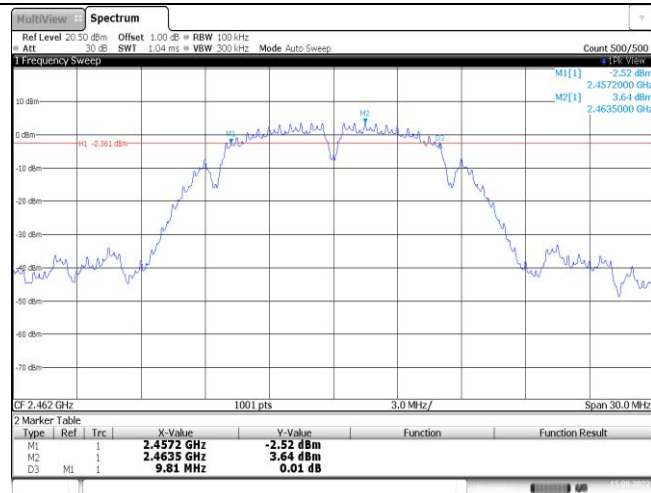
CH01



CH06



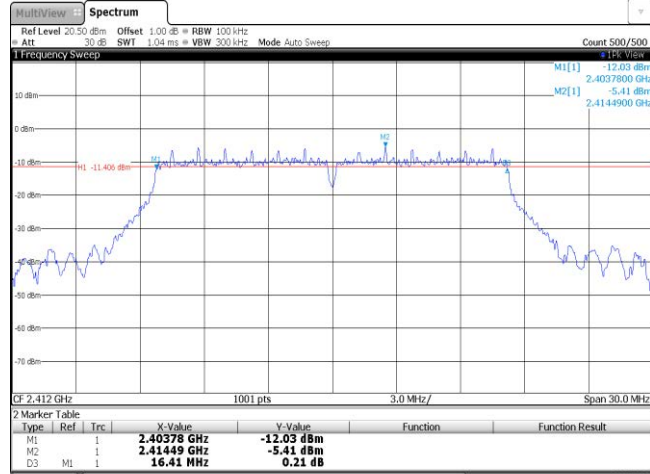
CH11



Type:

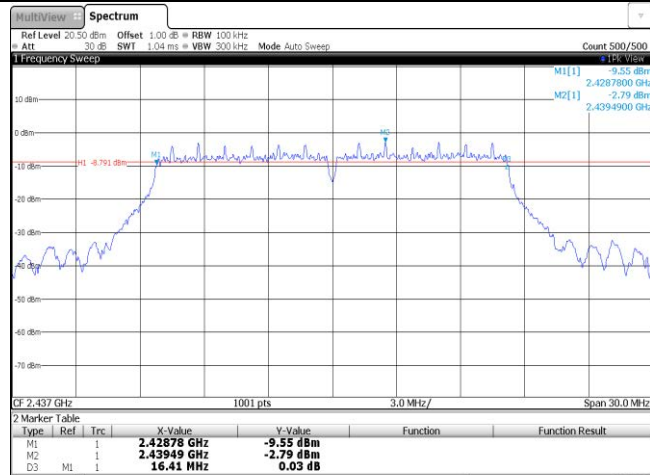
802.11 g

CH01



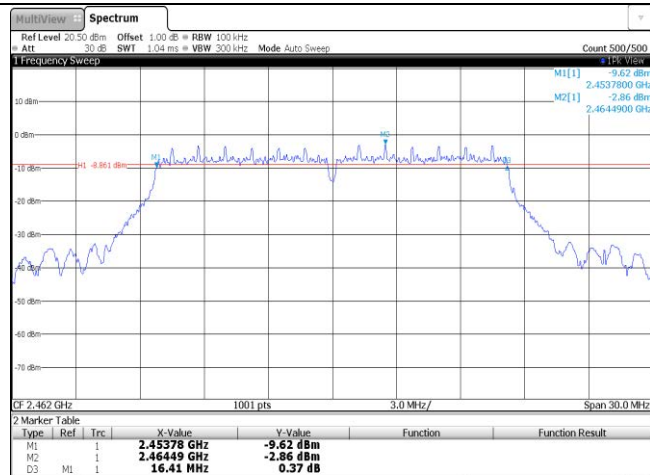
Date: 15 AUG 2022 13:41:00

CH06



Date: 15 AUG 2022 13:43:00

CH11

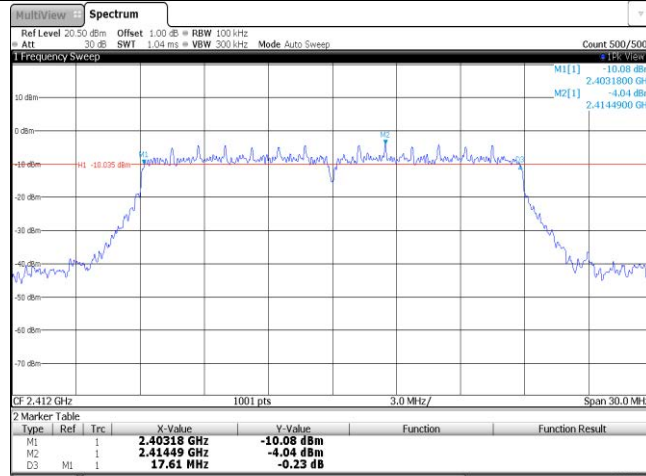


Date: 15 AUG 2022 13:45:41

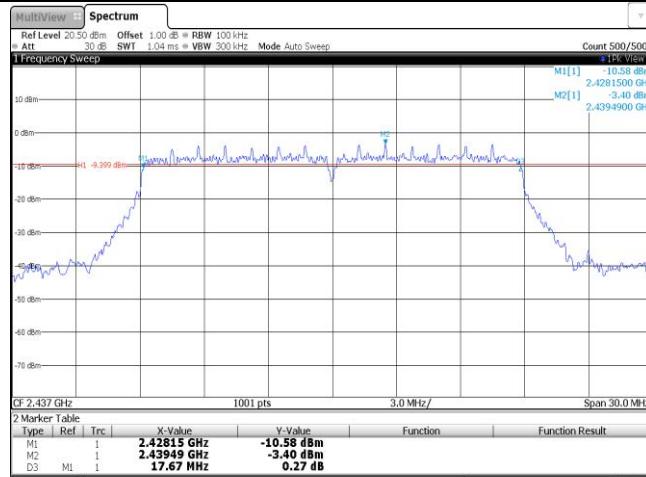
Type:

802.11n(HT20)

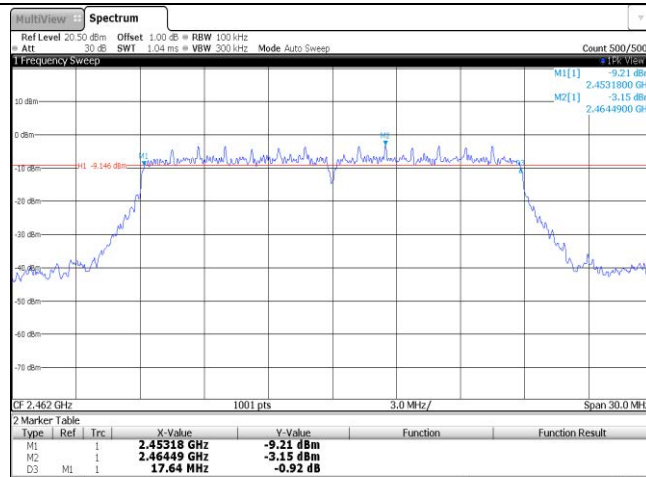
CH01



CH06



CH11



Appendix D: 99% Occupied Bandwidth

| Type | Channel | 99% Bandwidth (MHz) | Limit (MHz) | Result |
|---------------|---------|---------------------|-------------|--------|
| 802.11b | 01 | 12.32 | - | Pass |
| | 06 | 12.26 | | |
| | 11 | 12.20 | | |
| 802.11g | 01 | 17.29 | - | Pass |
| | 06 | 17.29 | | |
| | 11 | 17.29 | | |
| 802.11n(HT20) | 01 | 17.92 | - | Pass |
| | 06 | 17.89 | | |
| | 11 | 17.89 | | |

