



# TEST REPORT

**Applicant:** INGENICO

**Address:** 9 Avenue de la gare - Rovaltain TGV, BP25156, Valence Cedex9, 26958, France

**Product Name:** Smart POS Terminal

**FCC ID:** XKB-DX8CL4GWBT2

**47 CFR Part 15, Subpart C(15.247)**

**Standard(s):** ANSI C63.10-2013  
KDB 558074 D01 15.247 Meas Guidance v05r02

**Report Number:** 2502P42842E-RF-00C

**Report Date:** 2025/3/28

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

**Reviewed By:** Pedro Yun

**Approved By:** Gavin Xu

Title: Project Engineer

Title: RF Supervisor

---

**Bay Area Compliance Laboratories Corp. (Dongguan)**  
No.12, Pulong East 1<sup>st</sup> Road, Tangxia Town, Dongguan, Guangdong, China

Tel: +86-769-86858888

Fax: +86-769-86858891

[www.baclcorp.com.cn](http://www.baclcorp.com.cn)

Note: The information marked ▲ is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report cannot be reproduced except in full, without prior written approval of the Company. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0. This report may contain data that are not covered by the accreditation scope and shall be marked with ★. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government. Each test item follows the test standard(s) without deviation.

## CONTENTS

|   |           |
|---|-----------|
| <b>DOCUMENT REVISION HISTORY .....</b>                              | <b>4</b>  |
| <b>1. GENERAL INFORMATION .....</b>                                 | <b>5</b>  |
| <b>1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....</b> | <b>5</b>  |
| <b>1.2 ACCESSORY INFORMATION.....</b>                               | <b>5</b>  |
| <b>1.3 ANTENNA INFORMATION DETAIL▲.....</b>                         | <b>5</b>  |
| <b>1.4 EQUIPMENT MODIFICATIONS .....</b>                            | <b>5</b>  |
| <b>2. SUMMARY OF TEST RESULTS .....</b>                             | <b>6</b>  |
| <b>3. DESCRIPTION OF TEST CONFIGURATION .....</b>                   | <b>7</b>  |
| <b>3.1 OPERATION FREQUENCY DETAIL.....</b>                          | <b>7</b>  |
| <b>3.2 EUT OPERATION CONDITION.....</b>                             | <b>7</b>  |
| <b>3.3 SUPPORT EQUIPMENT LIST AND DETAILS .....</b>                 | <b>7</b>  |
| <b>3.4 SUPPORT CABLE LIST AND DETAILS .....</b>                     | <b>7</b>  |
| <b>3.5 BLOCK DIAGRAM OF TEST SETUP .....</b>                        | <b>8</b>  |
| <b>3.6 TEST FACILITY.....</b>                                       | <b>10</b> |
| <b>3.7 MEASUREMENT UNCERTAINTY .....</b>                            | <b>10</b> |
| <b>4. REQUIREMENTS AND TEST PROCEDURES .....</b>                    | <b>11</b> |
| <b>4.1 AC LINE CONDUCTED EMISSIONS.....</b>                         | <b>11</b> |
| <b>4.1.1 Applicable Standard.....</b>                               | <b>11</b> |
| <b>4.1.2 EUT Setup.....</b>   | <b>12</b> |
| <b>4.1.3 EMI Test Receiver Setup .....</b>                          | <b>12</b> |
| <b>4.1.4 Test Procedure .....</b>                                   | <b>13</b> |
| <b>4.1.5 Corrected Amplitude &amp; Margin Calculation.....</b>      | <b>13</b> |
| <b>4.1.6 Test Result .....</b>                                      | <b>13</b> |
| <b>4.2 RADIATION SPURIOUS EMISSIONS.....</b>                        | <b>14</b> |
| <b>4.2.1 Applicable Standard.....</b>                               | <b>14</b> |
| <b>4.2.2 EUT Setup.....</b>   | <b>14</b> |
| <b>4.2.3 EMI Test Receiver &amp; Spectrum Analyzer Setup .....</b>  | <b>16</b> |
| <b>4.2.4 Test Procedure .....</b>                                   | <b>16</b> |
| <b>4.2.5 Corrected Amplitude &amp; Margin Calculation.....</b>      | <b>16</b> |
| <b>4.2.6 Test Result .....</b>                                      | <b>17</b> |
| <b>4.3 MAXIMUM CONDUCTED OUTPUT POWER.....</b>                      | <b>18</b> |
| <b>4.3.1 Applicable Standard.....</b>                               | <b>18</b> |
| <b>4.3.2 EUT Setup.....</b>   | <b>18</b> |
| <b>4.3.3 Test Procedure .....</b>                                   | <b>18</b> |
| <b>4.3.4 Test Result .....</b>                                      | <b>18</b> |
| <b>4.4 DUTY CYCLE .....</b>   | <b>19</b> |
| <b>4.4.1 EUT Setup.....</b>   | <b>19</b> |
| <b>4.4.2 Test Procedure .....</b>                                   | <b>19</b> |
| <b>4.4.3 Judgment.....</b>  | <b>19</b> |
| <b>4.5 ANTENNA REQUIREMENT.....</b>                                 | <b>20</b> |
| <b>4.5.1 Applicable Standard.....</b>                               | <b>20</b> |
| <b>4.5.2 Judgment.....</b>  | <b>20</b> |

|  |           |
|--|-----------|
| <b>5. Test DATA AND RESULTS .....</b>                          | <b>21</b> |
| <b>5.1 AC LINE CONDUCTED EMISSIONS.....</b>                    | <b>21</b> |
| <b>5.2 RADIATION SPURIOUS EMISSIONS .....</b>                  | <b>24</b> |
| <b>5.3 SPOT CHECK WITH MAXIMUM CONDUCTED OUTPUT POWER.....</b> | <b>43</b> |
| <b>5.4 DUTY CYCLE .....</b>                                    | <b>44</b> |
| <b>EXHIBIT A - EUT PHOTOGRAPHS.....</b>                        | <b>46</b> |
| <b>EXHIBIT B - TEST SETUP PHOTOGRAPHS .....</b>                | <b>47</b> |

**DOCUMENT REVISION HISTORY**

| Revision Number | Report Number      | Description of Revision | Date of Revision |
|-----------------|--------------------|-------------------------|------------------|
| 1.0             | 2502P42842E-RF-00C | Original Report         | 2025/3/28        |

## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

|  |   |
|--|---|
| <b>EUT Name:</b>                               | Smart POS Terminal  |
| <b>EUT Model:</b>                              | AXIUM DX8000  |
| <b>Operation Frequency:</b>                    | 2412-2462 MHz(802.11b/g/n ht20)   |
| <b>Maximum Peak Output Power (Conducted)▲:</b> | 23.607dBm   |
| <b>Modulation Type:</b>                        | 802.11b:DSSS-DBPSK, DQPSK, CCK<br>802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM                                      |
| <b>Rated Input Voltage:</b>                    | DC 5V from adapter or DC 7.2V from battery  |
| <b>Serial Number:</b>                          | 2XVR-1 (For RF Conducted Test)<br>2XVR-10 (For Radiated spurious emission and AC line conducted emission tests) |
| <b>EUT Received Date:</b>                      | 2025/1/22   |
| <b>EUT Received Status:</b>                    | Good  |

### 1.2 Accessory Information

| Accessory Description | Manufacturer                     | Model   | Parameters  |
|-----------------------|----------------------------------|---------|---|
| Adapter               | XIAMEN KELI ELECTRONICS CO.,LTD. | SW-0983 | Input: 100-240Vac~50/60Hz 0.5A<br>Output: 5.0Vdc 2.0A |

### 1.3 Antenna Information Detail▲

| Antenna Type   | input impedance (Ohm) | Frequency Range | Antenna Gain |
|--|-----------------------|-----------------|--------------|
| IFA  | 50                    | 2400-2500MHz    | -0.32dBi     |
| <b>The design of compliance with §15.203:</b>  |                       |                 |              |
| <input checked="" type="checkbox"/> Unit uses a permanently attached antenna.<br><input type="checkbox"/> Unit uses a unique coupling to the intentional radiator.<br><input type="checkbox"/> Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit. |                       |                 |              |

### 1.4 Equipment Modifications

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

## 2. SUMMARY OF TEST RESULTS

| Standard(s) Section          | Test Items                               | Result     |
|------------------------------|--|------------|
| §15.207(a)                   | AC Line Conducted Emissions              | Compliant  |
| §15.205, §15.209, §15.247(d) | Radiated Spurious Emissions              | Compliant  |
| §15.247 (a)(2)               | Minimum 6 dB Bandwidth                   | Compliant* |
| §15.247(b)(3)                | Maximum Conducted Output Power           | Reporting  |
| §15.247(d)                   | 100 kHz Bandwidth Of Frequency Band Edge | Compliant* |
| §15.247(e)                   | Power Spectral Density                   | Compliant* |
| FCC §15.203                  | Antenna Requirement                      | Compliant  |

Note 1:

For AC line conducted emissions and Radiated Spurious Emissions 9kHz~1GHz and 18~25GHz, the maximum peak output power mode and channel was tested.

Note2:

Compliant\*: The device built in a certified module, model:INGE808-NA, FCC ID: XKB-INGE808NA, per spot check, the RF parameters are identical with the original module report, therefore, the RF conducted test items please refer to the module report: TCWA24060013404▲, which was issued by Sushi TOWE Wireless Testing (Shenzhen) Co., Ltd. on 2024/10/14. (according to KDB 996369 D02 Module Q&A v02r02, Answer 1 b )

The Bay Area Compliance Laboratories Corp.(Dongguan) is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report.

### 3. DESCRIPTION OF TEST CONFIGURATION

#### 3.1 Operation Frequency Detail

For 802.11b/g/n ht20:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|
| 1       | <b>2412</b>     | 7       | 2442            |
| 2       | 2417            | 8       | 2447            |
| 3       | 2422            | 9       | 2452            |
| 4       | 2427            | 10      | 2457            |
| 5       | 2432            | 11      | <b>2462</b>     |
| 6       | <b>2437</b>     | /       | /               |

Note: The above frequencies in bold were performed the test.

#### 3.2 EUT Operation Condition

The EUT was configured for testing in Engineering Mode, which was provided by the manufacturer. The EUT configuration as below:

| EUT Exercise Software:   |           | QRCT3          |                |                 |
|--|-----------|----------------|----------------|-----------------|
| The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲ : |           |                |                |                 |
| Test Modes   | Data Rate | Lowest Channel | Middle Channel | Highest Channel |
| 802.11b  | 1Mbps     | 22             | 22             | 22              |
| 802.11g  | 6Mbps     | 20             | 20             | 17              |
| 802.11n ht20   | MCS0      | 19             | 19             | 16.5            |

Note:

1. The above are the worst-case data rates, which are determined for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations.

#### 3.3 Support Equipment List and Details

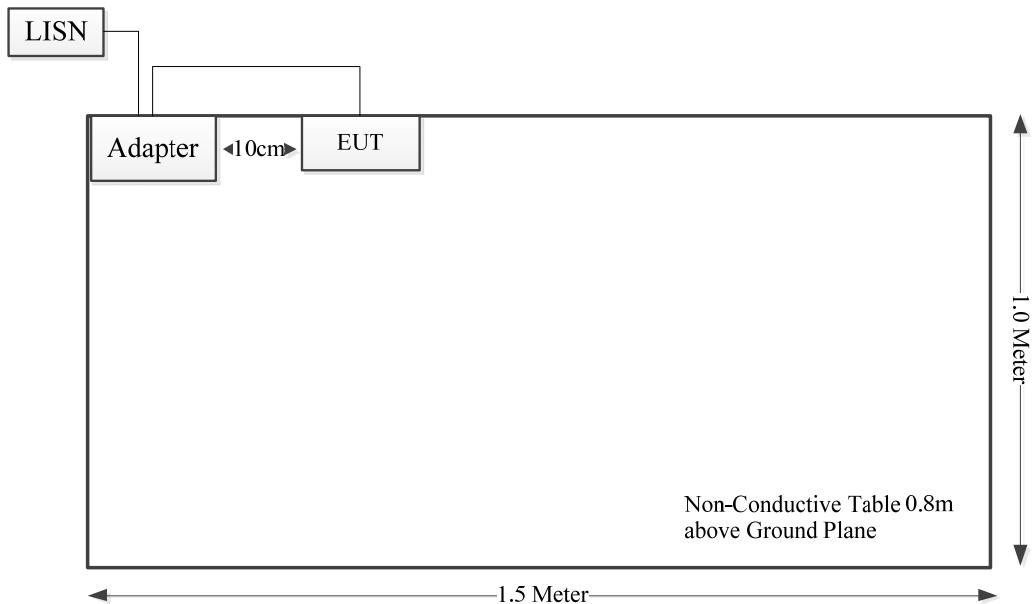
| Manufacturer | Description | Model | Serial Number |
|--------------|-------------|-------|---------------|
| /            | /           | /     | /             |

#### 3.4 Support Cable List and Details

| Cable Description | Shielding Type | Ferrite Core | Length (m) | From Port | To  |
|-------------------|----------------|--------------|------------|-----------|-----|
| USB Cable         | No             | No           | 1          | Adapter   | EUT |

