

# TEST REPORT

Applicant Name: M5Stack Technology Co., Ltd  
Address: Block A10, Expo Bay South Coast, Fuhai Street, Bao'an District, Shenzhen, China  
Report Number: 2504X24597E-RF-00B  
FCC ID: 2AN3WKANTANPLAYCORE

## Test Standard (s)

FCC PART 15.247

## Sample Description

Product Name: KANTAN Play Core  
Model No.: D054-KTPF, D054-KTPB

Trade Mark:



Date Received: 2025-09-12  
Report Date: 2025-11-25

|              |                                            |
|--------------|--------------------------------------------|
| Test Result: | The EUT complied with the standards above. |
|--------------|--------------------------------------------|

Prepared and Checked By:

*Matt\_Liang*

Matt Liang  
EMC Engineer

Approved By:

*Bob.Liao*

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EMC Engineer

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TABLE OF CONTENTS

DOCUMENT REVISION HISTORY ..... 4

GENERAL INFORMATION ..... 5

    PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) ..... 5

    OBJECTIVE ..... 5

    TEST METHODOLOGY ..... 5

    TEST FACILITY ..... 6

    MEASUREMENT UNCERTAINTY ..... 6

SYSTEM TEST CONFIGURATION ..... 7

    DESCRIPTION OF TEST CONFIGURATION..... 7

    EUT EXERCISE SOFTWARE AND POWER LEVEL<sup>#</sup> ..... 7

    SPECIAL ACCESSORIES ..... 7

    EQUIPMENT MODIFICATIONS..... 7

    SUPPORT EQUIPMENT LIST AND DETAILS ..... 8

    EXTERNAL I/O CABLE..... 8

    BLOCK DIAGRAM OF TEST SETUP ..... 8

SUMMARY OF TEST RESULTS ..... 10

TEST EQUIPMENT LIST ..... 11

ANTENNA REQUIREMENT..... 12

    APPLICABLE STANDARD..... 12

    ANTENNA CONNECTOR CONSTRUCTION ..... 12

AC LINE CONDUCTED EMISSIONS ..... 13

    APPLICABLE STANDARD..... 13

    EUT SETUP..... 13

    EMI TEST RECEIVER SETUP..... 13

    TEST PROCEDURE ..... 13

    CALCULATION ..... 14

    TEST DATA ..... 14

RADIATED SPURIOUS EMISSION..... 17

    APPLICABLE STANDARD..... 17

    EUT SETUP..... 17

    EMI TEST RECEIVER& SPECTRUM ANALYZER SETUP ..... 18

    TEST PROCEDURE ..... 19

    CALCULATION ..... 19

    TEST DATA ..... 20

6 dB EMISSION BANDWIDTH & OCCUPIED BANDWIDTH..... 92

    APPLICABLE STANDARD..... 92

    TEST PROCEDURE ..... 92

    TEST DATA ..... 92

MAXIMUM CONDUCTED OUTPUT POWER..... 93

    APPLICABLE STANDARD..... 93

    TEST PROCEDURE ..... 93

    TEST DATA ..... 93

CONDUCTED SPURIOUS EMISSION ..... 94

    APPLICABLE STANDARD..... 94

    TEST PROCEDURE ..... 94

    TEST DATA ..... 94

**POWER SPECTRAL DENSITY ..... 95**  
    APPLICABLE STANDARD..... 95  
    TEST PROCEDURE ..... 95  
    TEST DATA ..... 96  
**DUTY CYCLE..... 97**  
    TEST PROCEDURE ..... 97  
    TEST DATA ..... 97  
**APPENDIX ..... 98**  
    6dB EMISSION BANDWIDTH ..... 99  
    99% OCCUPIED BANDWIDTH ..... 102  
    MAXIMUM CONDUCTED OUTPUT POWER ..... 105  
    POWER SPECTRAL DENSITY ..... 106  
    DUTY CYCLE..... 109  
    CONDUCTED SPURIOUS EMISSION ..... 111  
**EXHIBIT A-EUT PHOTOGRAPHS ..... 117**  
**EXHIBIT B-TEST SETUP PHOTOGRAPHS ..... 118**

DOCUMENT REVISION HISTORY

| Revision Number | Report Number      | Description of Revision | Date of Revision |
|-----------------|--------------------|-------------------------|------------------|
| Rev.00          | 2504X24597E-RF-00B | Original Report         | 2025-11-25       |

## GENERAL INFORMATION

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

|                               |                                                                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Product Name                  | KANTAN Play Core                                                                                                                |
| Tested Model                  | D054-KTPF                                                                                                                       |
| Multiple Model                | D054-KTPB                                                                                                                       |
| Model Difference <sup>#</sup> | Only differ in model name. Please refer to DOS letter for more detail.<br>The applicant provided model "D054-KTPF" for testing. |
| Voltage Range <sup>#</sup>    | DC 5.0V from Type-C port or DC 3.7V from rechargeable battery                                                                   |

|                                                        |                                                                                        |
|--------------------------------------------------------|----------------------------------------------------------------------------------------|
| Frequency Range                                        | 2.4G Wi-Fi: 802.11b/g/n20: 2412-2462MHz<br>802.11n40: 2422-2452MHz                     |
| Maximum Conducted Output Power<br>(actual test result) | 17.56dBm(Peak), 8.91dBm(Average)                                                       |
| Modulation Technique                                   | DSSS, OFDM                                                                             |
| Antenna Specification <sup>#</sup>                     | PIFA Antenna, Antenna gain: 2.46dBi (It is provided by the applicant.)                 |
| Sample Serial Number                                   | For CE&RE Test: 39YZ-3<br>For RF Conducted Test: 39YZ-2<br>(Assigned by ATC, Shenzhen) |
| Sample/EUT Status                                      | Good condition                                                                         |

### Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices, and KDB 558074 D01 15.247 Meas Guidance v05r02.

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

Measurement Uncertainty

| Parameter                          |                 | Uncertainty            |
|------------------------------------|-----------------|------------------------|
| Occupied Channel Bandwidth         |                 | 5 %                    |
| RF Frequency                       |                 | $0.064 \times 10^{-7}$ |
| RF output power, conducted         |                 | 0.3 dB                 |
| Unwanted Emission, conducted       |                 | 1.2 dB                 |
| AC Power Lines Conducted Emissions |                 | 2.7 dB                 |
| Radiated Emissions                 | 9kHz - 30MHz    | 2.1 dB                 |
|                                    | 30MHz - 1GHz    | 4.3 dB                 |
|                                    | 1GHz - 18GHz    | 4.9 dB                 |
|                                    | 18GHz - 26.5GHz | 5.2 dB                 |
| Temperature                        |                 | 1 °C                   |
| Humidity                           |                 | 7 %                    |
| Supply voltages                    |                 | 0.4 %                  |

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

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

For 2.4G Wi-Fi, total 11 channels are provided to testing:

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

802.11b/g/n20 modes were tested with Channel 1, 6 and 11.