Type:

802.11 b

CH01



CH06



CH11



Type:

802.11 g

CH01



Date: 15 AUG 2022 13:41:19

CH06



Date: 15 AUG 2022 13:44:04

CH11

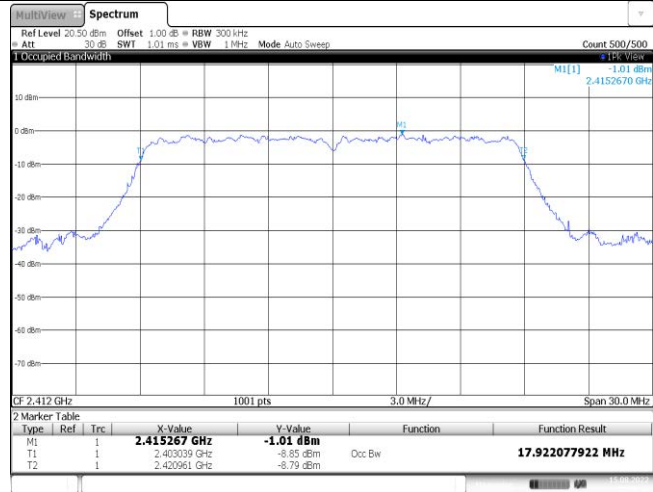


Date: 15 AUG 2022 13:45:01

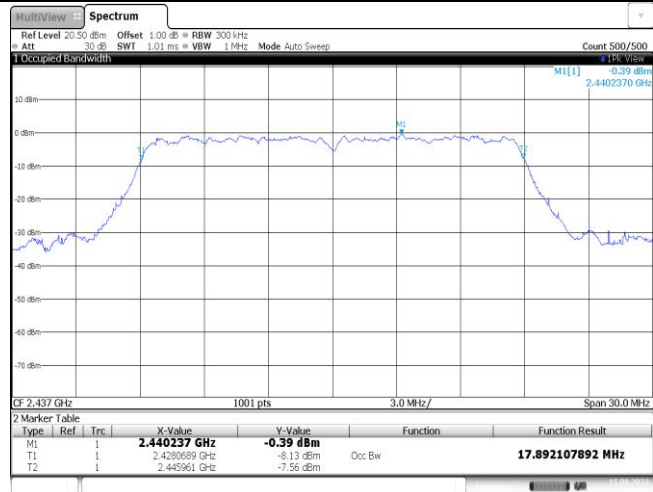
Type:

802.11n(HT20)