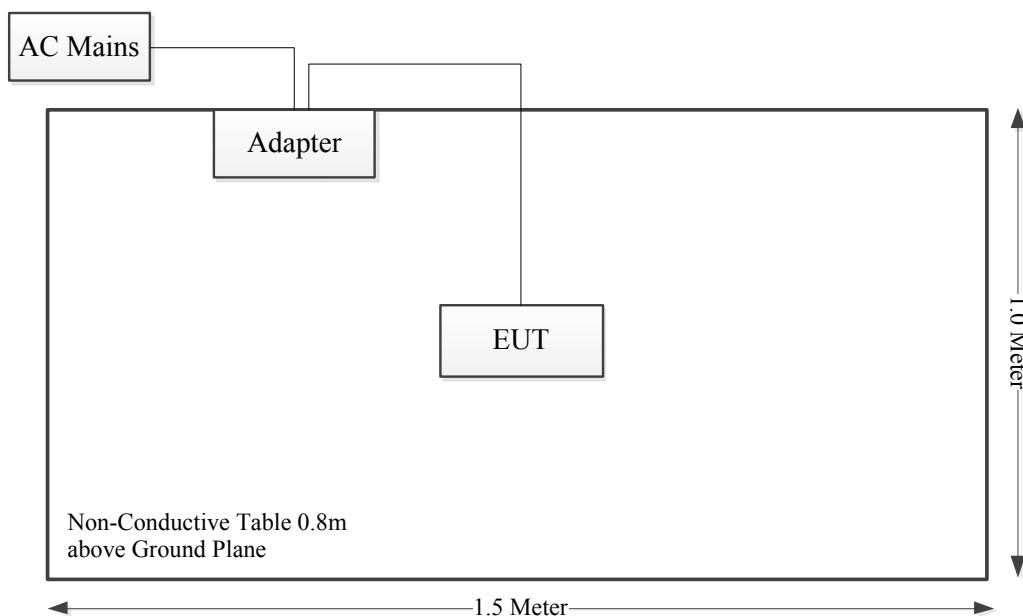
### 3.5 Block Diagram of Test Setup

AC line conducted emissions:

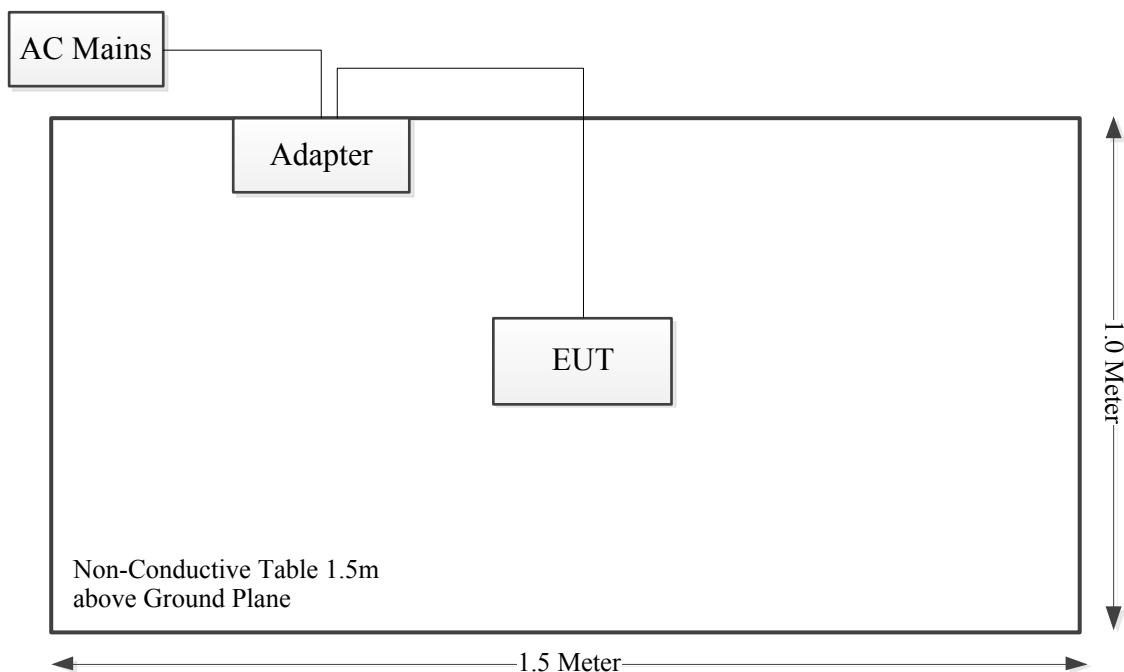


Spurious Emissions:

Below 1GHz:



Above 1GHz:



### 3.6 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 829273, the FCC Designation No. : CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

### 3.7 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

| Parameter                         | Measurement Uncertainty   |
|-----------------------------------|---|
| Occupied Channel Bandwidth        | ±5 %  |
| RF output power, conducted        | ±0.61dB   |
| Power Spectral Density, conducted | ±0.61 dB  |
| Unwanted Emissions, radiated      | 9kHz~30MHz: 3.3dB, 30MHz~200MHz: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz: 5.47 dB, 26.5GHz~40GHz: 5.63 dB |
| Unwanted Emissions, conducted     | ±2.47 dB  |
| Temperature                       | ±1°C  |
| Humidity                          | ±5%   |
| DC and low frequency voltages     | ±0.4%   |
| Duty Cycle                        | 1%  |
| AC Power Lines Conducted Emission | 3.11 dB (150 kHz to 30 MHz)   |

## 4. REQUIREMENTS AND TEST PROCEDURES

### 4.1 AC Line Conducted Emissions

#### 4.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

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

\*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

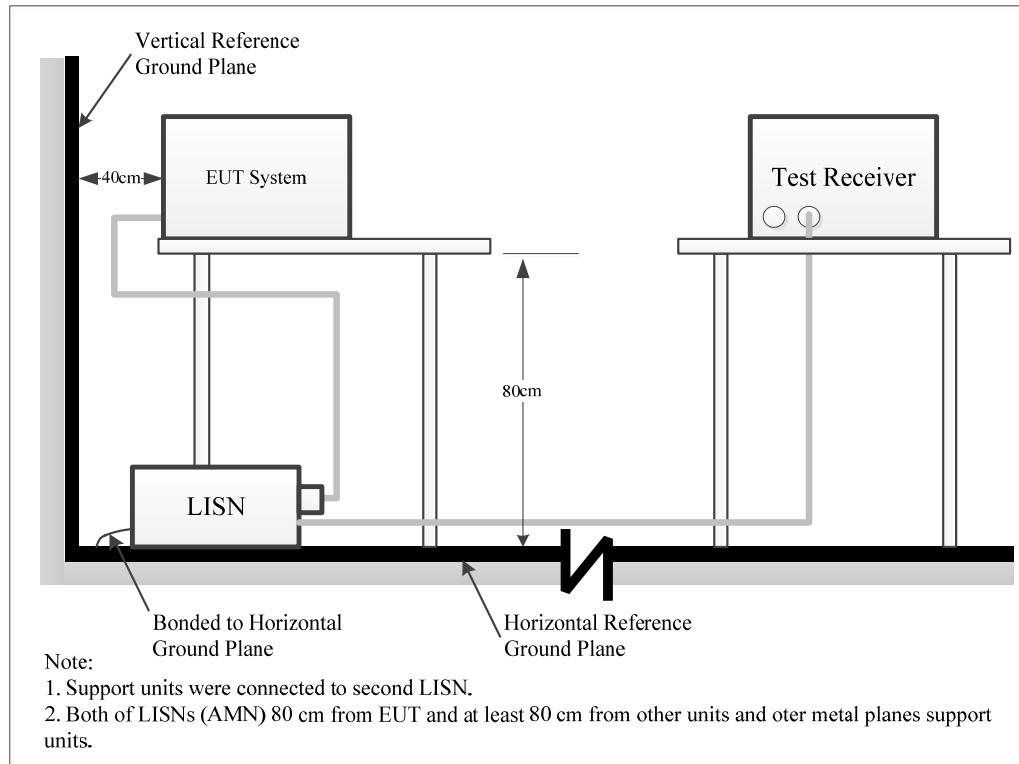
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000  $\mu$ V within the frequency band 535-1705 kHz, as measured using a 50  $\mu$ H/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

#### 4.1.2 EUT Setup



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with a 120 V/60 Hz AC power source.

#### 4.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range  | IF B/W |
|------------------|--------|
| 150 kHz – 30 MHz | 9 kHz  |

#### 4.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase (“hot”) line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

#### 4.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

Factor = attenuation caused by cable loss + voltage division factor of AMN

The “Margin” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

#### 4.1.6 Test Result

Please refer to section 5.1.

## 4.2 Radiation Spurious Emissions

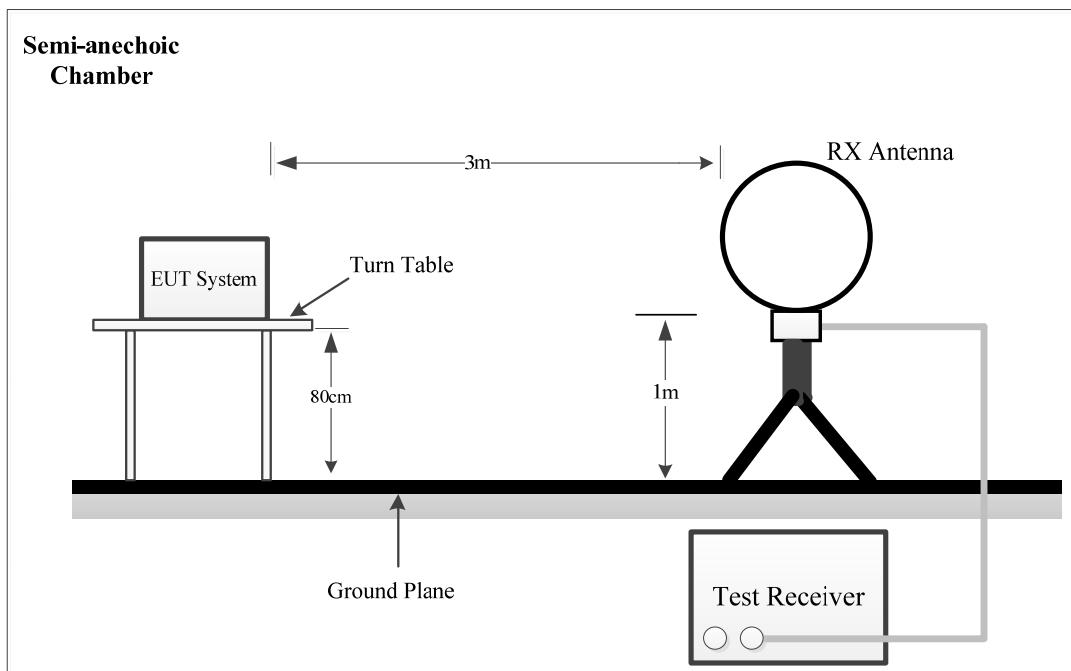
### 4.2.1 Applicable Standard

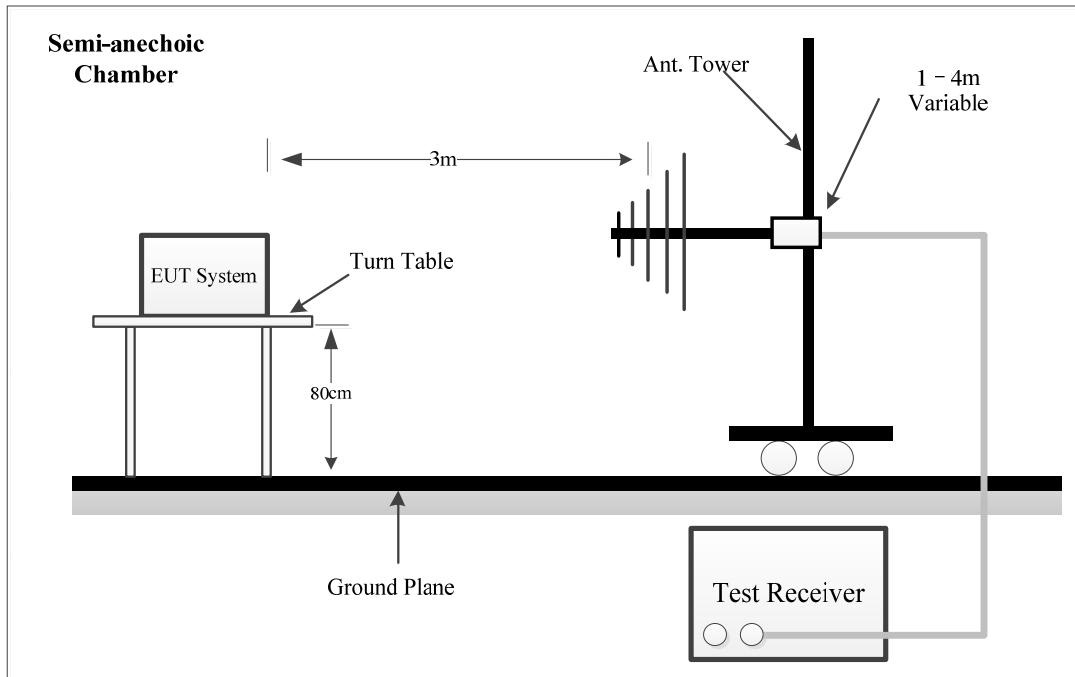
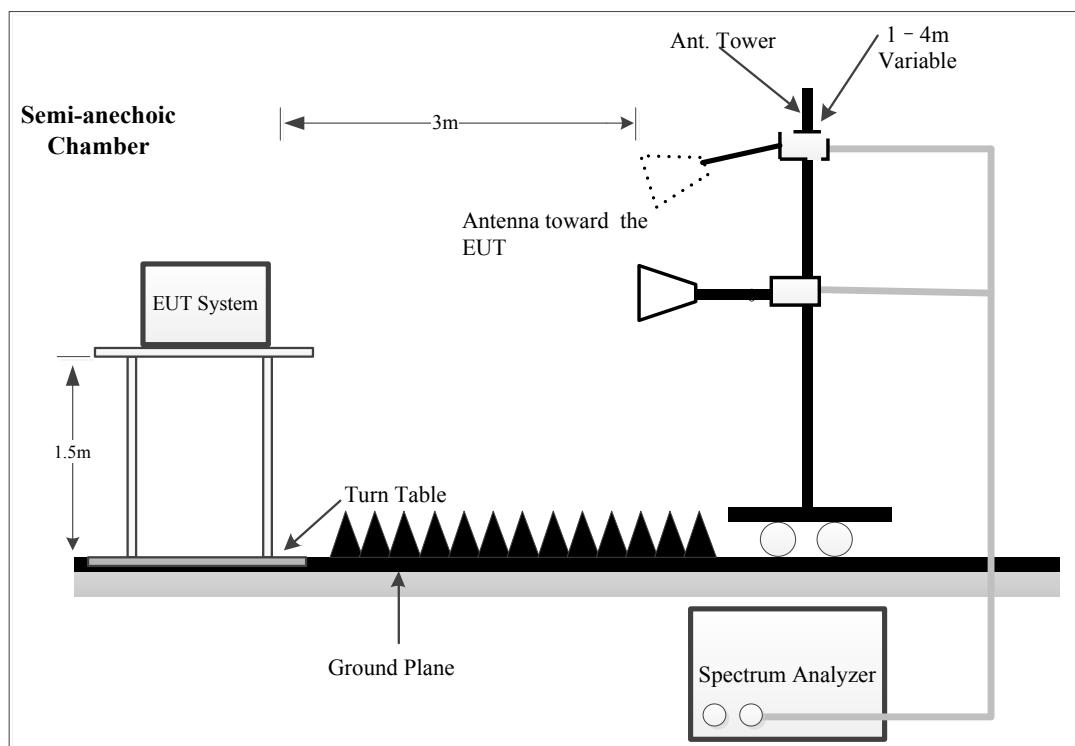
FCC §15.247 (d);