802.11n40 mode was tested with Channel 3, 6 and 9.

EUT Exercise Software and Power Level<sup>#</sup>

| Exercise Software: |           | EspRFTestTool_v3.6 |                |              |
|--------------------|-----------|--------------------|----------------|--------------|
| Mode               | Data Rate | Power Level        |                |              |
|                    |           | Low Channel        | Middle Channel | High Channel |
| 802.11 b           | 1Mbps     | 42                 | 42             | 42           |
| 802.11 g           | 6Mbps     | 42                 | 42             | 42           |
| 802.11 n20         | MCS0      | 42                 | 42             | 42           |
| 802.11 n40         | MCS0      | 42                 | 42             | 42           |

Note 1: The information in the above table is provided by the applicant.

Note 2: The worse-case data rates are determined to be as above for each mode based upon investigations by measuring the output power and PSD across all data rates, bandwidths and modulations.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

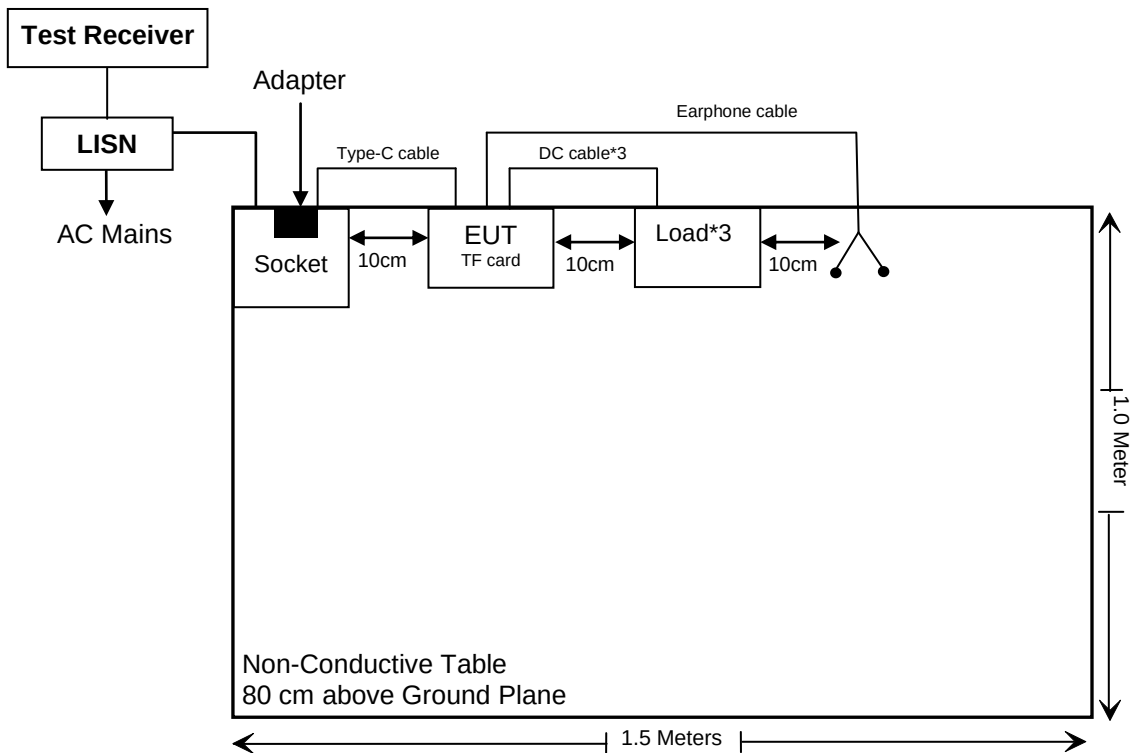
| Manufacturer | Description                                                  | Model        | Serial Number |
|--------------|--------------------------------------------------------------|--------------|---------------|
| HUAWEI       | Adapter<br>Input: 100-240V~ 50/60Hz 0.5A<br>Output: 5V ---2A | HW-090200CH0 | Unknown       |
| M5STACK      | Load*3 <sup>#</sup>                                          | Unknown      | Unknown       |
| Kingston     | TF card                                                      | SDCS2        | Unknown       |
| Xiaomi       | Earphone                                                     | Unknown      | Unknown       |

External I/O Cable

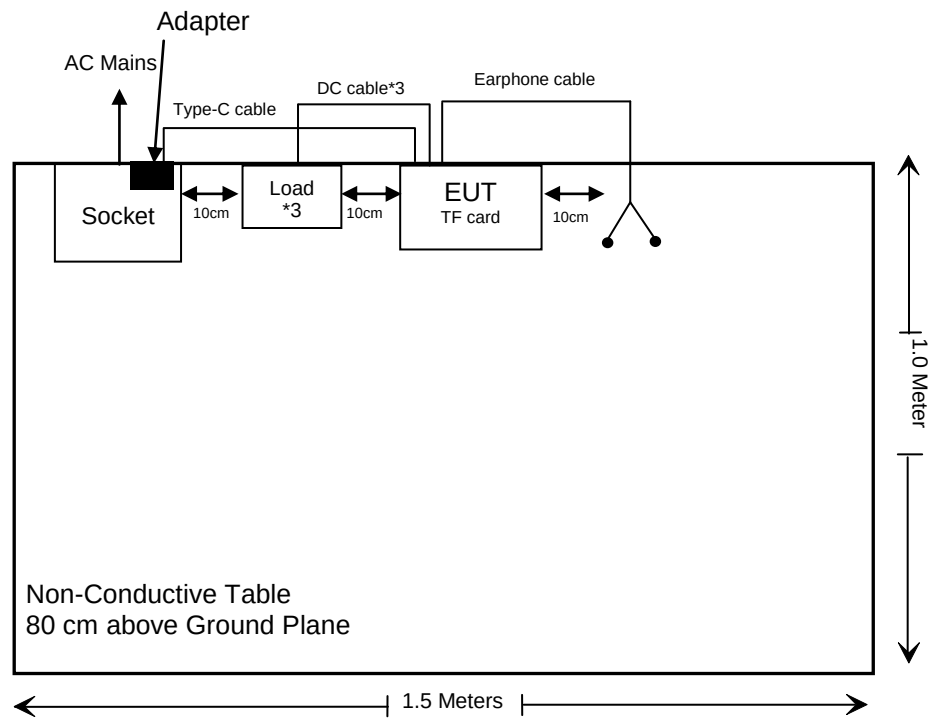
| Cable Description       | Shielding Type | Length (m) | From Port | To       |
|-------------------------|----------------|------------|-----------|----------|
| USB Cable               | NO             | 0.5        | Adapter   | EUT      |
| Earphone Cable          | NO             | 1.0        | EUT       | Earphone |
| DC Cable*3 <sup>#</sup> | NO             | 0.1        | EUT       | Load*3   |