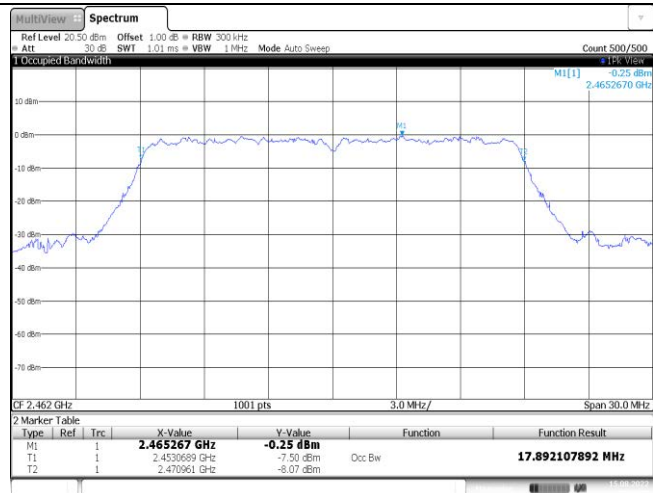
CH01



CH06

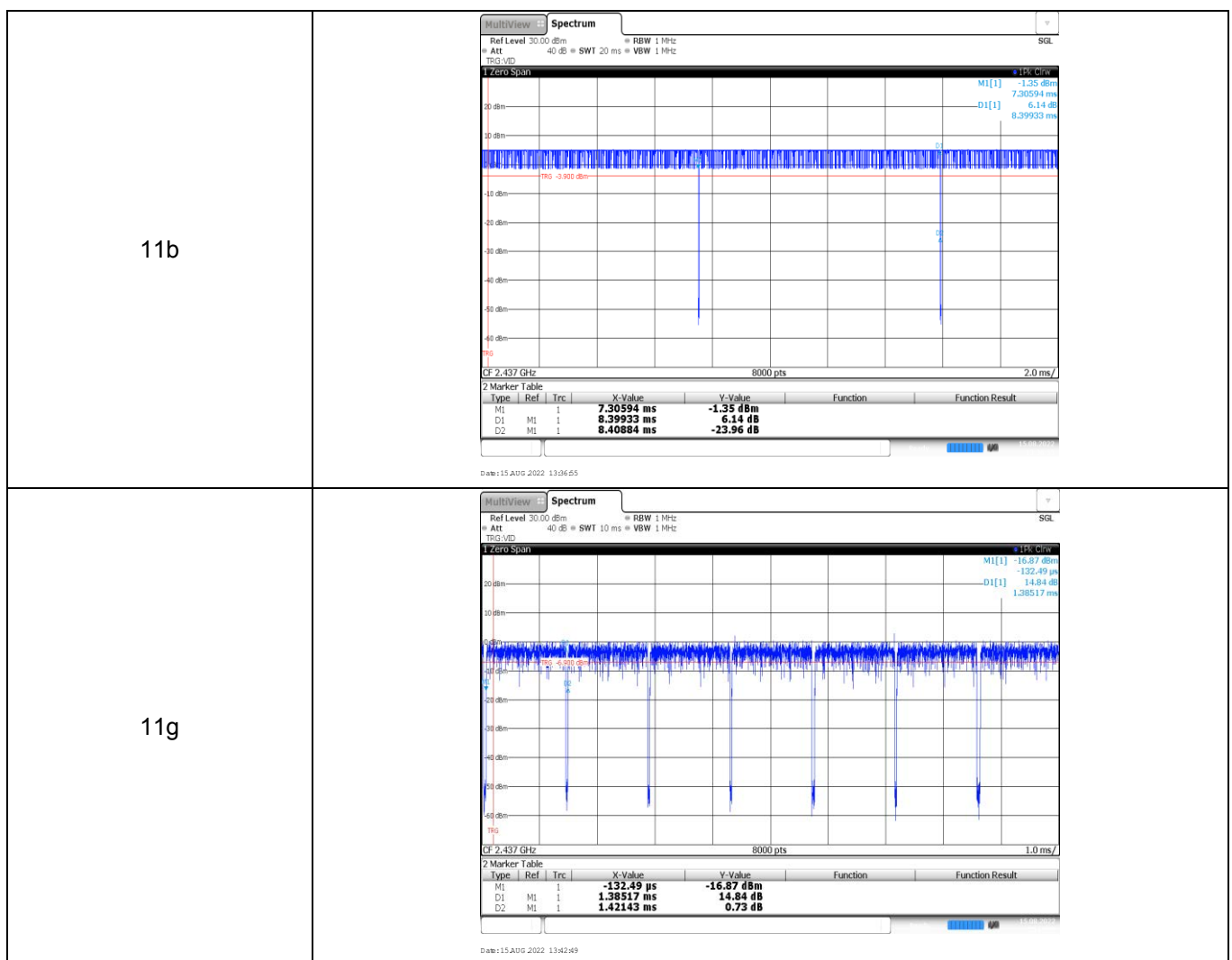


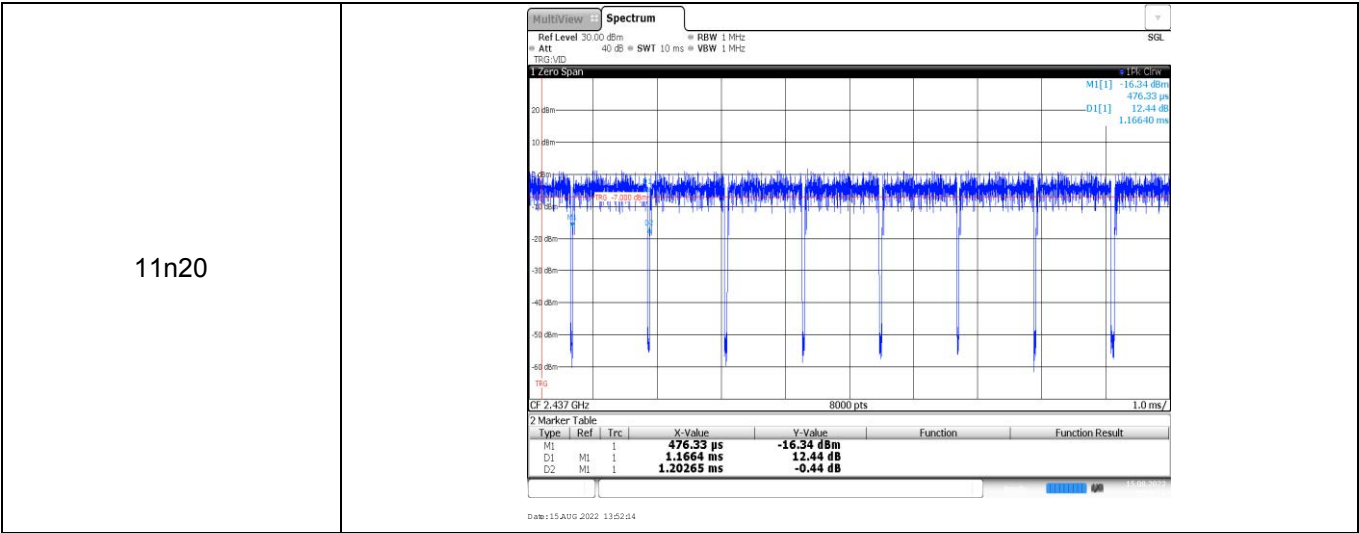
CH11



Appendix E: Duty Cycle

| Modulation Type | Test Frequency (MHz) | T _{on time} for single burst (ms) | T _{period} (ms) | Duty cycle | 1/T _{on time} (kHz) |
|-----------------|----------------------|--|--------------------------|------------|------------------------------|
| 11b | 2437 | 8.40 | 8.41 | 99.9% | 0.1 |
| 11g | 2437 | 1.39 | 1.42 | 97.9% | 0.7 |
| 11n20 | 2437 | 1.17 | 1.20 | 97.5% | 0.9 |

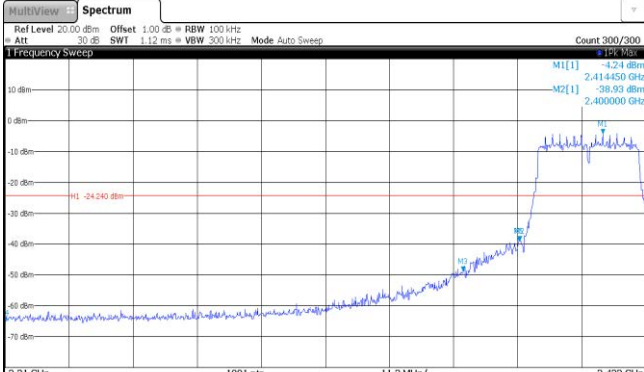
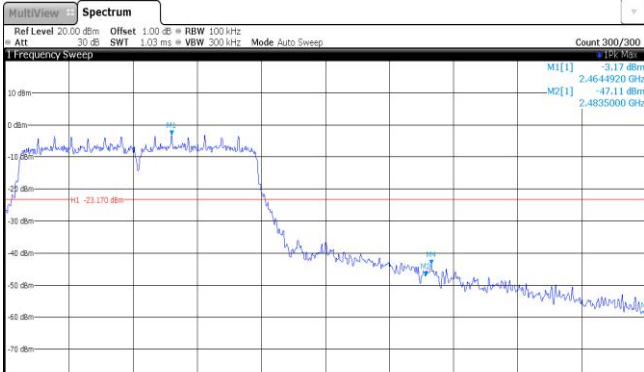


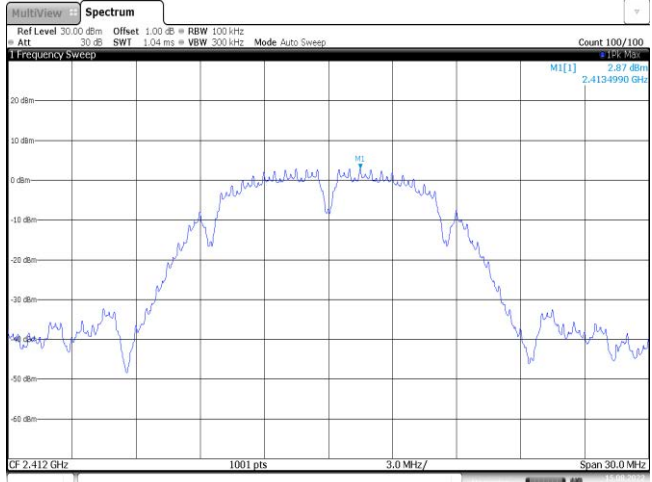
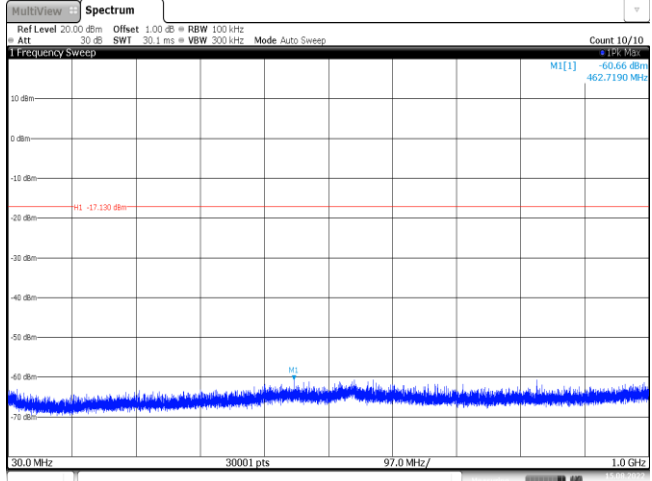
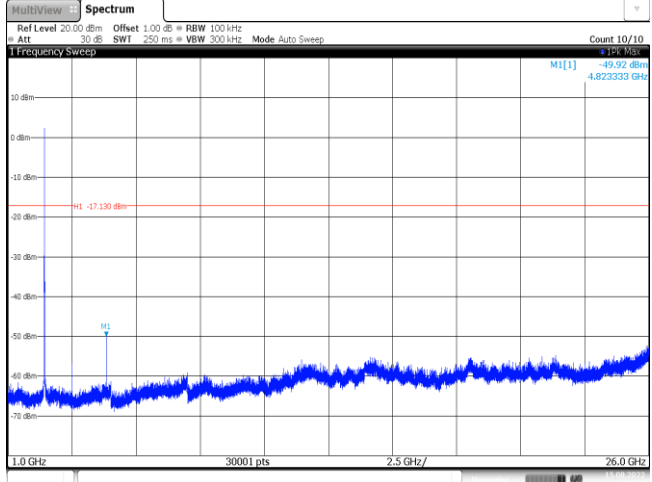