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### 4.2.2 EUT Setup

9kHz~30MHz:



**30MHz~1GHz:****Above 1GHz:**

The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

#### 4.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz-1000MHz:

| Frequency Range  | Measurement | RBW     | Video B/W | IF B/W | Detector |
|------------------|-------------|---------|-----------|--------|----------|
| 9 kHz – 150 kHz  | QP/AV       | 300Hz   | 1 kHz     | 200 Hz | QP/AV    |
| 150 kHz – 30 MHz | QP/AV       | 10 kHz  | 30 kHz    | 9 kHz  | QP/AV    |
| 30MHz – 1000 MHz | PK          | 100 kHz | 300 kHz   | /      | PK       |
|                  | QP          | /       | /         | 120kHz | QP       |

1GHz- 25GHz:

Pre-scan:

| Frequency Range | Measurement | RBW  | Video B/W | Detector |
|-----------------|-------------|------|-----------|----------|
| Above 1 GHz     | Peak        | 1MHz | 3 MHz     | PK       |
|                 | AV          | 1MHz | 5kHz      | PK       |

Final measurement for emission identified during the pre-scan:

| Measurement | Detector | Duty cycle | RBW  | Video B/W |
|-------------|----------|------------|------|-----------|
| PK          | PK       | Any        | 1MHz | 3 MHz     |
| Ave.        | PK       | >98%       | 1MHz | 10 Hz     |
|             |          | <98%       | 1MHz | ≥1/T      |

Note: T is minimum transmission duration

If the maximized peak measured value is under the QP/Average limit by more than 6dB, then it is unnecessary to perform an QP/Average measurement.

#### 4.2.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9 – 90 kHz, 110 – 490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

All emissions under the average limit and under the noise floor have not recorded in the report.

#### 4.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

Factor = Antenna Factor + Cable Loss- Amplifier Gain

The “Margin” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

#### **4.2.6 Test Result**

Please refer to section 5.2.

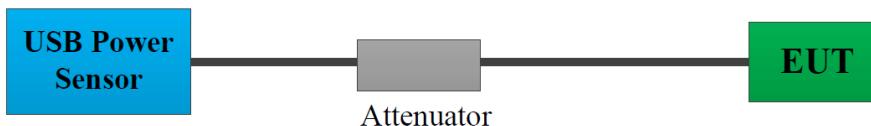
## 4.3 Maximum Conducted Output Power

### 4.3.1 Applicable Standard

FCC §15.247 (b)(3)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

### 4.3.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

### 4.3.3 Test Procedure

According to ANSI C63.10-2013 Section 11.9.1.2

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

- a) Set the EUT in transmitting mode.
- b) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to test equipment.
- c) Add a correction factor to the display.
- d) Set the power meter to test peak output power, record the result.

According to ANSI C63.10-2013 Section 11.9.2.3.2

Method AVGPM-G is a measurement using a gated RF average power meter.

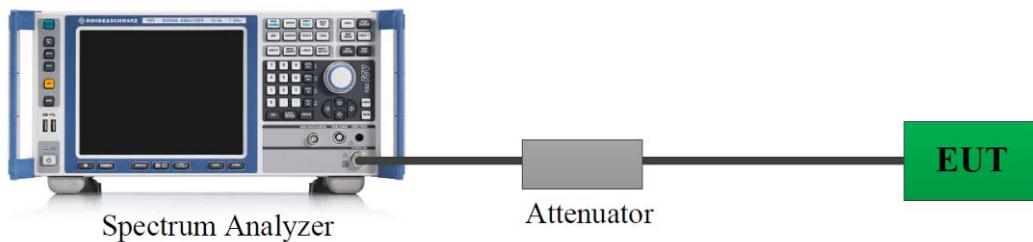
Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

### 4.3.4 Test Result

Please refer to section 5.3.

## 4.4 Duty Cycle

### 4.4.1 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

### 4.4.2 Test Procedure

According to ANSI C63.10-2020 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

- 1) Set the center frequency of the instrument to the center frequency of the transmission.
- 2) Set  $RBW \geq OBW$  if possible; otherwise, set  $RBW$  to the largest available value.
- 3) Set  $VBW \geq RBW$ . Set detector = peak or average.
- 4) The zero-span measurement method shall not be used unless both  $RBW$  and  $VBW$  are  $> 50/T$  and the number of sweep points across duration  $T$  exceeds 100. (For example, if  $VBW$  and/or  $RBW$  are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if  $T \leq 16.7 \mu s$ .)

### 4.4.3 Judgment

Report Only. Please refer to section 5.4.

## 4.5 Antenna Requirement

### 4.5.1 Applicable Standard

FCC §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 shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### 4.5.2 Judgment

**Compliant.** Please refer to the Antenna Information detail in Section 1.3.

## 5. Test DATA AND RESULTS

### 5.1 AC Line Conducted Emissions

|                |           |              |              |
|----------------|-----------|--------------|--------------|
| Serial Number: | 2XVR-10   | Test Date:   | 2025/2/13    |
| Test Site:     | CE        | Test Mode:   | Transmitting |
| Tester:        | Yukin Qiu | Test Result: | Pass         |

#### Environmental Conditions:

|                   |      |                        |    |                     |       |
|-------------------|------|------------------------|----|---------------------|-------|
| Temperature: (°C) | 21.8 | Relative Humidity: (%) | 48 | ATM Pressure: (kPa) | 101.4 |
|-------------------|------|------------------------|----|---------------------|-------|

#### Test Equipment List and Details:

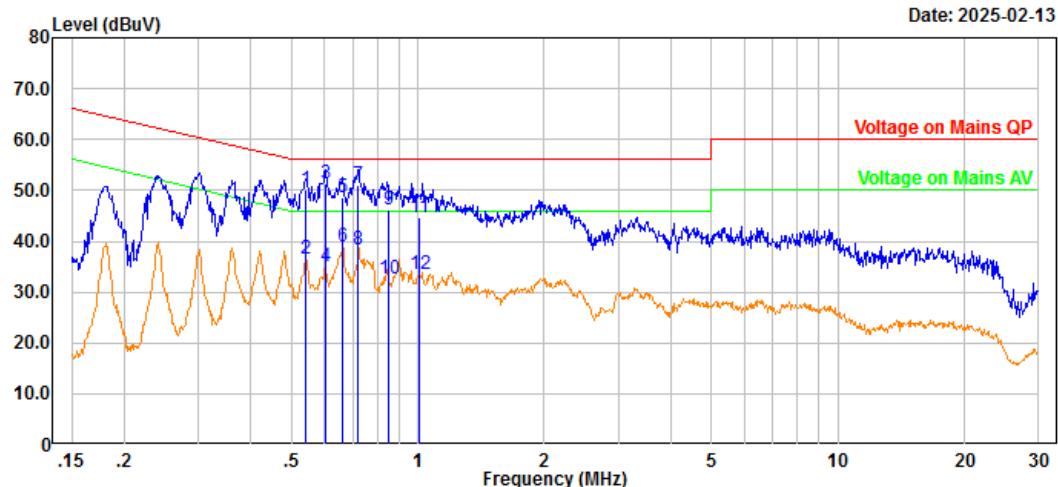
| Manufacturer | Description       | Model     | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-------------------|-----------|---------------|------------------|----------------------|
| R&S          | LISN              | ENV216    | 101614        | 2024/9/5         | 2025/9/4             |
| MICRO-COAX   | Coaxial Cable     | C-NJNJ-50 | C-0200-01     | 2024/9/5         | 2025/9/4             |
| R&S          | EMI Test Receiver | ESCI      | 100035        | 2024/8/26        | 2025/8/25            |
| Audix        | Test Software     | E3        | 191218 V9     | N/A              | N/A                  |

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Note: The maximum output power mode: 802.11n20 Middle channel was tested.

Project No.: 2502P42842E-RF  
 Port: Line  
 Test Mode: Transmitting  
 IF B/W 9KHz PK/AV

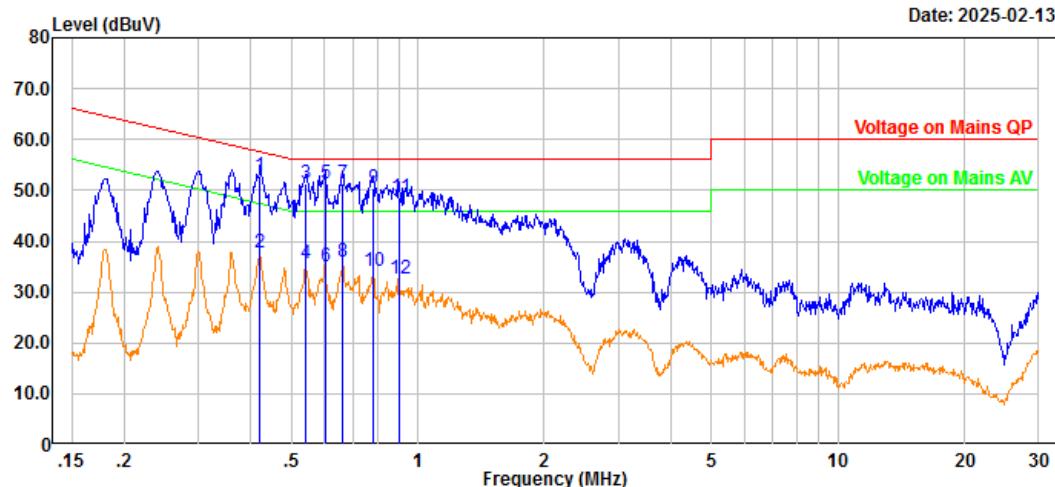
Serial No.: 2XVR-10  
 Tester: Yukin Qiu



| No. | Frequency (MHz) | Reading (dB $\mu$ V) | Factor (dB/m) | Result (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Detector |
|-----|-----------------|----------------------|---------------|-----------------------|----------------------|-------------|----------|
| 1   | 0.54            | 39.13                | 10.83         | 49.96                 | 56.00                | 6.04        | QP       |
| 2   | 0.54            | 25.81                | 10.83         | 36.64                 | 46.00                | 9.36        | Average  |
| 3   | 0.61            | 40.41                | 10.82         | 51.23                 | 56.00                | 4.77        | QP       |
| 4   | 0.61            | 24.15                | 10.82         | 34.97                 | 46.00                | 11.03       | Average  |
| 5   | 0.66            | 37.82                | 10.84         | 48.66                 | 56.00                | 7.34        | QP       |
| 6   | 0.66            | 27.98                | 10.84         | 38.82                 | 46.00                | 7.18        | Average  |
| 7   | 0.72            | 40.08                | 10.86         | 50.94                 | 56.00                | 5.06        | QP       |
| 8   | 0.72            | 27.49                | 10.86         | 38.35                 | 46.00                | 7.65        | Average  |
| 9   | 0.85            | 35.25                | 10.85         | 46.10                 | 56.00                | 9.90        | QP       |
| 10  | 0.85            | 21.80                | 10.85         | 32.65                 | 46.00                | 13.35       | Average  |
| 11  | 1.01            | 33.88                | 10.85         | 44.73                 | 56.00                | 11.27       | QP       |
| 12  | 1.01            | 22.73                | 10.85         | 33.58                 | 46.00                | 12.42       | Average  |

Project No.: 2502P42842E-RF  
 Port: neutral  
 Test Mode: Transmitting  
 IF B/W 9KHz PK/AV