Block Diagram of Test Setup

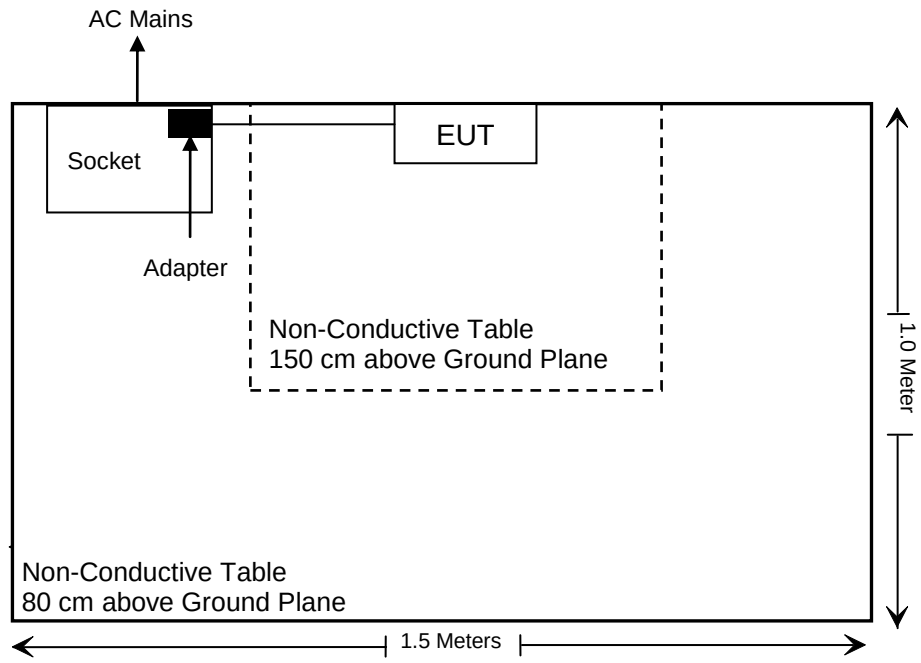
For Conducted Emission:



For Radiated Emission(Below 1GHz):



For Radiated Emission(Above 1GHz):



## SUMMARY OF TEST RESULTS

| FCC Rules                       | Description of Test                             | Result     |
|---------------------------------|-------------------------------------------------|------------|
| §15.203                         | Antenna Requirement                             | Compliance |
| §15.207(a)                      | AC Line Conducted Emissions                     | Compliance |
| §15.205, §15.209,<br>§15.247(d) | Radiated Spurious Emissions                     | Compliance |
| §15.247(a)(2)                   | 6 dB Emission Bandwidth<br>& Occupied Bandwidth | Compliance |
| §15.247(b)(3)                   | Maximum Conducted Output Power                  | Compliance |
| §15.247(d)                      | Conducted Spurious Emission                     | Compliance |
| §15.247(e)                      | Power Spectral Density                          | Compliance |

Note 1: The cable loss is 0.5<sup>#</sup> dB, which was added into the all RF test results, except Conducted Spurious Emissions.

Note 2: The cable loss is 3<sup>#</sup> dB (with a maximum loss of 3 dB for the cable from 30 MHz to 25 GHz), which was added into the Conducted Spurious Emissions test results.

**TEST EQUIPMENT LIST**

| Manufacturer                                       | Description                       | Model           | Serial Number | Calibration Date | Calibration Due Date |
|----------------------------------------------------|-----------------------------------|-----------------|---------------|------------------|----------------------|
| <b>Conducted Emissions Test</b>                    |                                   |                 |               |                  |                      |
| Rohde & Schwarz                                    | EMI Test Receiver                 | ESCI            | 100784        | 2025/09/17       | 2026/09/16           |
| Rohde & Schwarz                                    | L.I.S.N.                          | ENV216          | 101314        | 2025/09/17       | 2026/09/16           |
| Anritsu Corp                                       | 50 Coaxial Switch                 | MP59B           | 6100237248    | 2025/09/18       | 2026/09/17           |
| Rohde & Schwarz                                    | Pulse Limiter                     | ESH3-Z2         | 100312        | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.17           | N0350         | 2025/05/30       | 2026/05/29           |
| Test Software: e3 191218 (V9)                      |                                   |                 |               |                  |                      |
| <b>Radiated Spurious Emission Test(Below 1GHz)</b> |                                   |                 |               |                  |                      |
| Rohde & Schwarz                                    | Test Receiver                     | ESR             | 102725        | 2025/09/18       | 2026/09/17           |
| SONOMA INSTRUMENT                                  | Amplifier                         | 310N            | 186131        | 2025/03/26       | 2026/03/25           |
| Schwarzbeck                                        | Bilog Antenna                     | VULB9163        | 9163-323      | 2024/08/08       | 2027/08/07           |
| Unknown                                            | RF Coaxial Cable                  | No.12           | N040          | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.13           | N300          | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.14           | N800          | 2025/05/30       | 2026/05/29           |
| BACL                                               | LOOP ANTENNA                      | 1313-1A         | 3110711       | 2024/01/16       | 2027/01/15           |
| Test Software: e3 191218 (V9)                      |                                   |                 |               |                  |                      |
| <b>Radiated Spurious Emission Test(Above 1GHz)</b> |                                   |                 |               |                  |                      |
| Rohde & Schwarz                                    | Spectrum Analyzer                 | FSV40           | 101949        | 2025/09/17       | 2026/09/16           |
| Decentest                                          | Filter Switch Unit                | DT7220FSU       | DQ77927       | 2025/09/18       | 2026/09/17           |
| Decentest                                          | Multiplex Switch Test Control Set | DT7220CSU       | DQ77924       | 2025/09/18       | 2026/09/17           |
| A.H. Systems, inc.                                 | Preamplifier                      | PAM-0118        | 226           | 2025/03/20       | 2026/03/19           |
| Schwarzbeck                                        | Horn Antenna                      | BBHA9120D       | 837           | 2023/02/22       | 2026/02/21           |
| Unknown                                            | RF Coaxial Cable                  | No.10           | N050          | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.11           | N1000         | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.19           | N500          | 2025/05/30       | 2026/05/29           |
| Schwarzbeck                                        | HORN ANTENNA                      | BBHA9170        | 9170-359      | 2023/12/12       | 2026/12/11           |
| BACL                                               | Amplifier                         | BACL-1313-A1840 | 4012521       | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.15           | N600          | 2025/05/30       | 2026/05/29           |
| Unknown                                            | RF Coaxial Cable                  | No.16           | N650          | 2025/05/30       | 2026/05/29           |
| Test Software: e3 191218 (V9)                      |                                   |                 |               |                  |                      |
| <b>RF Conducted test</b>                           |                                   |                 |               |                  |                      |
| Rohde & Schwarz                                    | Spectrum Analyzer                 | FSV-40          | 101495        | 2025/09/17       | 2026/09/16           |
| WEINSCHTEL                                         | 10dB Attenuator                   | 5324            | AU 3842       | 2025/03/26       | 2026/03/25           |
| Anritsu                                            | Microwave Peak Power Sensor       | MA24418A        | 12619         | 2025/03/26       | 2026/03/25           |
| Test Software: JDAutoTestSystem V1.0.0             |                                   |                 |               |                  |                      |