Appendix F: Band edge and Spurious Emissions (conducted)

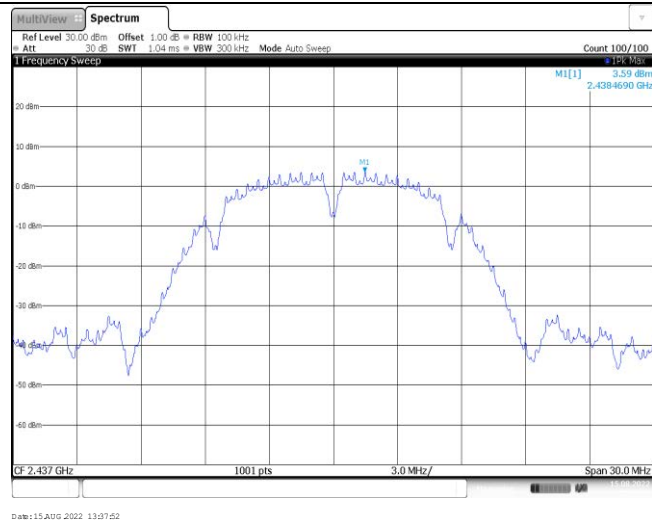
| Test Item: | Bandedge | Type: | 802.11 b | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|---|-------|--------------|------------|----------|-----------------|---------|---------|----------|-----------------|----|---|--|--------------|----------|--|--|----|---|--|------------|------------|--|--|----|---|--|----------|------------|--|--|----|---|--|--------------|------------|--|--|----|---|--|--------------|------------|--|--|
| CH01 | <div><div><div><div><div>MultiView</div><div>Spectrum</div><div>Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz</div><div>Att 30.0 dB SWT 1.12 ms VBW 300 kHz Mode Auto Sweep</div><div>Count 300/300</div></div><div><div>1 Frequency Sweep</div><div><div><div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>-60 dBm</div><div>-70 dBm</div></div><div><div><div>M1</div><div>M2</div></div><div><div>2.72 dBm</div><div>2.413440 GHz</div><div>-40.07 dBm</div><div>2.400000 GHz</div></div></div><div><div><div>M1</div><div>M2</div></div><div><div>-17.280 dBm</div><div></div></div></div></div><div><div>2.31 GHz</div><div>1001 pts</div><div>11.2 MHz/</div><div>2.422 GHz</div></div></div><div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>2.41344 GHz</td><td>2.72 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-40.07 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-53.54 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.74 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.398928 GHz</td><td>-35.89 dBm</td><td></td><td></td></tr></table></div></div></div><div>Date:15.AUG.2022 13:02:44</div></div></div> | | | Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | M1 | 1 | | 2.41344 GHz | 2.72 dBm | | | M2 | 1 | | 2.4 GHz | -40.07 dBm | | | M3 | 1 | | 2.39 GHz | -53.54 dBm | | | M4 | 1 | | 2.31 GHz | -63.74 dBm | | | M5 | 1 | | 2.398928 GHz | -35.89 dBm | | |
| Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | 1 | | 2.41344 GHz | 2.72 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | 1 | | 2.4 GHz | -40.07 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1 | | 2.39 GHz | -53.54 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | 1 | | 2.31 GHz | -63.74 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 | 1 | | 2.398928 GHz | -35.89 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CH11 | <div><div><div><div><div>MultiView</div><div>Spectrum</div><div>Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz</div><div>Att 30.0 dB SWT 1.03 ms VBW 300 kHz Mode Auto Sweep</div><div>Count 300/300</div></div><div><div>1 Frequency Sweep</div><div><div><div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>-60 dBm</div><div>-70 dBm</div></div><div><div><div>M1</div><div>M2</div></div><div><div>3.52 dBm</div><div>2.4634850 GHz</div><div>-52.78 dBm</div><div>2.4835000 GHz</div></div></div><div><div><div>M1</div><div>M2</div></div><div><div>-16.490 dBm</div><div></div></div></div></div><div><div>2.452 GHz</div><div>1001 pts</div><div>4.8 MHz/</div><div>2.5 GHz</div></div></div><div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>2.463485 GHz</td><td>3.52 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4833 GHz</td><td>-52.78 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-62.08 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.483536 GHz</td><td>-53.09 dBm</td><td></td><td></td></tr></table></div></div></div><div>Date:15.AUG.2022 13:09:18</div></div></div> | | | Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | M1 | 1 | | 2.463485 GHz | 3.52 dBm | | | M2 | 1 | | 2.4833 GHz | -52.78 dBm | | | M3 | 1 | | 2.5 GHz | -62.08 dBm | | | M4 | 1 | | 2.483536 GHz | -53.09 dBm | | | | | | | | | |
| Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | 1 | | 2.463485 GHz | 3.52 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | 1 | | 2.4833 GHz | -52.78 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1 | | 2.5 GHz | -62.08 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | 1 | | 2.483536 GHz | -53.09 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Test Item: | Bandedge | Type: | 802.11 g | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|---|-------|--------------|------------|----------|-----------------|---------|---------|----------|-----------------|----|---|--|--------------|-----------|--|--|----|---|--|------------|------------|--|--|----|---|--|----------|------------|--|--|----|---|--|--------------|------------|--|--|----|---|--|--------------|------------|--|--|
| CH01 | <div><div><div>MultiView</div><div>Spectrum</div><div>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep</div><div>Count 300/300</div><div>1 Frequency Sweep</div><div><div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>-60 dBm</div><div>-70 dBm</div></div><div><div>M1[1] -5.51 dBm</div><div>2.414450 GHz</div><div>M2[1] -39.34 dBm</div><div>2.400000 GHz</div></div></div><div><div>2.31 GHz</div><div>1001 pts</div><div>11.2 MHz/</div><div>2.422 GHz</div></div><div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>2.41445 GHz</td><td>-5.51 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-39.34 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-48.55 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-62.64 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.398704 GHz</td><td>-36.76 dBm</td><td></td><td></td></tr></table></div></div><div>Date: 15 AUG 2022 13:41:37</div></div> | | | Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | M1 | 1 | | 2.41445 GHz | -5.51 dBm | | | M2 | 1 | | 2.4 GHz | -39.34 dBm | | | M3 | 1 | | 2.39 GHz | -48.55 dBm | | | M4 | 1 | | 2.31 GHz | -62.64 dBm | | | M5 | 1 | | 2.398704 GHz | -36.76 dBm | | |
| Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | 1 | | 2.41445 GHz | -5.51 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | 1 | | 2.4 GHz | -39.34 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1 | | 2.39 GHz | -48.55 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | 1 | | 2.31 GHz | -62.64 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 | 1 | | 2.398704 GHz | -36.76 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CH11 | <div><div><div>MultiView</div><div>Spectrum</div><div>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.03 ms VBW 300 kHz Mode Auto Sweep</div><div>Count 300/300</div><div>1 Frequency Sweep</div><div><div><div>10 dBm</div><div>0 dBm</div><div>-10 dBm</div><div>-20 dBm</div><div>-30 dBm</div><div>-40 dBm</div><div>-50 dBm</div><div>-60 dBm</div><div>-70 dBm</div></div><div><div>M1[1] -2.75 dBm</div><div>2.4644920 GHz</div><div>M2[1] -47.96 dBm</div><div>2.4835000 GHz</div></div></div><div><div>2.452 GHz</div><div>1001 pts</div><div>4.8 MHz/</div><div>2.5 GHz</div></div><div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>2.464492 GHz</td><td>-2.75 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-47.96 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-58.05 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.483632 GHz</td><td>-45.63 dBm</td><td></td><td></td></tr></table></div></div><div>Date: 15 AUG 2022 13:46:08</div></div> | | | Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | M1 | 1 | | 2.464492 GHz | -2.75 dBm | | | M2 | 1 | | 2.4835 GHz | -47.96 dBm | | | M3 | 1 | | 2.5 GHz | -58.05 dBm | | | M4 | 1 | | 2.483632 GHz | -45.63 dBm | | | | | | | | | |
| Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | 1 | | 2.464492 GHz | -2.75 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | 1 | | 2.4835 GHz | -47.96 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1 | | 2.5 GHz | -58.05 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | 1 | | 2.483632 GHz | -45.63 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