Serial No.: 2XVR-10  
 Tester: Yukin Qiu



| No. | Frequency (MHz) | Reading (dB $\mu$ V) | Factor (dB/m) | Result (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Detector |
|-----|-----------------|----------------------|---------------|-----------------------|----------------------|-------------|----------|
| 1   | 0.42            | 42.12                | 10.77         | 52.89                 | 57.42                | 4.53        | QP       |
| 2   | 0.42            | 27.05                | 10.77         | 37.82                 | 47.42                | 9.60        | Average  |
| 3   | 0.54            | 40.44                | 10.73         | 51.17                 | 56.00                | 4.83        | QP       |
| 4   | 0.54            | 24.77                | 10.73         | 35.50                 | 46.00                | 10.50       | Average  |
| 5   | 0.60            | 40.47                | 10.72         | 51.19                 | 56.00                | 4.81        | QP       |
| 6   | 0.60            | 24.37                | 10.72         | 35.09                 | 46.00                | 10.91       | Average  |
| 7   | 0.66            | 40.57                | 10.75         | 51.32                 | 56.00                | 4.68        | QP       |
| 8   | 0.66            | 25.15                | 10.75         | 35.90                 | 46.00                | 10.10       | Average  |
| 9   | 0.78            | 39.53                | 10.78         | 50.31                 | 56.00                | 5.69        | QP       |
| 10  | 0.78            | 23.36                | 10.78         | 34.14                 | 46.00                | 11.86       | Average  |
| 11  | 0.90            | 37.91                | 10.83         | 48.74                 | 56.00                | 7.26        | QP       |
| 12  | 0.90            | 21.73                | 10.83         | 32.56                 | 46.00                | 13.44       | Average  |

## 5.2 Radiation Spurious Emissions

### 1)9kHz - 1GHz

|                |              |              |              |
|----------------|--------------|--------------|--------------|
| Serial Number: | 2XVP-10      | Test Date:   | 2025/2/19    |
| Test Site:     | Chamber10m   | Test Mode:   | Transmitting |
| Tester:        | Leesin Xiang | Test Result: | Pass         |

| Environmental Conditions: |      |                        |    |                     |       |
|---------------------------|------|------------------------|----|---------------------|-------|
| Temperature: (°C)         | 22.4 | Relative Humidity: (%) | 51 | ATM Pressure: (kPa) | 101.7 |

### Test Equipment List and Details:

| Manufacturer   | Description          | Model     | Serial Number | Calibration Date | Calibration Due Date |
|----------------|----------------------|-----------|---------------|------------------|----------------------|
| EMCO           | Passive Loop Antenna | 6512      | 9706-1206     | 2023/10/25       | 2026/10/24           |
| Sunol Sciences | Hybrid Antenna       | JB3       | A060611-1     | 2023/9/6         | 2026/9/5             |
| Narda          | Coaxial Attenuator   | 779-6dB   | 04269         | 2023/9/6         | 2026/9/5             |
| Unknown        | Coaxial Cable        | C-NJNJ-50 | C-1000-01     | 2024/7/1         | 2025/6/30            |
| Unknown        | Coaxial Cable        | C-NJNJ-50 | C-0400-04     | 2024/7/1         | 2025/6/30            |
| Unknown        | Coaxial Cable        | C-NJNJ-50 | C-0530-01     | 2024/7/1         | 2025/6/30            |
| Sonoma         | Amplifier            | 310N      | 185914        | 2024/8/26        | 2025/8/25            |
| R&S            | EMI Test Receiver    | ESCI      | 100224        | 2024/8/26        | 2025/8/25            |
| Audix          | Test Software        | E3        | 191218 V9     | N/A              | N/A                  |

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data:

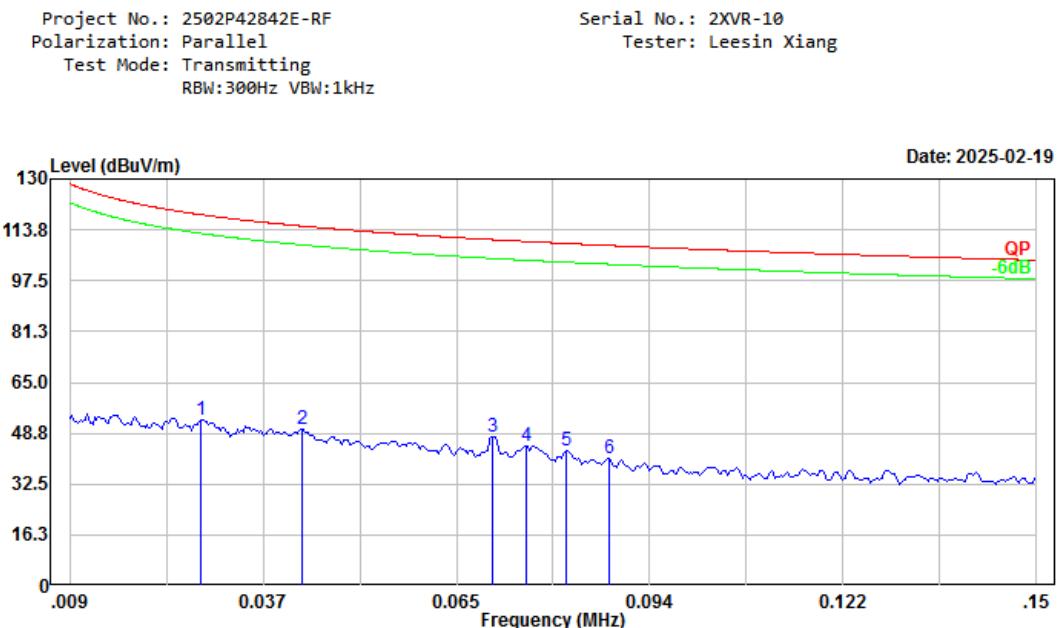
Please refer to the below table and plots.

After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to table and plots.

*Note: The maximum output power mode: 802.11n20 Middle channel was tested.*

**9kHz~30MHz**

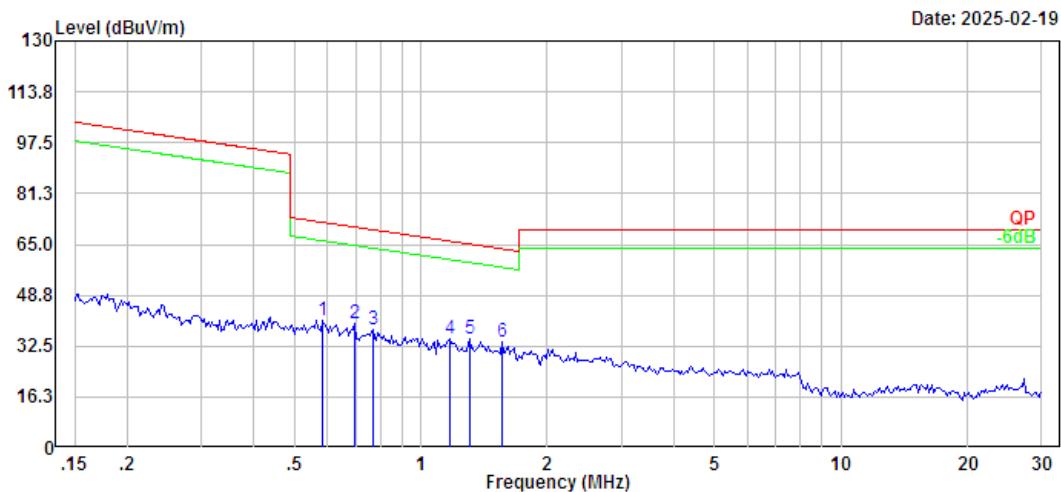
Three antenna orientations (parallel, perpendicular, and ground-parallel) was measured, the worst orientations was below:



| No.   | Frequency | Reading      | Factor | Result         | Limit          | Margin | Measurement |
|-------|-----------|--------------|--------|----------------|----------------|--------|-------------|
|       | (MHz)     | (dB $\mu$ V) | (dB/m) | (dB $\mu$ V/m) | (dB $\mu$ V/m) | (dB)   |             |
| <hr/> |           |              |        |                |                |        |             |
| 1     | 0.028     | 4.90         | 48.01  | 52.91          | 118.61         | 65.70  | Peak        |
| 2     | 0.043     | 4.85         | 45.29  | 50.14          | 114.97         | 64.83  | Peak        |
| 3     | 0.071     | 7.37         | 40.46  | 47.83          | 110.61         | 62.78  | Peak        |
| 4     | 0.076     | 5.20         | 39.67  | 44.87          | 110.04         | 65.17  | Peak        |
| 5     | 0.081     | 4.27         | 38.66  | 42.93          | 109.38         | 66.45  | Peak        |
| 6     | 0.088     | 3.37         | 37.55  | 40.92          | 108.75         | 67.83  | Peak        |

Project No.: 2502P42842E-RF  
Polarization: Parallel  
Test Mode: Transmitting  
: RBW:10kHz VBW:30kHz

Serial No.: 2XVR-10  
Tester: Leesin Xiang

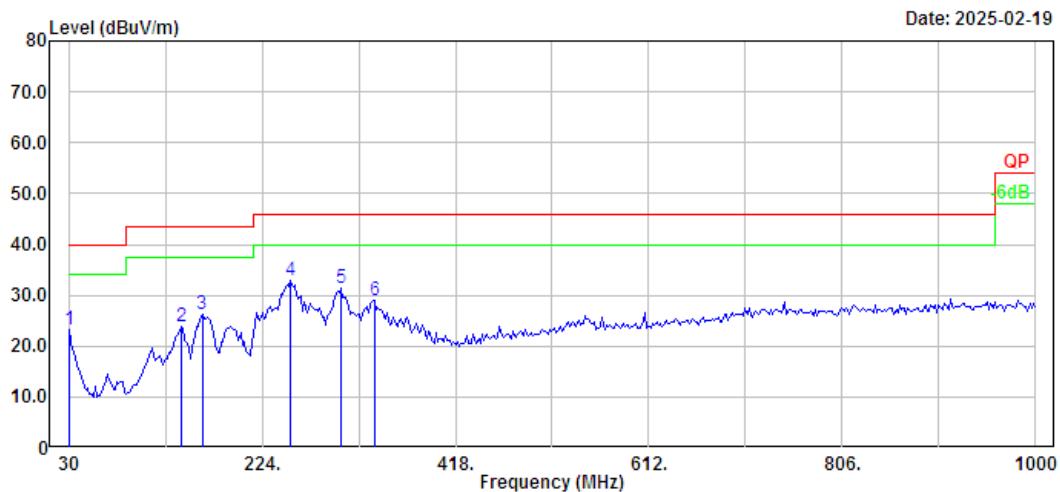


| No.   | Frequency<br>(MHz) | Reading<br>(dB $\mu$ V) | Factor<br>(dB/m) | Result<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) | Measurement |
|-------|--------------------|-------------------------|------------------|--------------------------|-------------------------|----------------|-------------|
| <hr/> |                    |                         |                  |                          |                         |                |             |
| 1     | 0.582              | 17.99                   | 22.65            | 40.64                    | 72.27                   | 31.63          | Peak        |
| 2     | 0.697              | 18.34                   | 21.49            | 39.83                    | 70.67                   | 30.84          | Peak        |
| 3     | 0.767              | 16.72                   | 20.86            | 37.58                    | 69.83                   | 32.25          | Peak        |
| 4     | 1.172              | 19.24                   | 15.80            | 35.04                    | 66.07                   | 31.03          | Peak        |
| 5     | 1.303              | 19.40                   | 15.22            | 34.62                    | 65.13                   | 30.51          | Peak        |
| 6     | 1.560              | 19.57                   | 14.07            | 33.64                    | 63.53                   | 29.89          | Peak        |

**30MHz-1GHz**

Project No.: 2502P42842E-RF  
Polarization: Horizontal  
Test Mode: Transmitting  
: RBW:100kHz VBW:300kHz

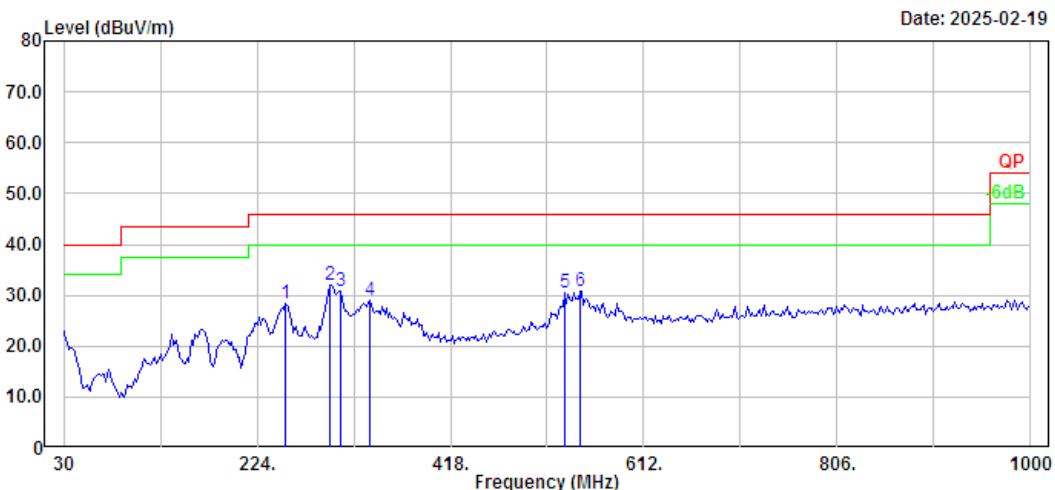
Serial No.: 2XVR-10  
Tester: Leesin Xiang



| No. | Frequency<br>(MHz) | Reading<br>(dB $\mu$ V) | Factor<br>(dB/m) | Result<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) | Measurement |
|-----|--------------------|-------------------------|------------------|--------------------------|-------------------------|----------------|-------------|
|     |                    |                         |                  |                          |                         |                | Peak        |
| 1   | 30.00              | 26.93                   | -3.80            | 23.13                    | 40.00                   | 16.87          | Peak        |
| 2   | 142.52             | 34.34                   | -10.61           | 23.73                    | 43.50                   | 19.77          | Peak        |
| 3   | 163.86             | 37.60                   | -11.39           | 26.21                    | 43.50                   | 17.29          | Peak        |
| 4   | 253.10             | 44.18                   | -11.34           | 32.84                    | 46.00                   | 13.16          | Peak        |
| 5   | 303.54             | 40.81                   | -9.44            | 31.37                    | 46.00                   | 14.63          | Peak        |
| 6   | 336.52             | 37.77                   | -8.77            | 29.00                    | 46.00                   | 17.00          | Peak        |