**\* Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## ANTENNA REQUIREMENT

---

### Applicable Standard

According to 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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### Antenna Connector Construction

The EUT has one PIFA antenna arrangement, which were permanently attached to the EUT. The antenna is 2.46dBi<sup>#</sup>. Fulfill the requirement of this section. Please refer to the EUT photos.

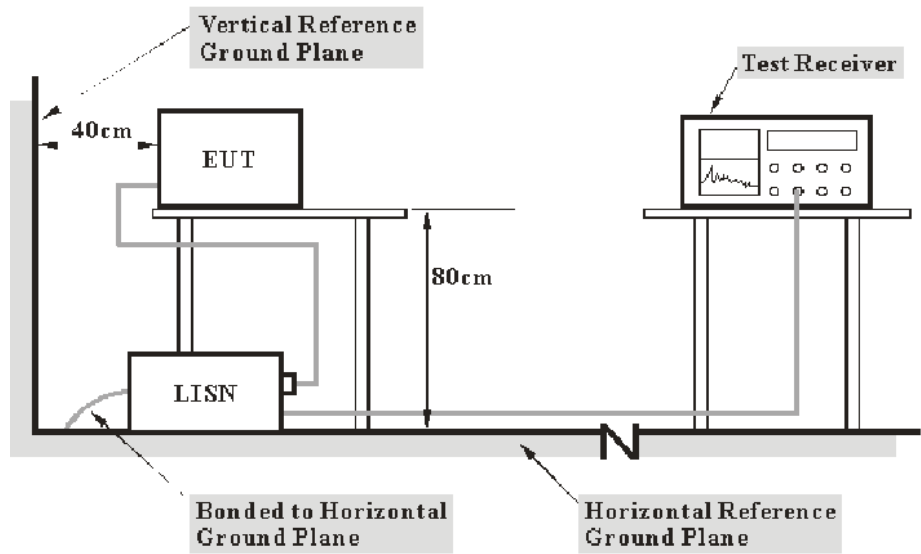
**Result:** Compliance.

AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a).

EUT Setup



- Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.207 limits.  
The spacing between the peripherals was 10 cm.

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  |

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.  
Maximizing procedure was performed on the six (6) highest emissions of the EUT.  
All final data was recorded in the Quasi-peak and average detection mode.

Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss+ 10dB Attenuation(Limiter)

The “**Over limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level - Limit

Level = Read Level + Factor

Test Data

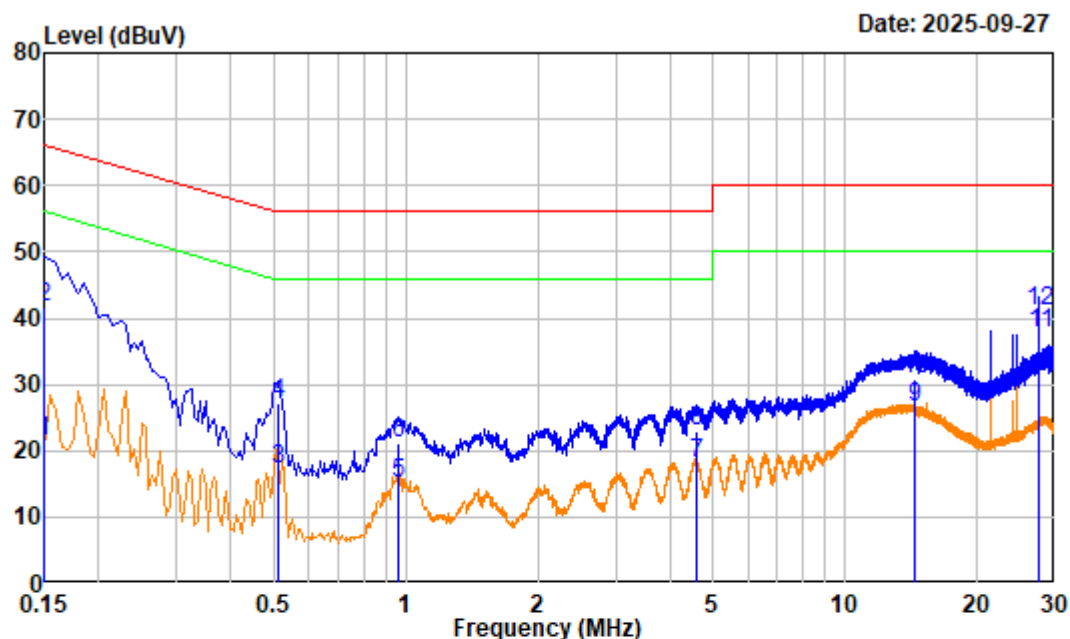
Environmental Conditions

|                     |                        |
|---------------------|------------------------|
| Temperature:        | 24.6 °C                |
| Relative Humidity:  | 55%                    |
| ATM Pressure:       | 100.2 kPa              |
| Test Engineer:      | Jason Fan              |
| Test Date:          | 2025-09-27             |
| EUT Operation Mode: | 2.4G WiFi Transmitting |

**Test Result:** Compliance, please refer to the below data.

*Note: The maximum output power mode and channel: 2.4G WIFI 802.11g High Channel was tested.*