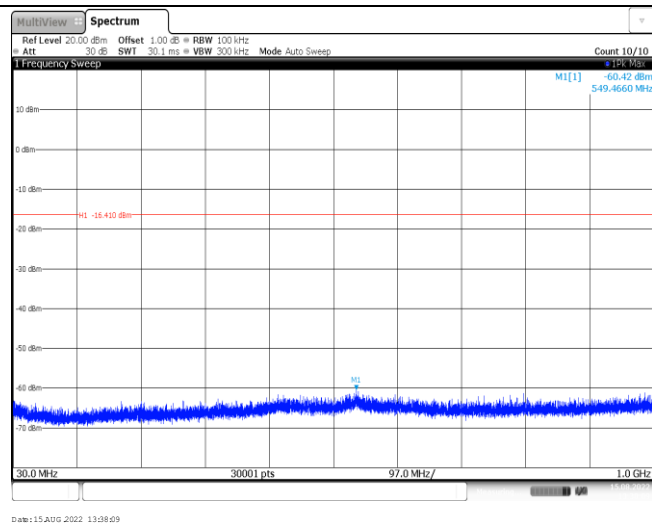
| Test Item: | Bandedge | Type: | 802.11 n(HT20) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|-------|----------------|------------|----------|-----------------|---------|---------|----------|-----------------|----|---|--|--------------|-----------|--|--|----|---|--|------------|------------|--|--|----|---|--|----------|------------|--|--|----|---|--|-------------|------------|--|--|----|---|--|--------------|------------|--|--|
| CH01 | <div><div><div>MultiViewSpectrum</div><div>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300</div><div>1 Frequency Sweep</div><div></div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>2.41445 GHz</td><td>-4.24 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-38.93 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-48.68 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-64.32 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399824 GHz</td><td>-38.94 dBm</td><td></td><td></td></tr></table></div><div>Date: 15.AUG.2022 13:51:03</div></div> | | | Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | M1 | 1 | | 2.41445 GHz | -4.24 dBm | | | M2 | 1 | | 2.4 GHz | -38.93 dBm | | | M3 | 1 | | 2.39 GHz | -48.68 dBm | | | M4 | 1 | | 2.31 GHz | -64.32 dBm | | | M5 | 1 | | 2.399824 GHz | -38.94 dBm | | |
| Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | 1 | | 2.41445 GHz | -4.24 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | 1 | | 2.4 GHz | -38.93 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1 | | 2.39 GHz | -48.68 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | 1 | | 2.31 GHz | -64.32 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 | 1 | | 2.399824 GHz | -38.94 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CH11 | <div><div><div>MultiViewSpectrum</div><div>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.03 ms VBW 300 kHz Mode Auto Sweep Count 300/300</div><div>1 Frequency Sweep</div><div></div><div>2 Marker Table</div><table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>2.464492 GHz</td><td>-3.17 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-47.11 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-58.31 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.48392 GHz</td><td>-43.60 dBm</td><td></td><td></td></tr></table></div><div>Date: 15.AUG.2022 13:54:45</div></div> | | | Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | M1 | 1 | | 2.464492 GHz | -3.17 dBm | | | M2 | 1 | | 2.4835 GHz | -47.11 dBm | | | M3 | 1 | | 2.5 GHz | -58.31 dBm | | | M4 | 1 | | 2.48392 GHz | -43.60 dBm | | | | | | | | | |
| Type | Ref | Trc | X-Value | Y-Value | Function | Function Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | 1 | | 2.464492 GHz | -3.17 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | 1 | | 2.4835 GHz | -47.11 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | 1 | | 2.5 GHz | -58.31 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | 1 | | 2.48392 GHz | -43.60 dBm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Test Item: | Spurious Emissions | Type: | 802.11 b |
|-------------------------|--|-------|----------|
| CH01 Reference level |  <p>CH01 Reference level</p> | | |
| CH01 30MHz~1000MHz |  <p>CH01 30MHz~1000MHz</p> | | |
| CH01 1GHz~26GHz |  <p>CH01 1GHz~26GHz</p> | | |