Project No.: 2502P42842E-RF  
Polarization: Vertical  
Test Mode: Transmitting  
: RBW:100kHz VBW:300kHz

Serial No.: 2XVR-10  
Tester: Leesin Xiang



| No. | Frequency<br>(MHz) | Reading<br>(dB $\mu$ V) | Factor<br>(dB/m) | Result<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) | Measurement |
|-----|--------------------|-------------------------|------------------|--------------------------|-------------------------|----------------|-------------|
| 1   | 253.10             | 39.75                   | -11.34           | 28.41                    | 46.00                   | 17.59          | Peak        |
| 2   | 297.72             | 41.46                   | -9.53            | 31.93                    | 46.00                   | 14.07          | Peak        |
| 3   | 307.42             | 40.01                   | -9.35            | 30.66                    | 46.00                   | 15.34          | Peak        |
| 4   | 336.52             | 37.81                   | -8.77            | 29.04                    | 46.00                   | 16.96          | Peak        |
| 5   | 532.46             | 34.31                   | -3.73            | 30.58                    | 46.00                   | 15.42          | Peak        |
| 6   | 547.98             | 34.41                   | -3.47            | 30.94                    | 46.00                   | 15.06          | Peak        |

**2) 1-25GHz:**

|                |           |              |              |
|----------------|-----------|--------------|--------------|
| Serial Number: | 2XVR-10   | Test Date:   | 2025/2/24    |
| Test Site:     | Chamber B | Test Mode:   | Transmitting |
| Tester:        | Leo Xiao  | Test Result: | Pass         |

| <b>Environmental Conditions:</b> |      |                        |    |                     |       |
|----------------------------------|------|------------------------|----|---------------------|-------|
| Temperature: (°C)                | 20.7 | Relative Humidity: (%) | 48 | ATM Pressure: (kPa) | 102.4 |

**Test Equipment List and Details:**

| Manufacturer          | Description  | Model                     | Serial Number     | Calibration Date | Calibration Due Date |
|-----------------------|--|---------------------------|-------------------|------------------|----------------------|
| ETS-Lindgren          | Horn Antenna   | 3115                      | 000 527 35        | 2023/9/7         | 2026/9/6             |
| Ducommun Technologies | Horn Antenna   | ARH-4223-02               | 1007726-02 1304   | 2023/2/22        | 2026/2/21            |
| Xinhang Macrowave     | Coaxial Cable  | XH750A-N/J-SMA/J-10M      | 20231117004 #0001 | 2024/11/17       | 2025/11/16           |
| Xinhang Macrowave     | Coaxial Cable  | XH360A-2.92/J-2.92/J-6M-A | 20231208001 #0001 | 2024/12/9        | 2025/12/8            |
| AH                    | Preamplifier   | PAM-0118P                 | 469               | 2024/4/15        | 2025/4/14            |
| AH                    | Preamplifier   | PAM-1840VH                | 191               | 2024/9/5         | 2025/9/4             |
| R&S                   | Spectrum Analyzer                                      | FSV40                     | 101589            | 2024/9/5         | 2025/9/4             |
| Audix                 | Test Software  | E3                        | 191218 V9         | N/A              | N/A                  |
| Decentest             | Multiplex Switch Test Control Set & Filter Switch Unit | DT7220SCU & DT7220FCU     | DC79902 & DC79905 | 2024/8/27        | 2025/8/26            |

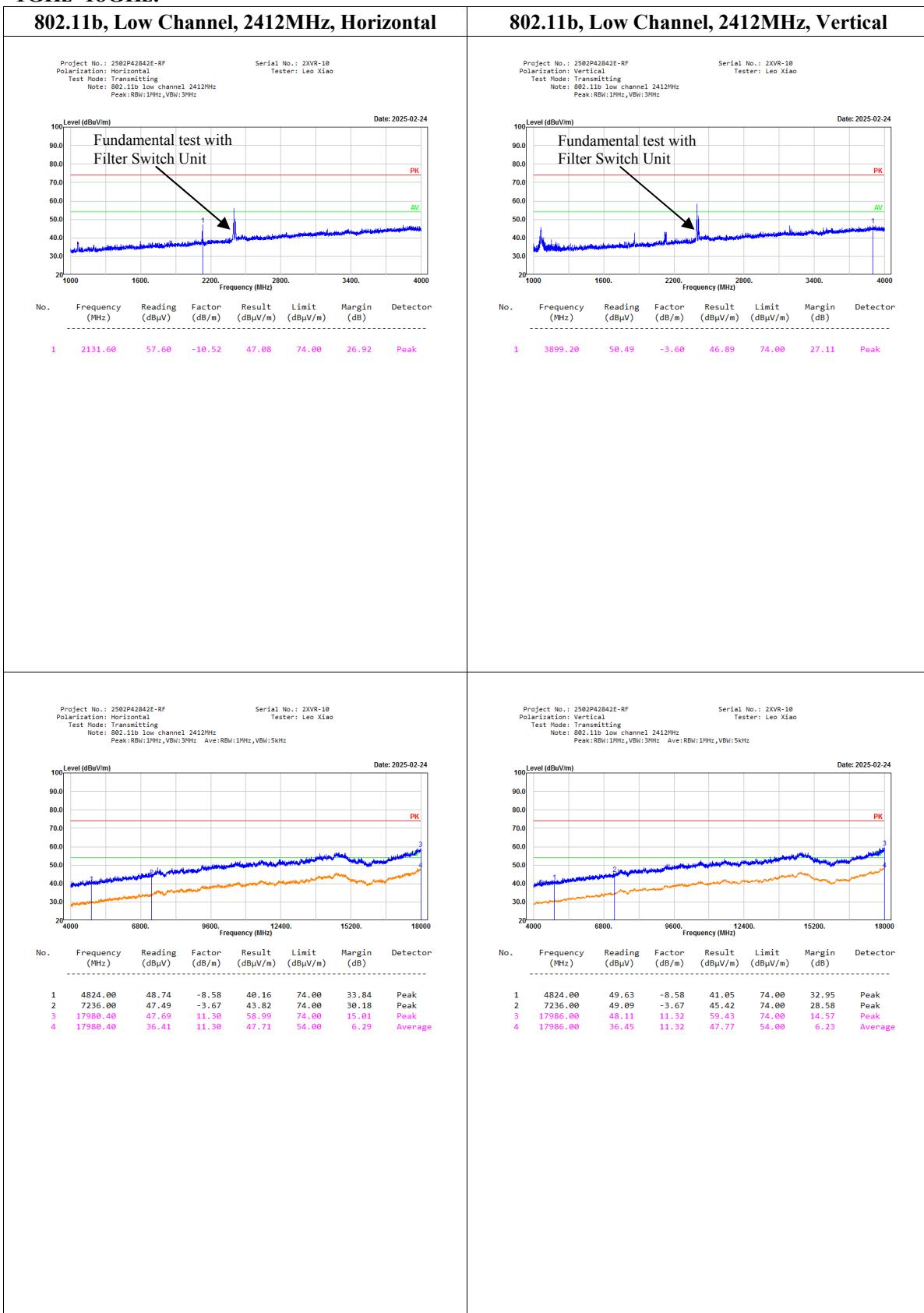
\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

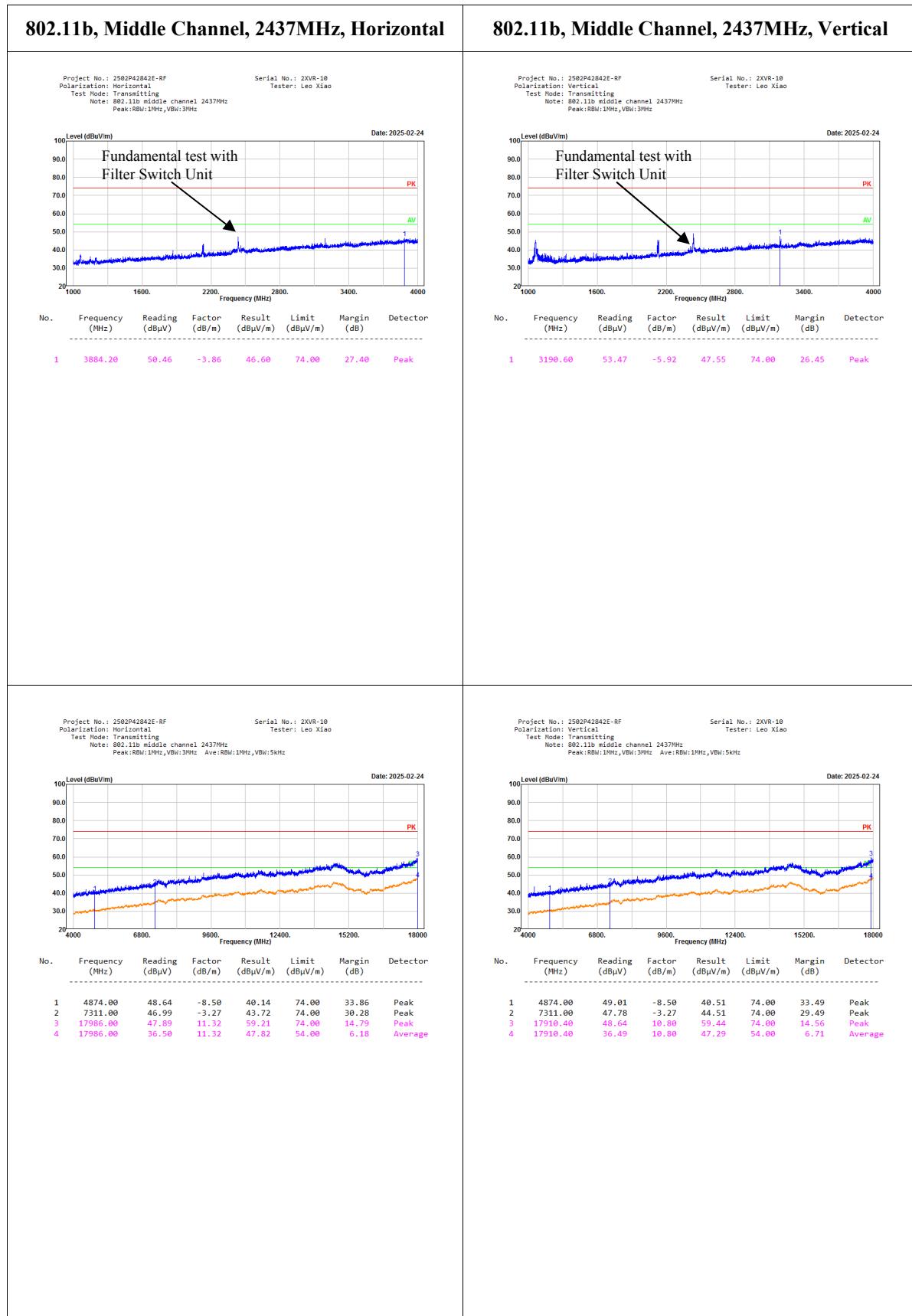
**Test Data:**

Please refer to the below table and plots.

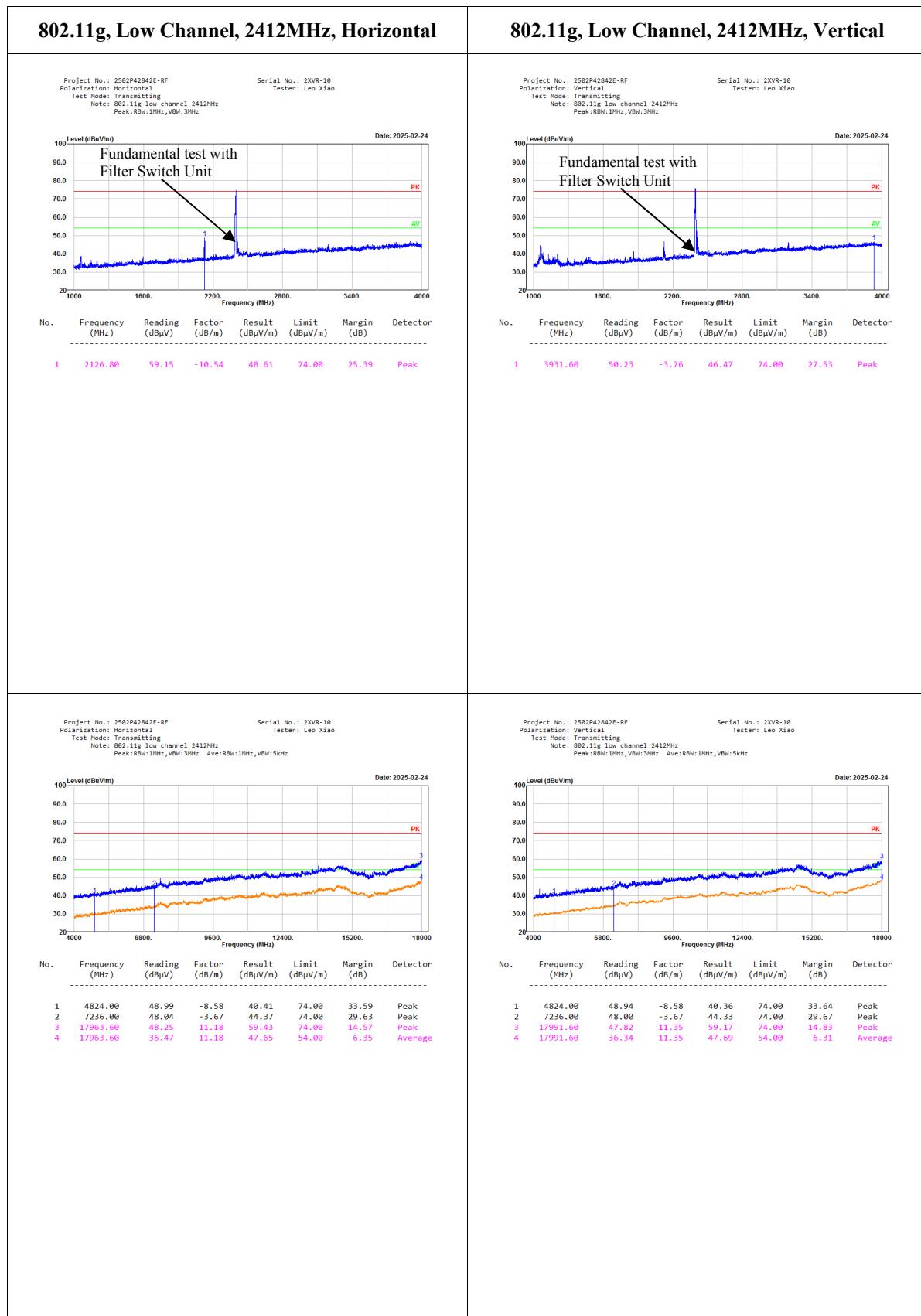
After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to table and plots.