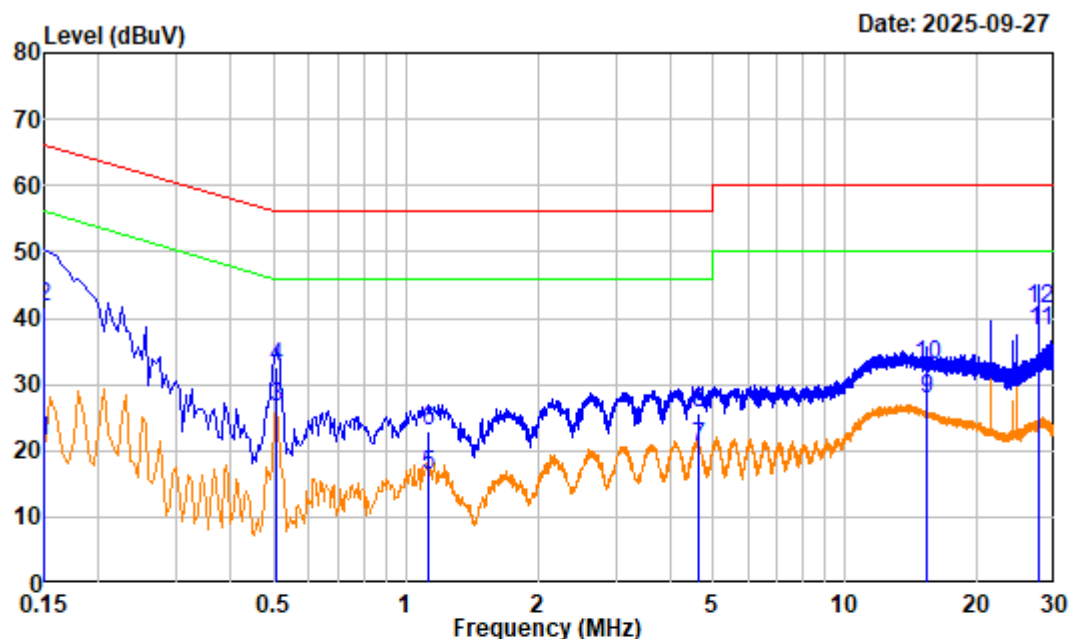
## AC 120V/60Hz, Line:



Site : Shielding Room  
 Condition: Line  
 Job No. : 2504X24597E-RF  
 Test Mode: 2.4G WiFi Transmitting  
 Note : Adapter  
 Tester : Jason Fan  
 Setting : IF B/W 9kHz PK/AV

|    | Freq   | Factor | Read Level | Level | Limit Line | Over Limit | Remark  |
|----|--------|--------|------------|-------|------------|------------|---------|
|    | MHz    | dB     | dBuV       | dBuV  | dBuV       | dB         |         |
| 1  | 0.150  | 19.99  | 1.43       | 21.42 | 56.00      | -34.58     | Average |
| 2  | 0.150  | 19.99  | 21.58      | 41.57 | 66.00      | -24.43     | QP      |
| 3  | 0.510  | 20.00  | -2.81      | 17.19 | 46.00      | -28.81     | Average |
| 4  | 0.510  | 20.00  | 7.26       | 27.26 | 56.00      | -28.74     | QP      |
| 5  | 0.965  | 20.32  | -5.25      | 15.07 | 46.00      | -30.93     | Average |
| 6  | 0.965  | 20.32  | 0.72       | 21.04 | 56.00      | -34.96     | QP      |
| 7  | 4.590  | 21.62  | -3.45      | 18.17 | 46.00      | -27.83     | Average |
| 8  | 4.590  | 21.62  | 1.33       | 22.95 | 56.00      | -33.05     | QP      |
| 9  | 14.410 | 23.41  | 3.07       | 26.48 | 50.00      | -23.52     | Average |
| 10 | 14.410 | 23.41  | 7.35       | 30.76 | 60.00      | -29.24     | QP      |
| 11 | 27.650 | 24.73  | 12.95      | 37.68 | 50.00      | -12.32     | Average |
| 12 | 27.650 | 24.73  | 16.30      | 41.03 | 60.00      | -18.97     | QP      |

## AC 120V/60Hz, Neutral:



Site : Shielding Room  
 Condition: neutral  
 Job No. : 2504X24597E-RF  
 Test Mode: 2.4G WiFi Transmitting  
 Note : Adapter  
 Tester : Jason Fan  
 Setting : IF B/W 9kHz PK/AV

|    | Freq   | Factor | Read<br>Level | Level | Limit<br>Line | Over<br>Limit | Remark  |
|----|--------|--------|---------------|-------|---------------|---------------|---------|
|    | MHz    | dB     | dBuV          | dBuV  | dBuV          | dB            |         |
| 1  | 0.150  | 19.88  | 1.46          | 21.34 | 56.00         | -34.66        | Average |
| 2  | 0.150  | 19.88  | 21.86         | 41.74 | 66.00         | -24.26        | QP      |
| 3  | 0.505  | 20.03  | 6.60          | 26.63 | 46.00         | -19.37        | Average |
| 4  | 0.505  | 20.03  | 12.47         | 32.50 | 56.00         | -23.50        | QP      |
| 5  | 1.125  | 20.54  | -4.35         | 16.19 | 46.00         | -29.81        | Average |
| 6  | 1.125  | 20.54  | 2.53          | 23.07 | 56.00         | -32.93        | QP      |
| 7  | 4.655  | 21.58  | -0.98         | 20.60 | 46.00         | -25.40        | Average |
| 8  | 4.655  | 21.58  | 3.96          | 25.54 | 56.00         | -30.46        | QP      |
| 9  | 15.360 | 23.60  | 4.13          | 27.73 | 50.00         | -22.27        | Average |
| 10 | 15.360 | 23.60  | 9.21          | 32.81 | 60.00         | -27.19        | QP      |
| 11 | 27.650 | 24.84  | 13.30         | 38.14 | 50.00         | -11.86        | Average |
| 12 | 27.650 | 24.84  | 16.62         | 41.46 | 60.00         | -18.54        | QP      |