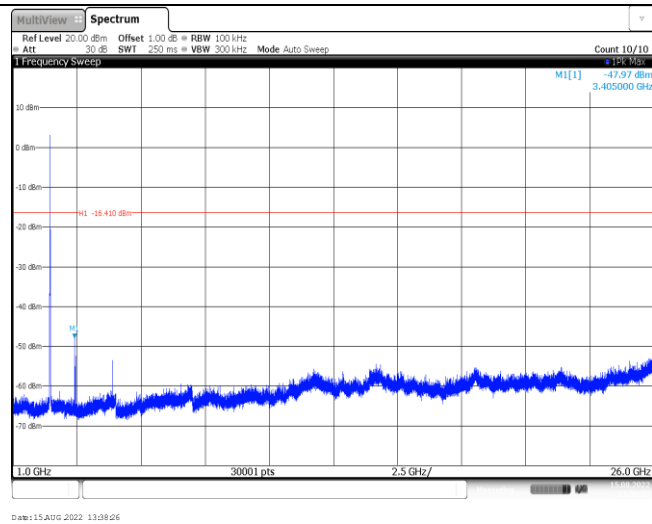
CH06
Reference level



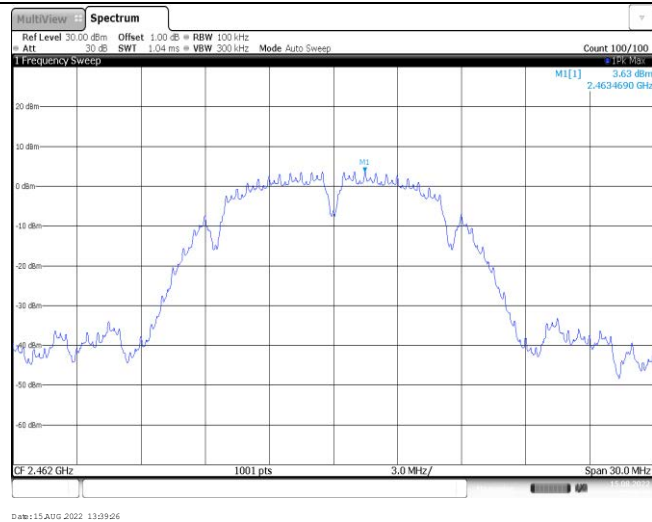
CH06
30MHz~1000MHz



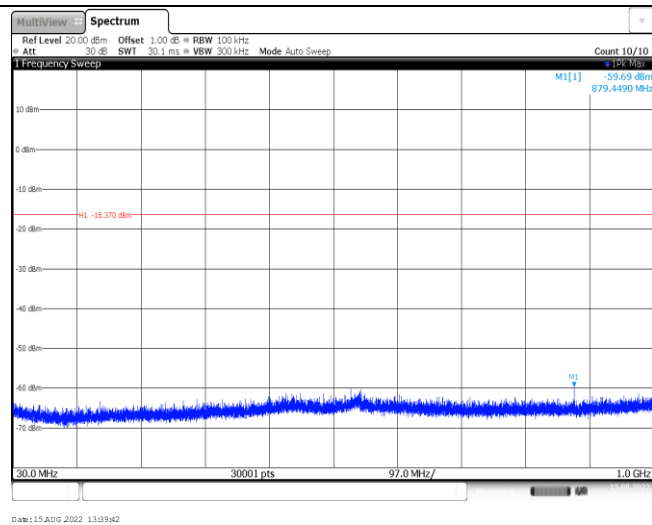
CH06
1GHz~26GHz



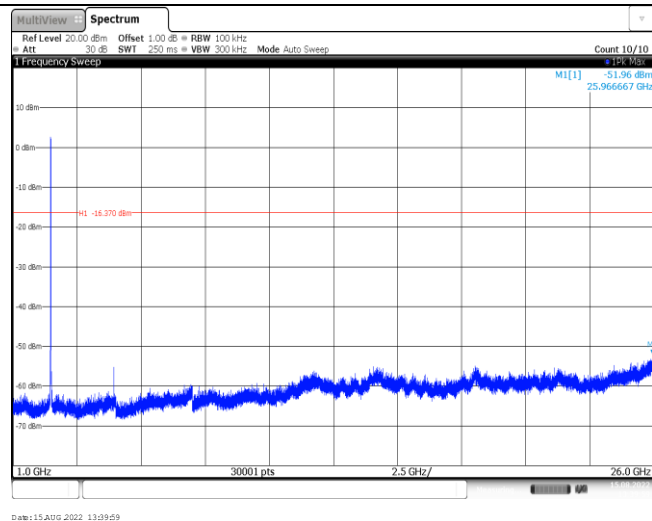
CH11
Reference level

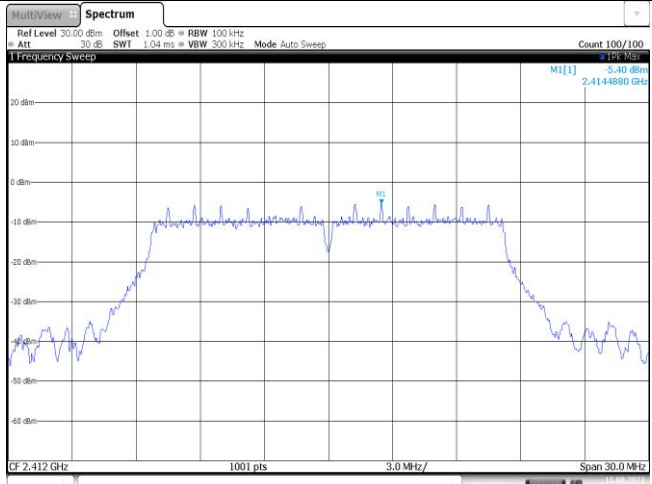
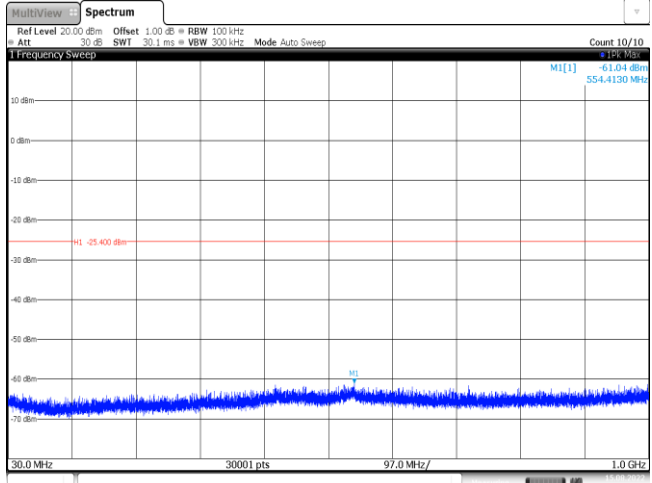
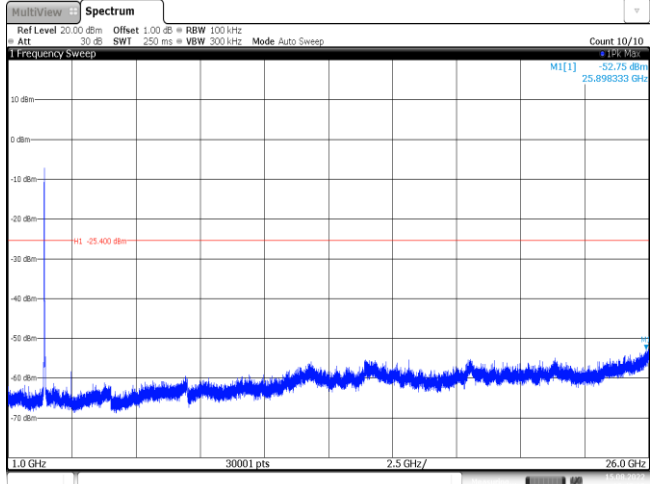


CH11
30MHz~1000MHz

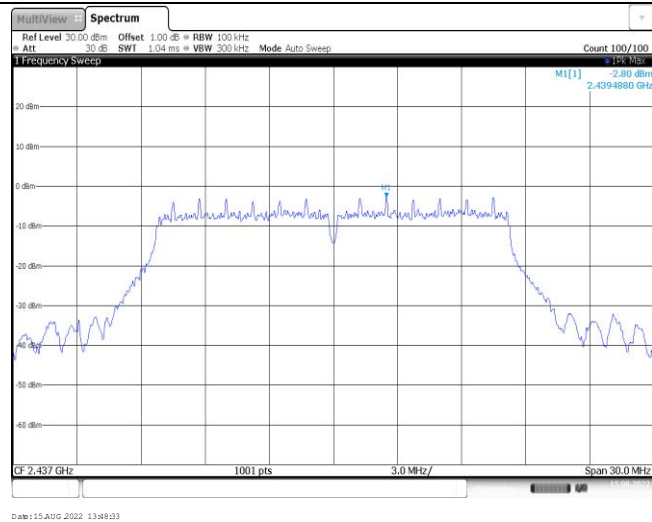


CH11
1GHz~26GHz

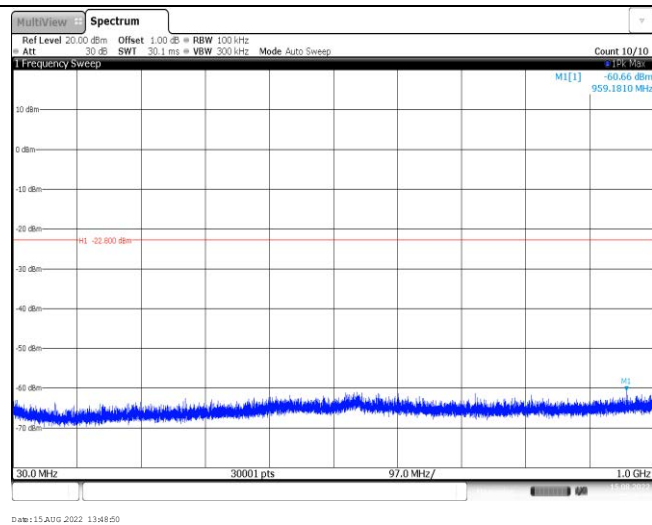


| Test Item: | Spurious Emissions | Type: | 802.11 g |
|-------------------------|--|-------|----------|
| CH01 Reference level |  <p>CH01 Reference level</p> | | |
| CH01 30MHz~1000MHz |  <p>CH01 30MHz~1000MHz</p> | | |
| CH01 1GHz~26GHz |  <p>CH01 1GHz~26GHz</p> | | |