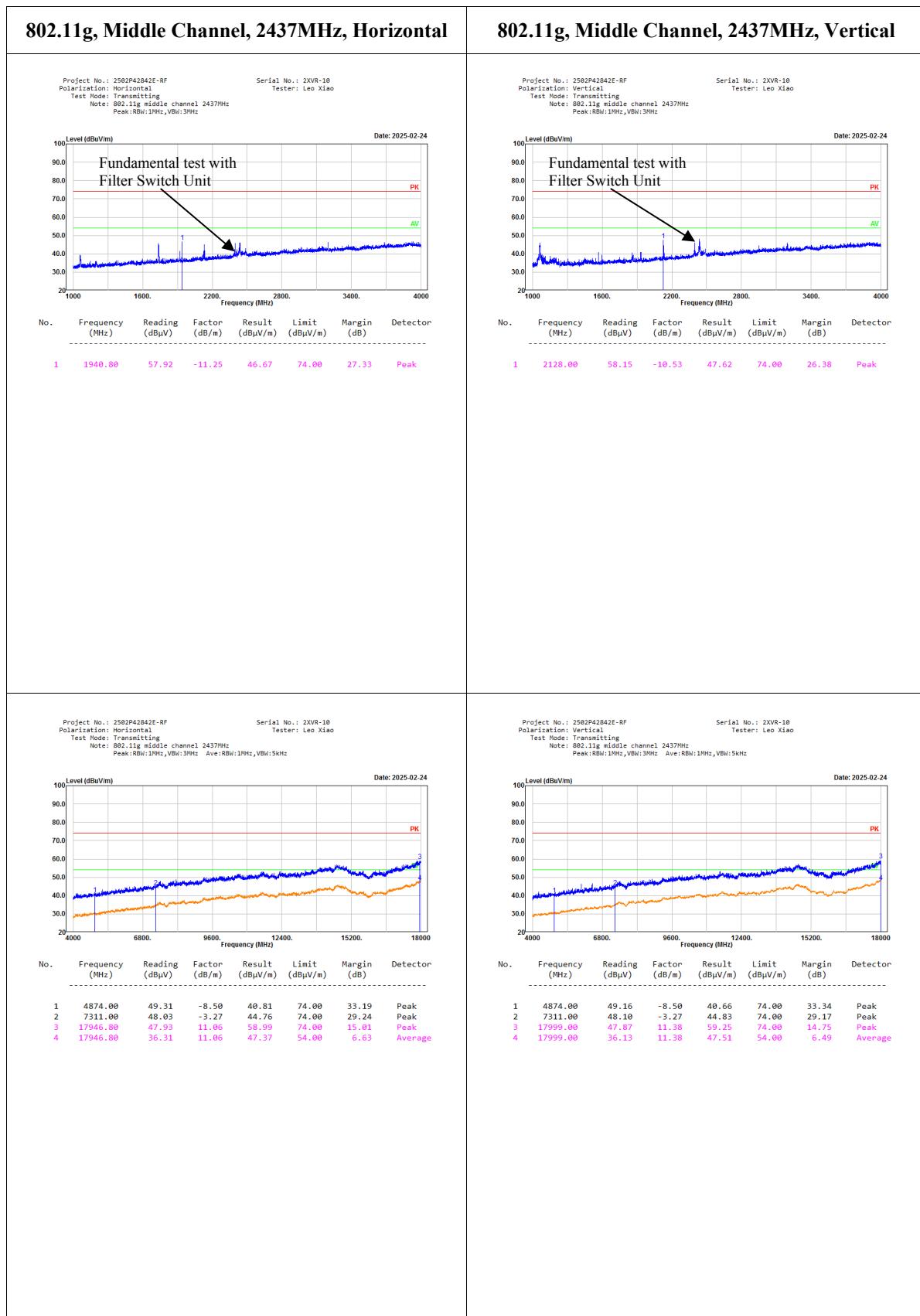
## 1GHz~18GHz:

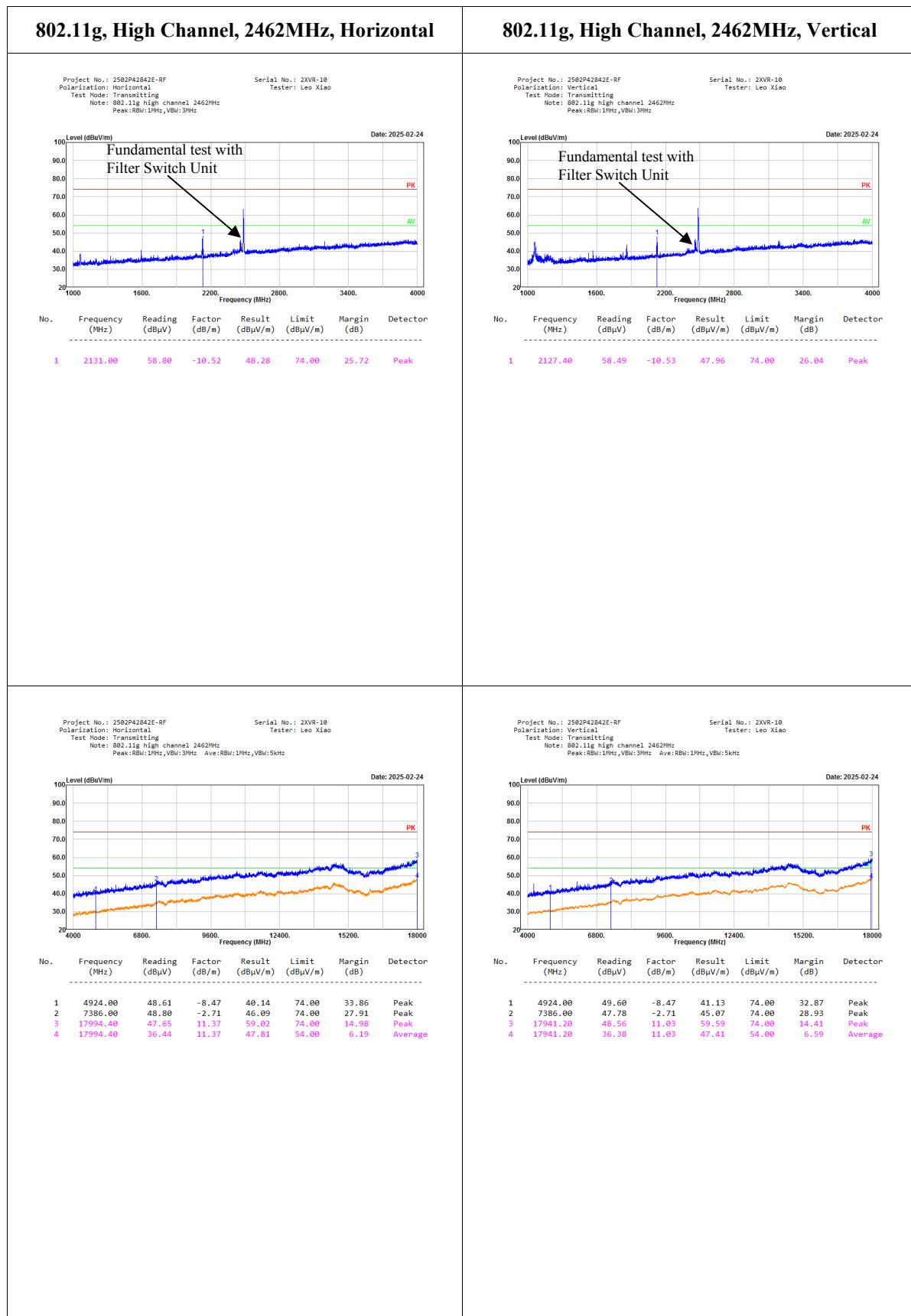


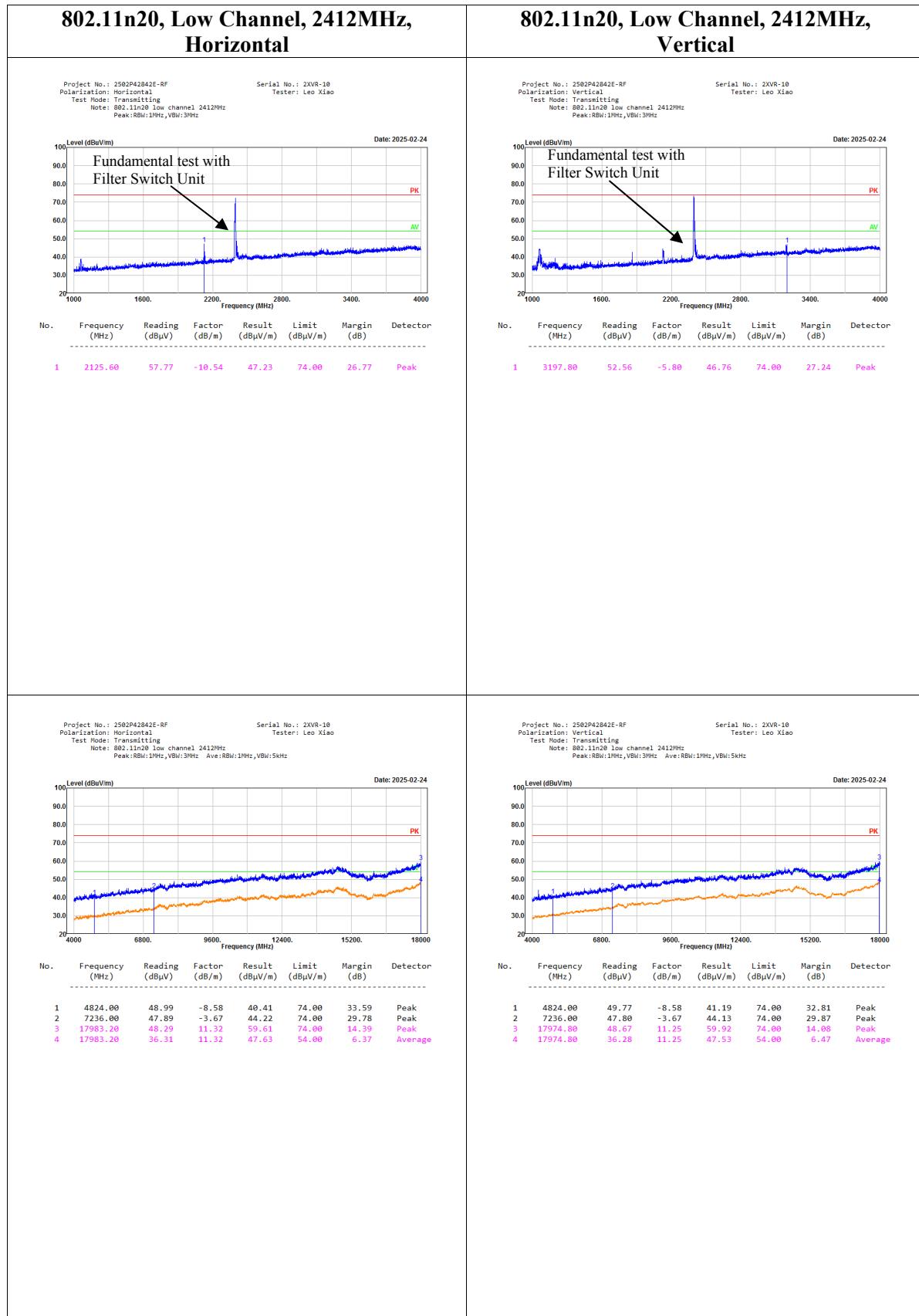




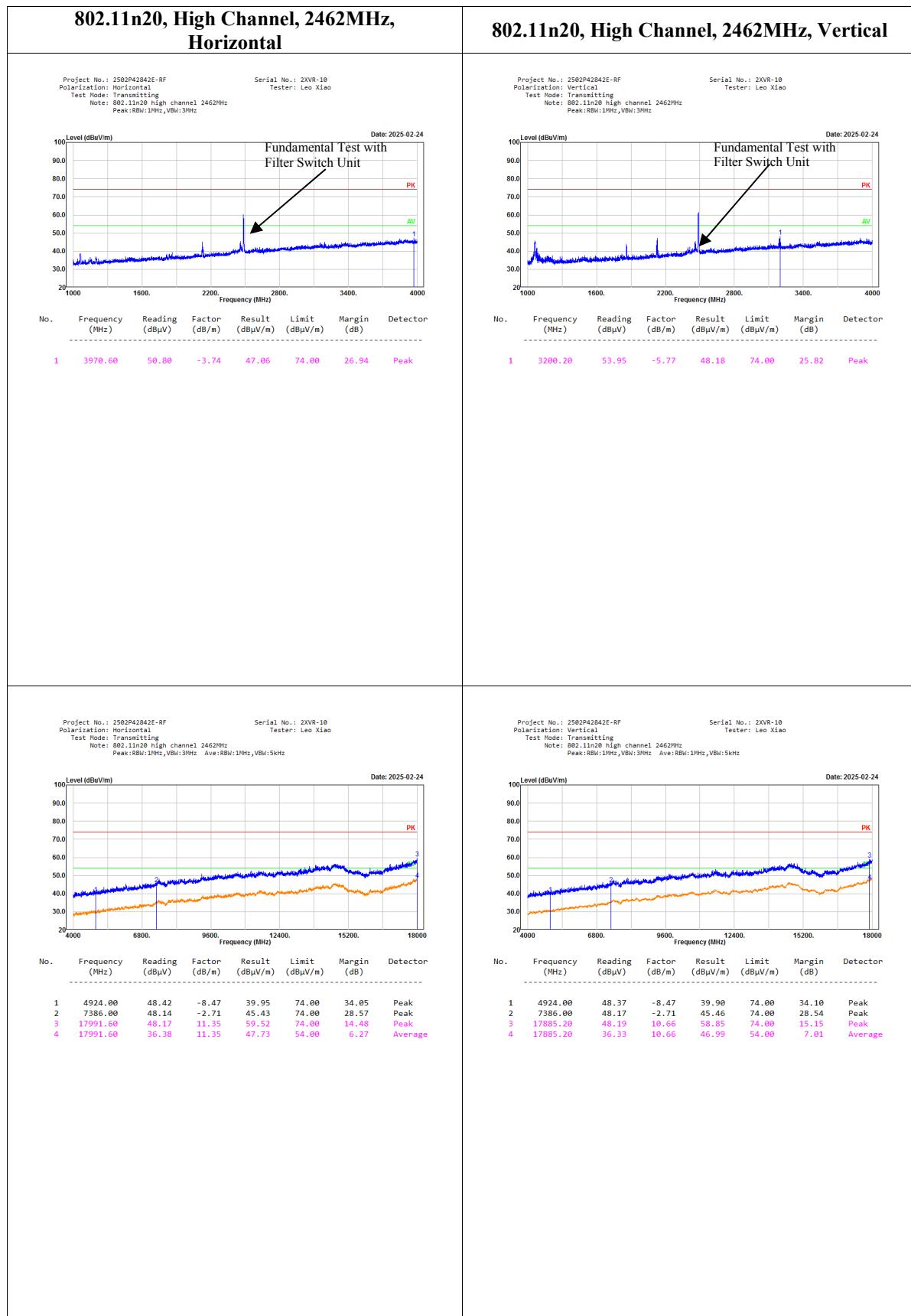






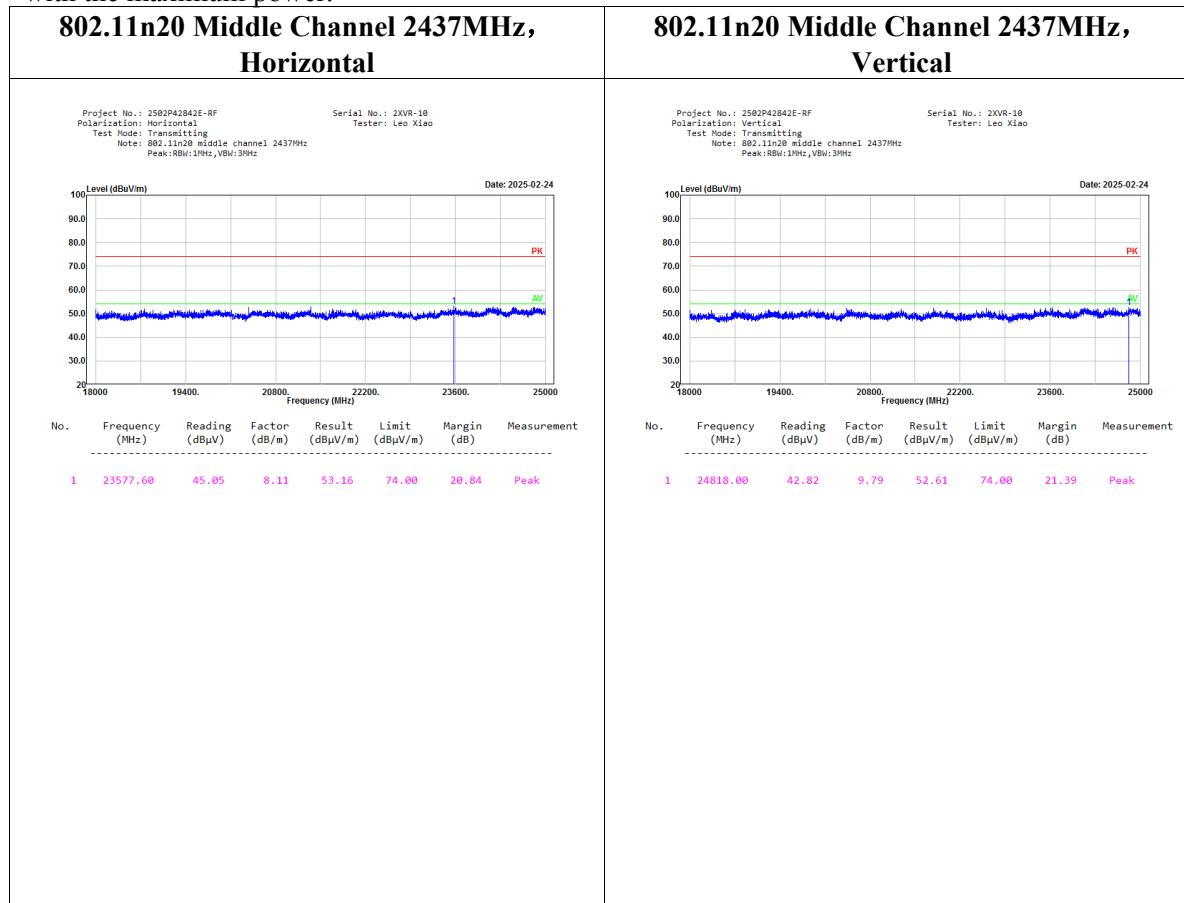




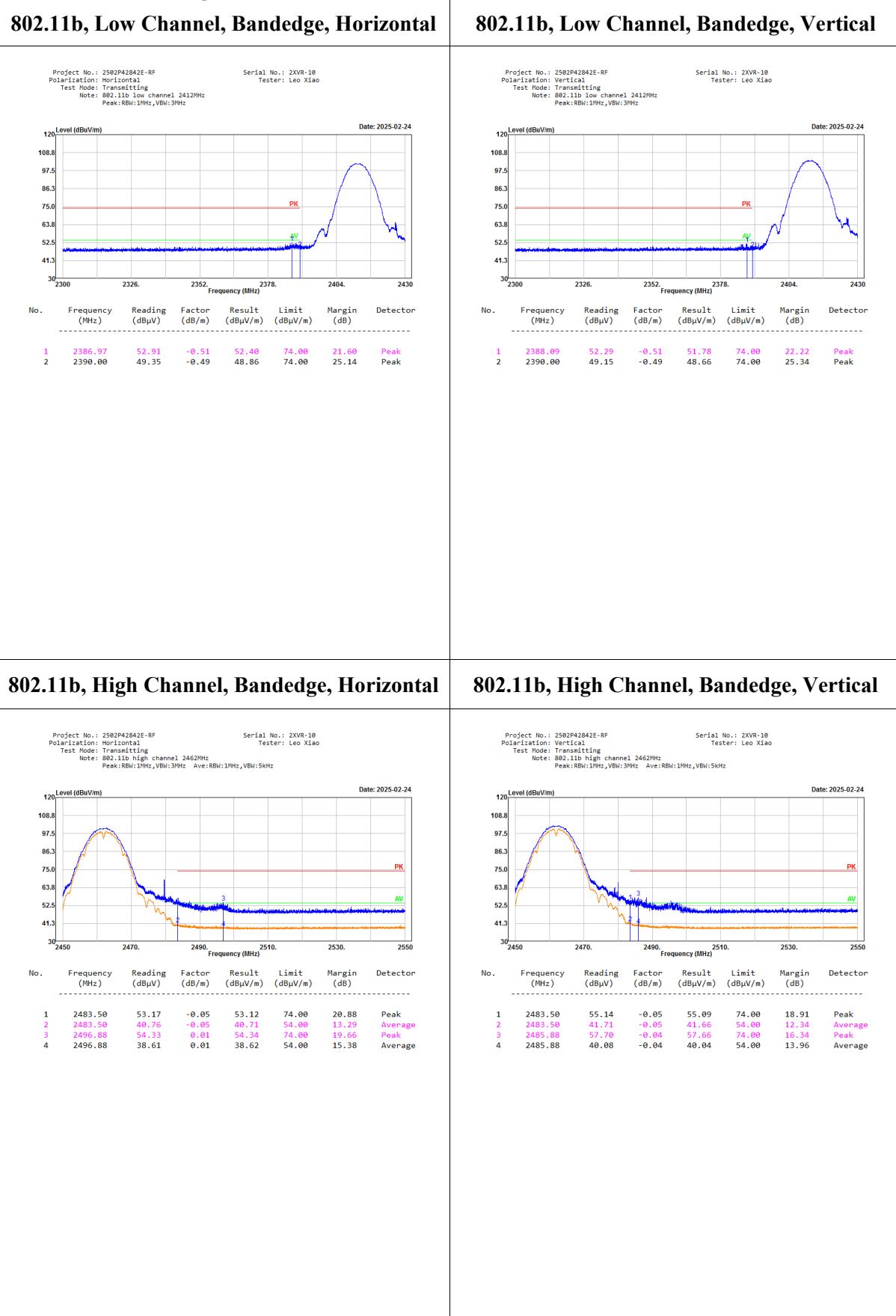


**18-25GHz:**

No Emission was detected in the range 18-25GHz, test was performed on the mode and channel which with the maximum power.



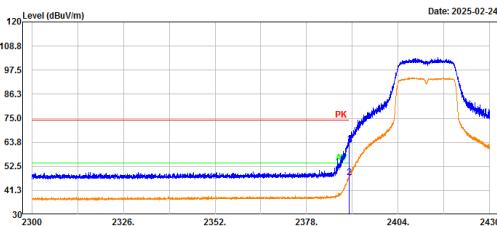
## Test Plots for Bandege:



**802.11g, Low Channel, Bandedge, Horizontal**

Project No.: 2502P42842E-RF  
 Polarization: Horizontal  
 Test Mode: Transmitting  
 Note: 802.11g low channel 2412MHz  
 Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 2XVR-18  
 Tester: Leo Xiao

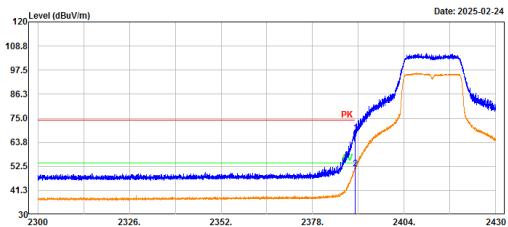


| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|----------|
| 1   | 2390.00         | 63.59          | -0.49         | 63.10           | 74.00          | 10.90       | Peak     |
| 2   | 2390.00         | 47.76          | -0.49         | 47.27           | 54.00          | 6.73        | Average  |

**802.11g, Low Channel, Bandedge, Vertical**

Project No.: 2502P42842E-RF  
 Polarization: Vertical  
 Test Mode: Transmitting  
 Note: 802.11g low channel 2412MHz  
 Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 2XVR-18  
 Tester: Leo Xiao

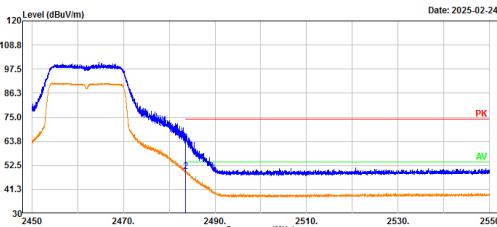


| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|----------|
| 1   | 2390.00         | 68.47          | -0.49         | 67.98           | 74.00          | 6.02        | Peak     |
| 2   | 2390.00         | 51.80          | -0.49         | 51.31           | 54.00          | 2.69        | Average  |

**802.11g, High Channel, Bandedge, Horizontal**

Project No.: 2502P42842E-RF  
 Polarization: Horizontal  
 Test Mode: Transmitting  
 Note: 802.11g high channel 2462MHz  
 Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 2XVR-18  
 Tester: Leo Xiao

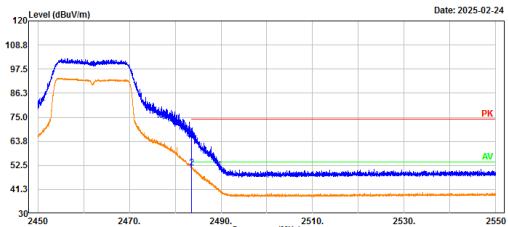


| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|----------|
| 1   | 2483.50         | 63.38          | -0.05         | 63.33           | 74.00          | 10.67       | Peak     |
| 2   | 2483.50         | 49.62          | -0.05         | 49.57           | 54.00          | 4.43        | Average  |