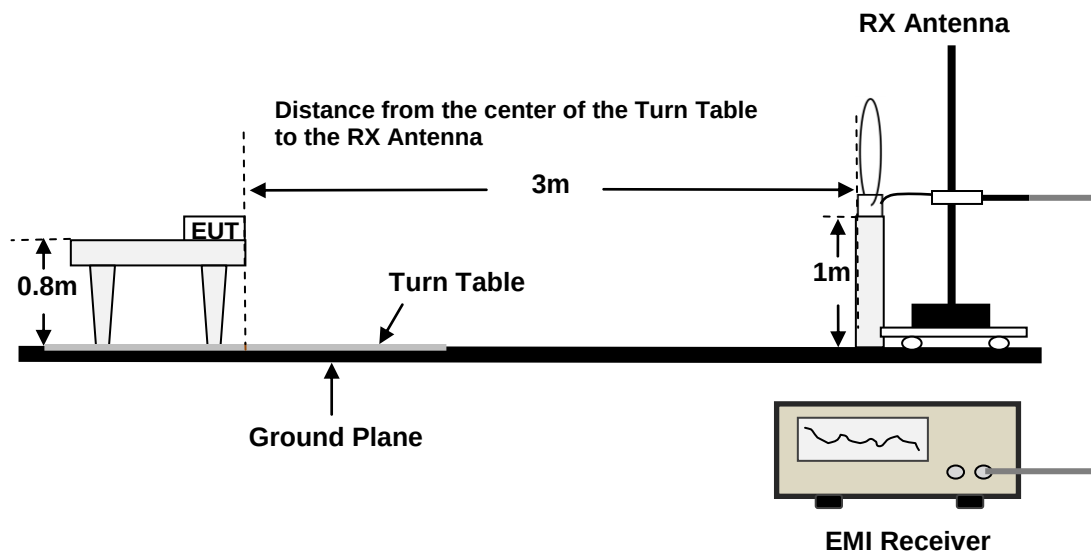
## RADIATED SPURIOUS EMISSION

### Applicable Standard

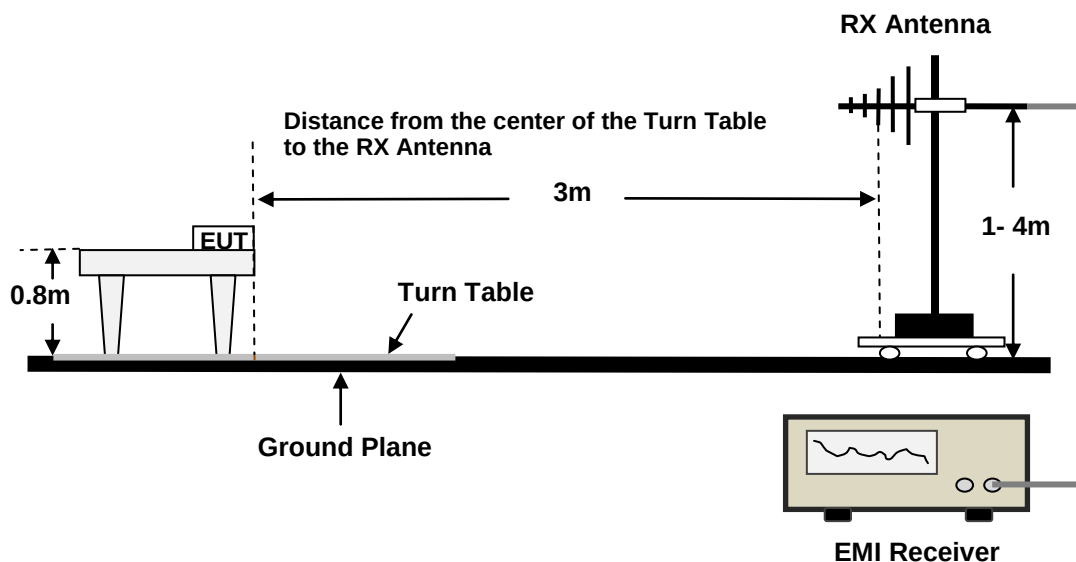
FCC §15.205; §15.209; §15.247(d)

### EUT Setup

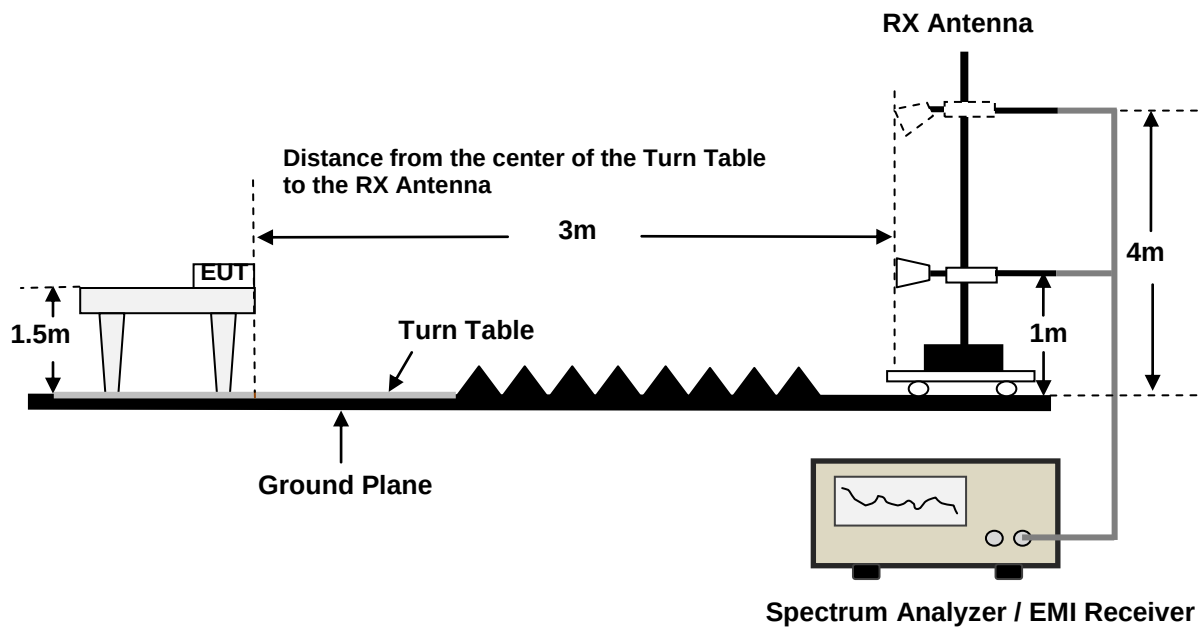
9kHz - 30MHz:



30MHz - 1GHz:



Above 1GHz:



The radiated emission performed in the 3 meters, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, FCC 15.247 limits.

EMI Test Receiver& Spectrum Analyzer Setup

The system was investigated from 9kHz to 25GHz.

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 |
|-----------------|-------------|--------|-----------|--------|----------|
| 9kHz - 150kHz   | PK          | 0.3kHz | 1kHz      | /      | PK       |
|                 | QP/AV       | /      | /         | 200Hz  | QP/AV    |
| 150kHz - 30MHz  | PK          | 10kHz  | 30kHz     | /      | PK       |
|                 | QP/AV       | /      | /         | 9kHz   | QP/AV    |
| 30MHz - 1000MHz | PK          | 100kHz | 300kHz    | /      | PK       |
|                 | QP          | /      | /         | 120kHz | QP       |

1GHz-25GHz:

Pre-scan:

| Measurement | Detector | Duty cycle | RBW  | Video B/W               |
|-------------|----------|------------|------|-------------------------|
| PK          | Peak     | Any        | 1MHz | 3MHz                    |
| Ave.        | Peak     | >98%       | 1MHz | 5kHz                    |
|             |          | <98%       | 1MHz | ≥1/T, no less than 5kHz |

Final measurement for emission identified during the pre-scan:

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

Note 1: T is minimum transmission duration

Note 2: The 1GHz-4GHz testing use the notch filter and the 4GHz-18GHz testing use high-pass filter.