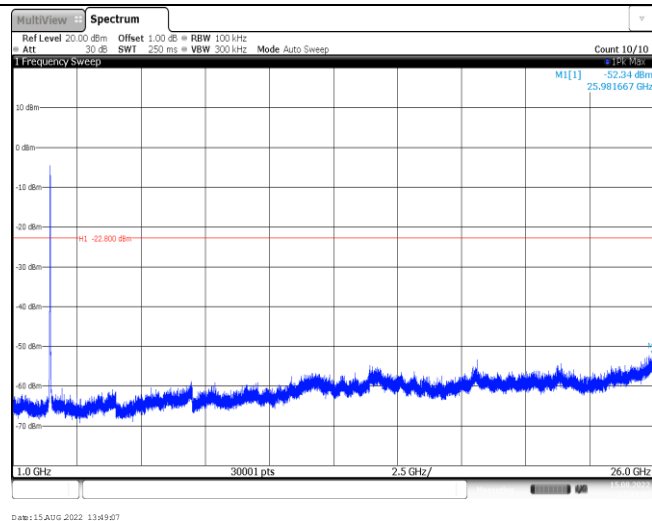
CH06
Reference level



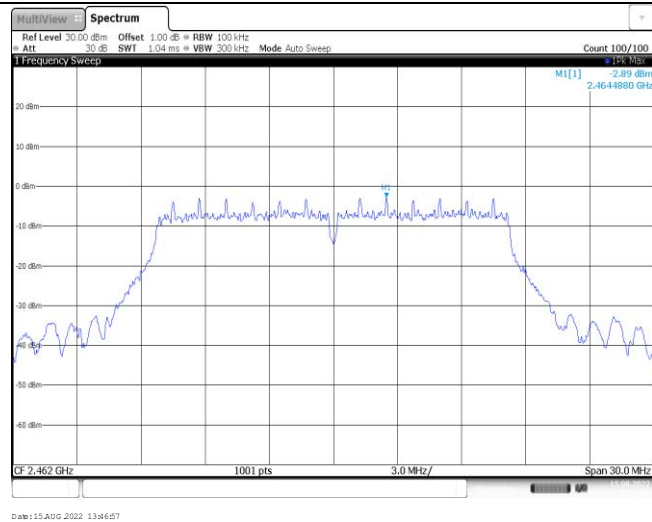
CH06
30MHz~1000MHz



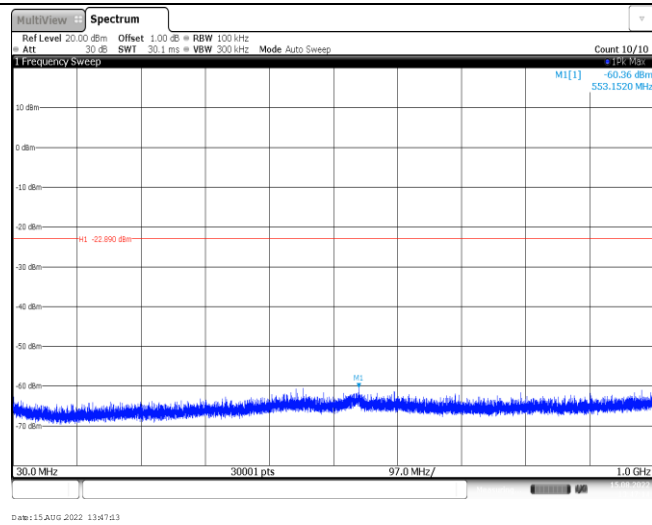
CH06
1GHz~26GHz



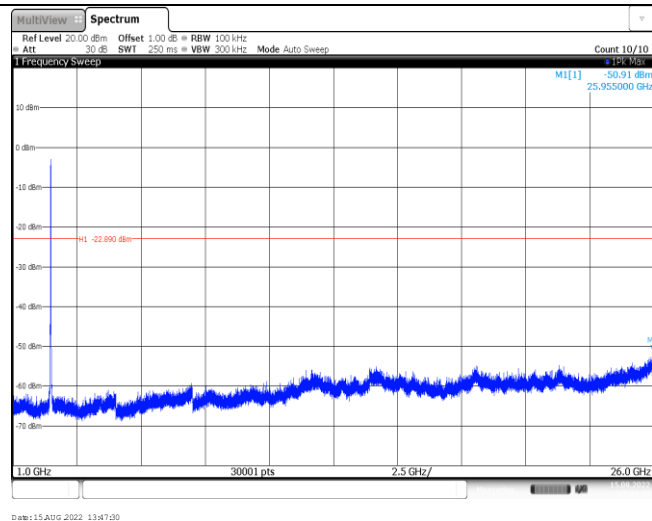
CH11
Reference level

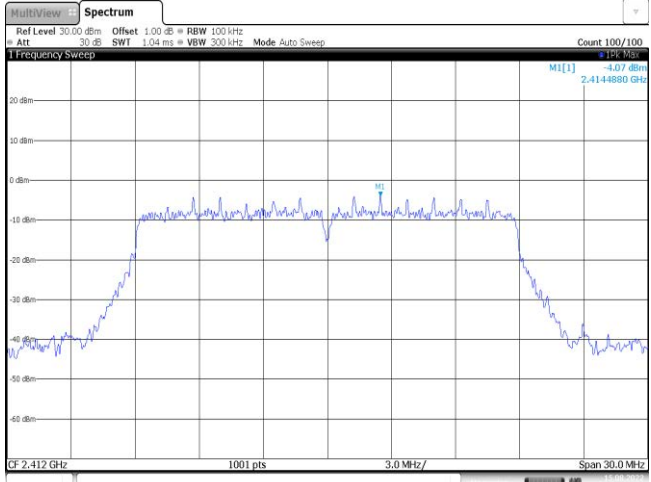
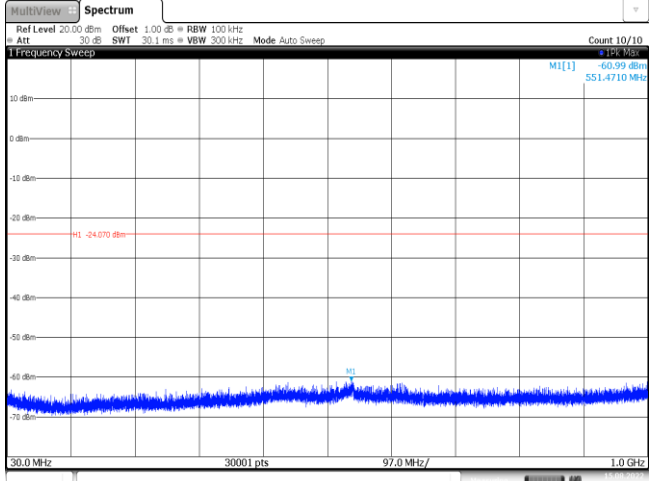
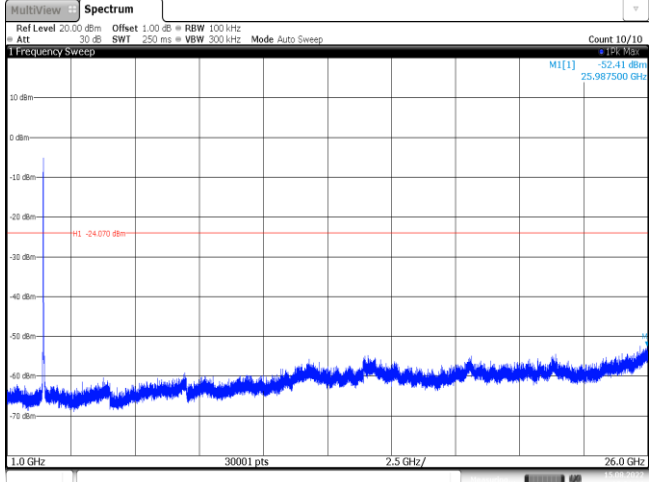