**802.11g, High Channel, Bandedge, Vertical**

Project No.: 2502P42842E-RF  
 Polarization: Vertical  
 Test Mode: Transmitting  
 Note: 802.11g high channel 2462MHz  
 Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 2XVR-18  
 Tester: Leo Xiao



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|----------|
| 1   | 2483.50         | 65.94          | -0.05         | 65.89           | 74.00          | 8.11        | Peak     |
| 2   | 2483.50         | 51.44          | -0.05         | 51.39           | 54.00          | 2.61        | Average  |

|   |         |         |       |       |       |       |         |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
|---|---------|---------|-------|-------|-------|-------|---------|------|---|---------|-------|-------|-------|-------|-------|---------|---|---|---------|-------|-------|-------|-------|------|------|---|---------|-------|-------|-------|-------|------|---------|
| <p><b>802.11n20, Low Channel, Bandedge, Horizontal</b></p> <p>Project No.: 2502P42842E-RF<br/>Polarization: Horizontal<br/>Test Mode: Transmitting<br/>Note: 802.11n20 low channel 2412MHz<br/>Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz</p> <p>Serial No.: 2XVR-10<br/>Tester: Leo Xiao</p> <p>Level (dBuV/m) Date: 2025-02-24</p> <p>No. Frequency (MHz) Reading (dBuV) Factor (dB/m) Result (dBuV/m) Limit (dBuV/m) Margin (dB) Detector</p> <table border="1"> <tr> <td>1</td> <td>2390.00</td> <td>60.63</td> <td>-0.49</td> <td>60.14</td> <td>74.00</td> <td>13.86</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>2390.00</td> <td>44.22</td> <td>-0.49</td> <td>43.73</td> <td>54.00</td> <td>10.27</td> <td>Average</td> </tr> </table> | 1       | 2390.00 | 60.63 | -0.49 | 60.14 | 74.00 | 13.86   | Peak | 2 | 2390.00 | 44.22 | -0.49 | 43.73 | 54.00 | 10.27 | Average | <p><b>802.11n20, Low Channel, Bandedge, Vertical</b></p> <p>Project No.: 2502P42842E-RF<br/>Polarization: Vertical<br/>Test Mode: Transmitting<br/>Note: 802.11n20 low channel 2412MHz<br/>Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz</p> <p>Serial No.: 2XVR-10<br/>Tester: Leo Xiao</p> <p>Level (dBuV/m) Date: 2025-02-24</p> <p>No. Frequency (MHz) Reading (dBuV) Factor (dB/m) Result (dBuV/m) Limit (dBuV/m) Margin (dB) Detector</p> <table border="1"> <tr> <td>1</td> <td>2390.00</td> <td>65.29</td> <td>-0.49</td> <td>64.80</td> <td>74.00</td> <td>9.20</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>2390.00</td> <td>48.09</td> <td>-0.49</td> <td>47.60</td> <td>54.00</td> <td>6.40</td> <td>Average</td> </tr> </table>   | 1 | 2390.00 | 65.29 | -0.49 | 64.80 | 74.00 | 9.20 | Peak | 2 | 2390.00 | 48.09 | -0.49 | 47.60 | 54.00 | 6.40 | Average |
| 1   | 2390.00 | 60.63   | -0.49 | 60.14 | 74.00 | 13.86 | Peak    |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| 2   | 2390.00 | 44.22   | -0.49 | 43.73 | 54.00 | 10.27 | Average |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| 1   | 2390.00 | 65.29   | -0.49 | 64.80 | 74.00 | 9.20  | Peak    |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| 2   | 2390.00 | 48.09   | -0.49 | 47.60 | 54.00 | 6.40  | Average |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| <p><b>802.11n20, High Channel, Bandedge, Horizontal</b></p> <p>Project No.: 2502P42842E-RF<br/>Polarization: Horizontal<br/>Test Mode: Transmitting<br/>Note: 802.11n20 high channel 2462MHz<br/>Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz</p> <p>Serial No.: 2XVR-10<br/>Tester: Leo Xiao</p> <p>Level (dBuV/m) Date: 2025-02-24</p> <p>No. Frequency (MHz) Reading (dBuV) Factor (dB/m) Result (dBuV/m) Limit (dBuV/m) Margin (dB) Detector</p> <table border="1"> <tr> <td>1</td> <td>2483.50</td> <td>65.20</td> <td>-0.05</td> <td>65.15</td> <td>74.00</td> <td>8.85</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>2483.50</td> <td>48.82</td> <td>-0.05</td> <td>48.77</td> <td>54.00</td> <td>5.23</td> <td>Average</td> </tr> </table> | 1       | 2483.50 | 65.20 | -0.05 | 65.15 | 74.00 | 8.85    | Peak | 2 | 2483.50 | 48.82 | -0.05 | 48.77 | 54.00 | 5.23  | Average | <p><b>802.11n20, High Channel, Bandedge, Vertical</b></p> <p>Project No.: 2502P42842E-RF<br/>Polarization: Vertical<br/>Test Mode: Transmitting<br/>Note: 802.11n20 high channel 2462MHz<br/>Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz</p> <p>Serial No.: 2XVR-10<br/>Tester: Leo Xiao</p> <p>Level (dBuV/m) Date: 2025-02-24</p> <p>No. Frequency (MHz) Reading (dBuV) Factor (dB/m) Result (dBuV/m) Limit (dBuV/m) Margin (dB) Detector</p> <table border="1"> <tr> <td>1</td> <td>2483.50</td> <td>70.15</td> <td>-0.05</td> <td>70.10</td> <td>74.00</td> <td>3.90</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>2483.50</td> <td>51.26</td> <td>-0.05</td> <td>51.21</td> <td>54.00</td> <td>2.79</td> <td>Average</td> </tr> </table> | 1 | 2483.50 | 70.15 | -0.05 | 70.10 | 74.00 | 3.90 | Peak | 2 | 2483.50 | 51.26 | -0.05 | 51.21 | 54.00 | 2.79 | Average |
| 1   | 2483.50 | 65.20   | -0.05 | 65.15 | 74.00 | 8.85  | Peak    |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| 2   | 2483.50 | 48.82   | -0.05 | 48.77 | 54.00 | 5.23  | Average |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| 1   | 2483.50 | 70.15   | -0.05 | 70.10 | 74.00 | 3.90  | Peak    |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |
| 2   | 2483.50 | 51.26   | -0.05 | 51.21 | 54.00 | 2.79  | Average |      |   |         |       |       |       |       |       |         |   |   |         |       |       |       |       |      |      |   |         |       |       |       |       |      |         |

### 5.3 Spot Check With Maximum Conducted Output Power

#### Test Information:

|             |            |              |              |
|-------------|------------|--------------|--------------|
| Serial No.: | 2XVR-1     | Test Date:   | 2025/03/22   |
| Test Site:  | RF         | Test Mode:   | Transmitting |
| Tester:     | Karl Liang | Test Result: | Pass         |

#### Environmental Conditions:

|                   |      |                        |    |                     |       |
|-------------------|------|------------------------|----|---------------------|-------|
| Temperature: (°C) | 19.5 | Relative Humidity: (%) | 44 | ATM Pressure: (kPa) | 101.6 |
|-------------------|------|------------------------|----|---------------------|-------|

#### Test Equipment List and Details:

| Manufacturer | Description                 | Model    | Serial Number | Calibration Date | Calibration Due Date |
|--------------|-----------------------------|----------|---------------|------------------|----------------------|
| R&S          | Coaxial Attenuator          | 10dB     | F-08-EM512    | 2024/06/13       | 2025/06/12           |
| Anritsu      | Microwave Peak Power Sensor | MA24418A | 12618         | 2024/08/27       | 2025/08/26           |

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

#### Test Data:

| Mode      | Test Frequency (MHz) | Peak Output Power (dBm) | Average Output Power (dBm) | Limit (dBm) | Verdict |
|-----------|----------------------|-------------------------|----------------------------|-------------|---------|
| 802.11b   | 2412                 | 20.85                   | 17.99                      | 30          | Pass    |
|           | 2437                 | 21.92                   | 18.99                      | 30          | Pass    |
|           | 2462                 | 20.65                   | 17.87                      | 30          | Pass    |
| 802.11g   | 2412                 | 22.53                   | 17.15                      | 30          | Pass    |
|           | 2437                 | 23.44                   | 17.61                      | 30          | Pass    |
|           | 2462                 | 23.07                   | 15.97                      | 30          | Pass    |
| 802.11n20 | 2412                 | 22.58                   | 15.51                      | 30          | Pass    |
|           | 2437                 | 23.47                   | 16.69                      | 30          | Pass    |
|           | 2462                 | 22.91                   | 15.89                      | 30          | Pass    |

#### Note:

The Spot Check data were similar to the original data.

## 5.4 Duty Cycle

### Test Information:

|             |            |              |              |
|-------------|------------|--------------|--------------|
| Serial No.: | 2XVR-1     | Test Date:   | 2025/03/22   |
| Test Site:  | RF         | Test Mode:   | Transmitting |
| Tester:     | Karl Liang | Test Result: | Pass         |

### Environmental Conditions:

|                   |      |                        |    |                     |       |
|-------------------|------|------------------------|----|---------------------|-------|
| Temperature: (°C) | 19.5 | Relative Humidity: (%) | 44 | ATM Pressure: (kPa) | 101.6 |
|-------------------|------|------------------------|----|---------------------|-------|

### Test Equipment List and Details:

| Manufacturer | Description        | Model | Serial Number | Calibration Date | Calibration Due Date |
|--------------|--------------------|-------|---------------|------------------|----------------------|
| R&S          | Coaxial Attenuator | 10dB  | F-08-EM512    | 2024/06/13       | 2025/06/12           |
| R&S          | Spectrum Analyzer  | FSV40 | 101589        | 2024/09/05       | 2025/09/04           |

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

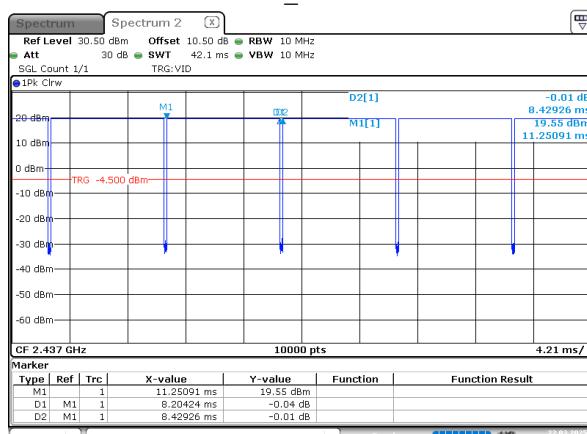
### Test Data:

| Mode      | Test Frequency (MHz) | Ton (ms) | Ton+Toff (ms) | Duty Cycle (%) | Duty Cycle Factor(dB) | 1/Ton (Hz) | VBW Setting (kHz) |
|-----------|----------------------|----------|---------------|----------------|-----------------------|------------|-------------------|
| 802.11b   | 2437                 | 8.204    | 8.429         | 97.33          | 0.12                  | 122        | 0.200             |
| 802.11g   | 2437                 | 1.356    | 1.582         | 85.71          | 0.67                  | 737        | 1                 |
| 802.11n20 | 2437                 | 1.255    | 1.479         | 84.85          | 0.71                  | 797        | 1                 |

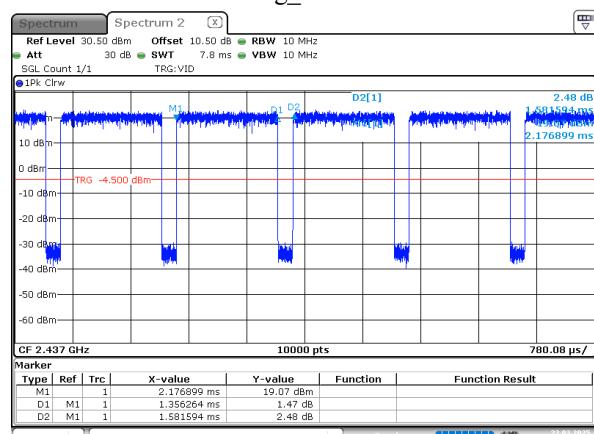
Duty Cycle = Ton/(Ton+Toff)\*100%

## 2.4G

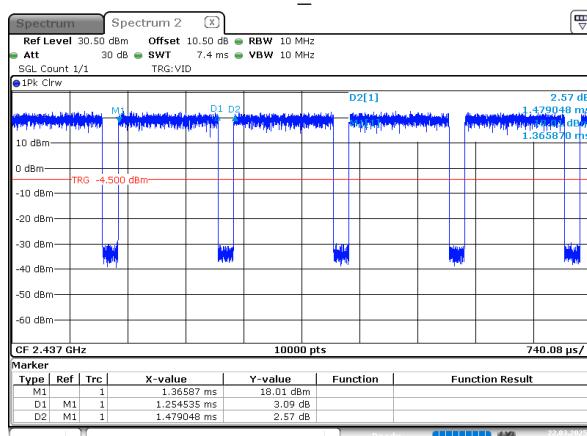
802.11b\_2437MHz



802.11g\_2437MHz



802.11n20\_2437MHz



ProjectNo.:2502P42842E-RF Tester:Karl Liang  
Date: 22.MAR.2025 09:45:45

---

## **EXHIBIT A - EUT PHOTOGRAPHS**

---

Please refer to the attachment 2502P42842E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2502P42842E-RF-INP EUT INTERNAL PHOTOGRAPHS.

---

## **EXHIBIT B - TEST SETUP PHOTOGRAPHS**

---

Please refer to the attachment 2502P42842E-RF-00C-TSP TEST SETUP PHOTOGRAPHS.

\*\*\*\*\* **END OF REPORT** \*\*\*\*\*