CH11
30MHz~1000MHz

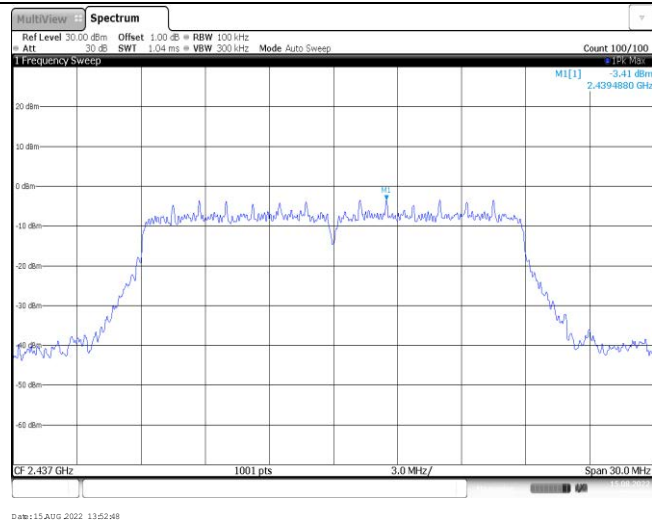


CH11
1GHz~26GHz

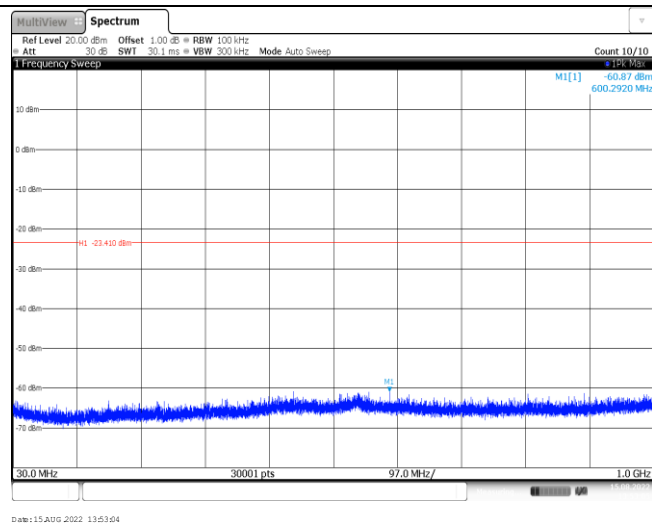


| Test Item: | Spurious Emissions | Type: | 802.11 n(HT20) |
|-------------------------|--|-------|----------------|
| CH01 Reference level |  <p>Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -40.7 dBm 2.414880 GHz CF 2.412 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date:15.AUG.2022 13:51:11</p> | | |
| CH01 30MHz~1000MHz |  <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.99 dBm 551.4710 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date:15.AUG.2022 13:51:27</p> | | |
| CH01 1GHz~26GHz |  <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -52.41 dBm 25.987500 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date:15.AUG.2022 13:51:44</p> | | |

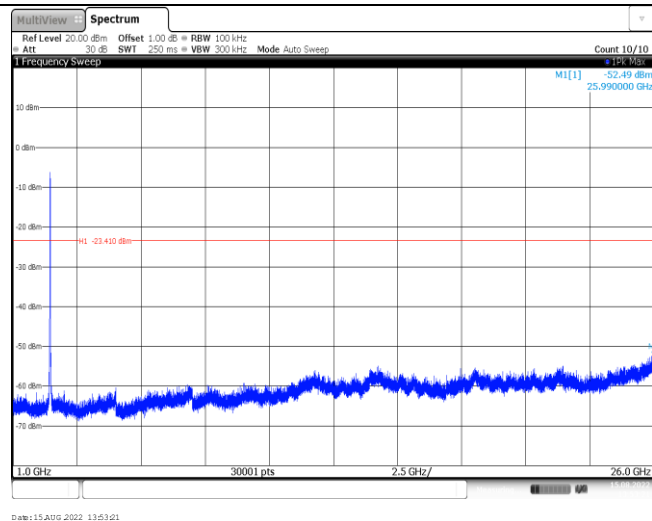
CH06
Reference level



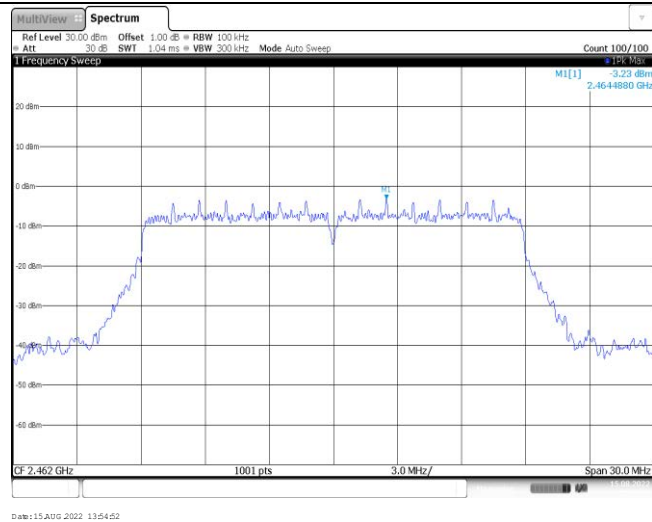
CH06
30MHz~1000MHz



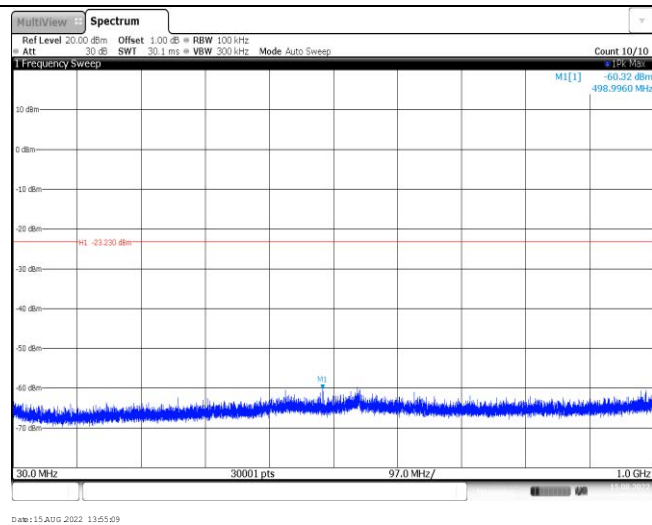
CH06
1GHz~26GHz



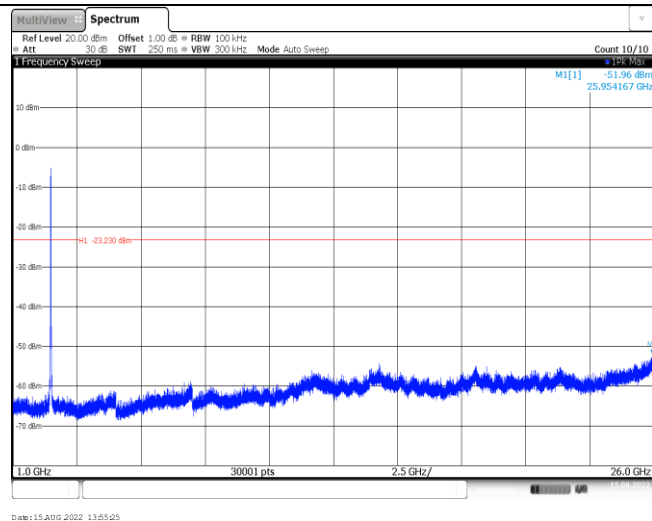
CH11
Reference level



CH11
30MHz~1000MHz



CH11
1GHz~26GHz



-----End of Report-----