Note 3: The band edge testing use 10dB attenuator.

Note 4: The filters and attenuators are all integrated within the filter switch unit.

## Test Procedure

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

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

According to ANSI C63.10-2020,9.2: For field strength measurements made at other than the distance specified by the limit, extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance).

$$E_{SpecLimit} = E_{Meas} + 20 \log \left( \frac{D_{Meas}}{D_{SpecLimit}} \right)$$

where

|                 |                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------|
| $E_{SpecLimit}$ | is the field strength of the emission at the distance specified by the limit, in dBuV/m |
| $E_{Meas}$      | is the field strength of the emission at the measurement distance, in dBuV/m            |
| $D_{Meas}$      | is the measurement distance, in m                                                       |
| $D_{SpecLimit}$ | is the distance specified by the limit, in m                                            |

Note 1: 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.

Note 2: For above 1GHz, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

## Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned} \text{Over Limit/Margin} &= \text{Level / Corrected Amplitude} - \text{Limit} \\ \text{Level / Corrected Amplitude} &= \text{Read Level} + \text{Factor} \end{aligned}$$

Test Data

For Radiated Spurious Emissions, after pre-scan testing in the X, Y and Z axes of orientation, the worst case as setup photos was recorded.

9kHz-1GHz

Environmental Conditions

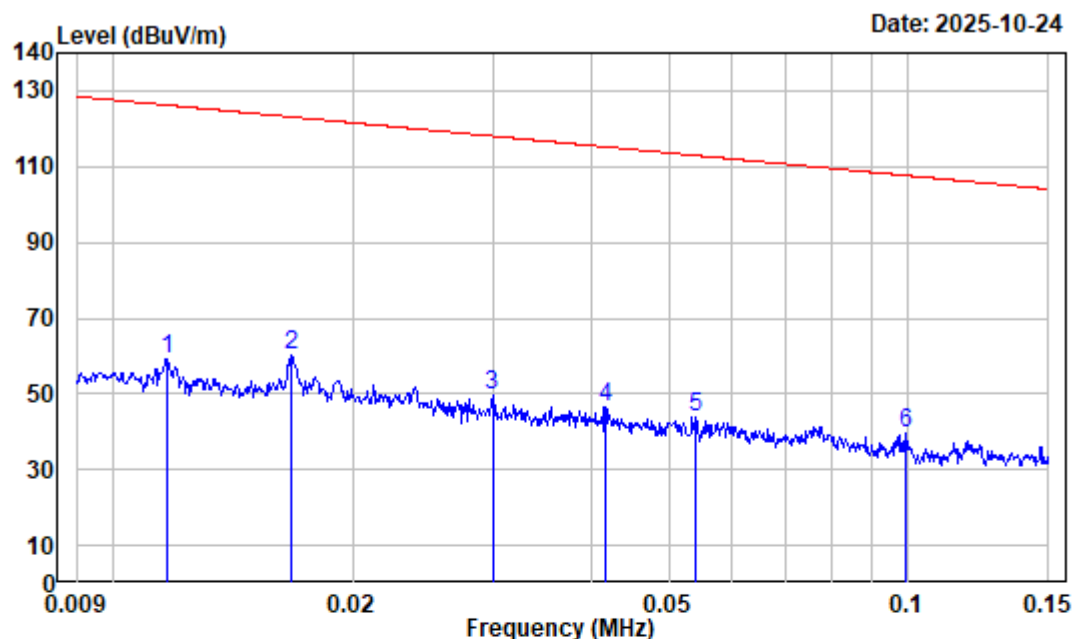
|                     |                        |
|---------------------|------------------------|
| Temperature:        | 24.3 °C                |
| Relative Humidity:  | 57 %                   |
| ATM Pressure:       | 100.7 kPa              |
| Test Engineer:      | Colin Lin              |
| Test Date:          | 2025-10-24             |
| EUT Operation Mode: | 2.4G WIFI Transmitting |

Test Result: Compliance, please refer to the below data

*Note 1: The Loop Antenna were tested in parallel, perpendicular, and ground-parallel. The worst orientation was parallel and the data was recorded in report.*

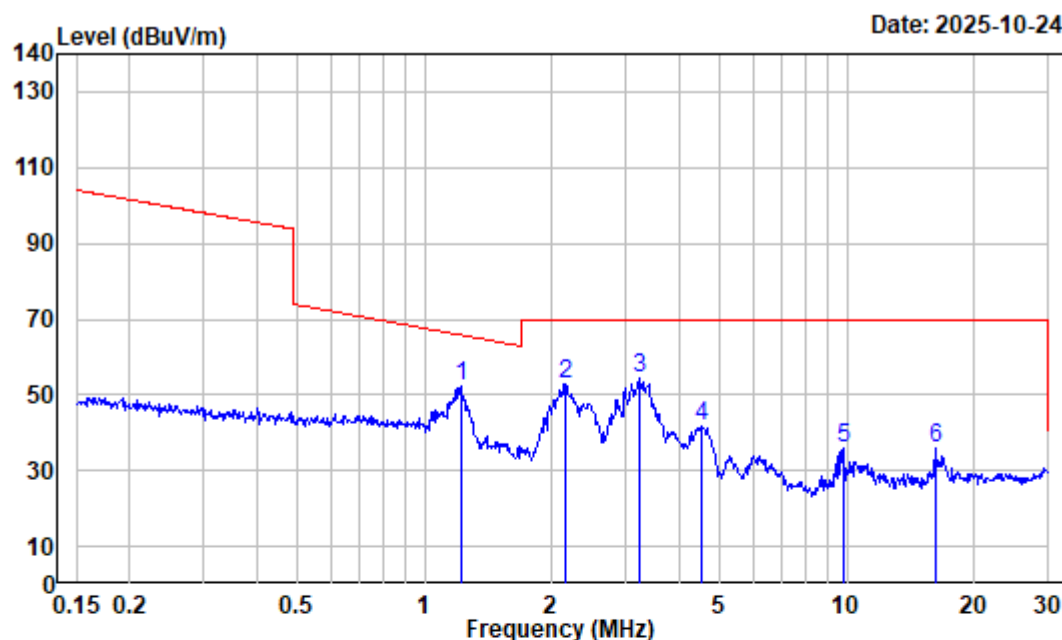
*Note 2: The maximum output power mode and channel: 802.11g High Channel was tested.*

9kHz~30MHz:



Site : Chamber  
 Condition : 3m  
 Job No. : 2504X24597E-RF  
 Polarization : Parallel Tester: Colin Lin  
 Test Mode : 2.4G WIFI Transmitting  
 Receiver Setting: RBW:300Hz VBW:1kHz

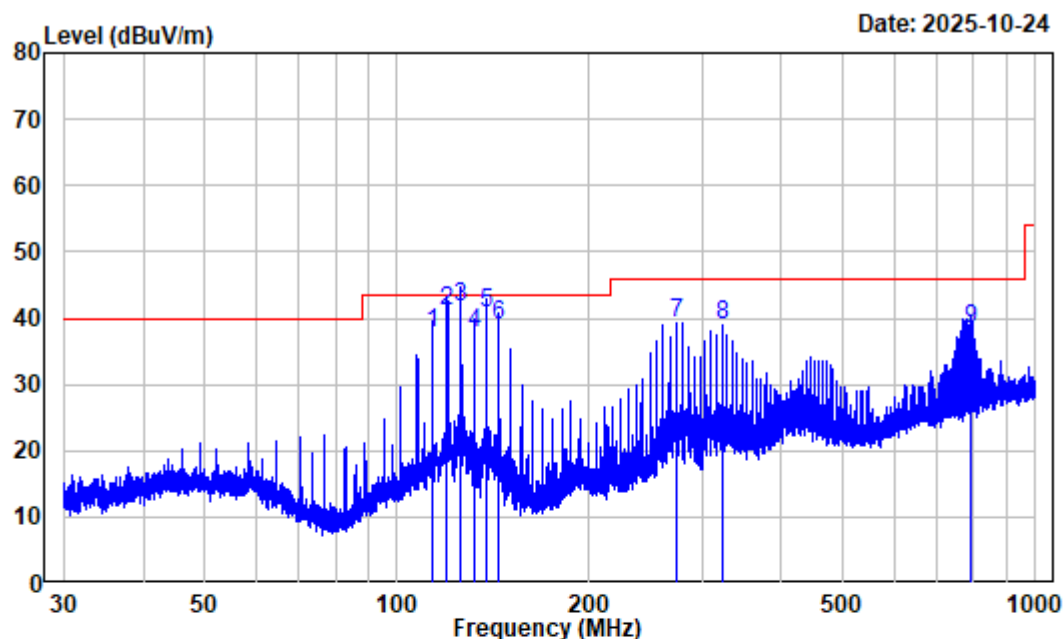
|   | Freq  | Factor | Read<br>Level | Level  | Limit<br>Line | Over<br>Limit | Remark |
|---|-------|--------|---------------|--------|---------------|---------------|--------|
|   | MHz   | dB/m   | dBuV          | dBuV/m | dBuV/m        | dB            |        |
| 1 | 0.012 | 35.08  | 23.89         | 58.97  | 126.25        | -67.28        | Peak   |
| 2 | 0.017 | 32.83  | 27.61         | 60.44  | 123.12        | -62.68        | Peak   |
| 3 | 0.030 | 26.95  | 22.66         | 49.61  | 118.06        | -68.45        | Peak   |
| 4 | 0.042 | 24.56  | 21.86         | 46.42  | 115.23        | -68.81        | Peak   |
| 5 | 0.054 | 22.23  | 21.68         | 43.91  | 112.95        | -69.04        | Peak   |
| 6 | 0.099 | 16.52  | 23.01         | 39.53  | 107.67        | -68.14        | Peak   |



Site : Chamber  
 Condition : 3m  
 Job No. : 2504X24597E-RF  
 Polarization : Parallel Tester: Colin Lin  
 Test Mode : 2.4G WIFI Transmitting  
 Receiver Setting: RBW:10kHz VBW:30kHz

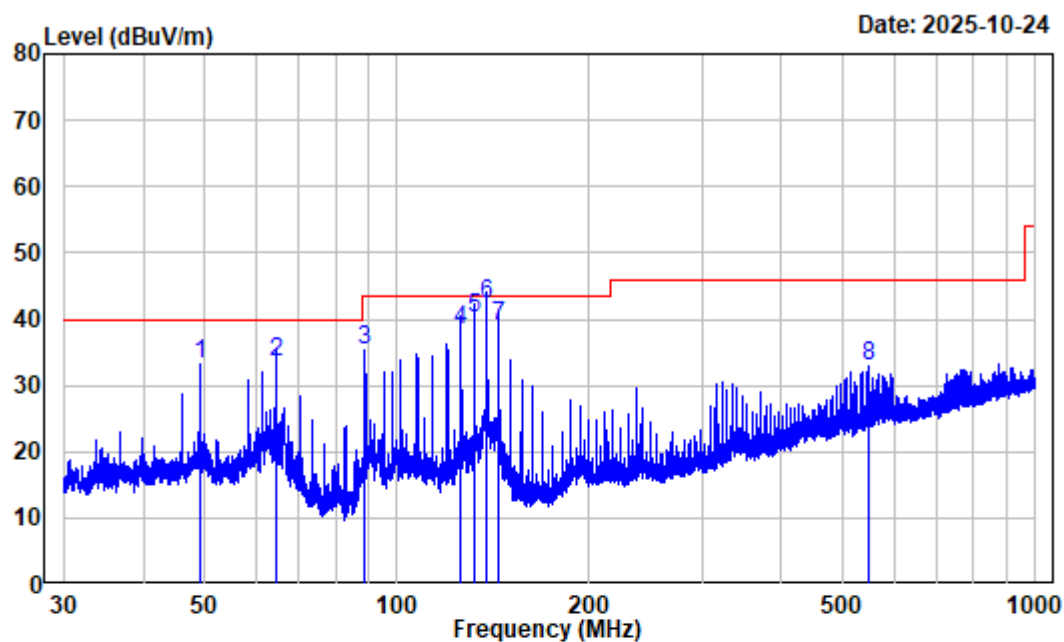
|   | Freq   | Factor | Read<br>Level | Level  | Limit<br>Line | Over<br>Limit | Remark |
|---|--------|--------|---------------|--------|---------------|---------------|--------|
|   | MHz    | dB/m   | dBuV          | dBuV/m | dBuV/m        | dB            |        |
| 1 | 1.223  | -2.62  | 54.67         | 52.05  | 65.69         | -13.64        | Peak   |
| 2 | 2.167  | -5.45  | 58.28         | 52.83  | 69.54         | -16.71        | Peak   |
| 3 | 3.224  | -5.94  | 60.21         | 54.27  | 69.54         | -15.27        | Peak   |
| 4 | 4.549  | -6.30  | 48.04         | 41.74  | 69.54         | -27.80        | Peak   |
| 5 | 9.809  | -5.38  | 41.09         | 35.71  | 69.54         | -33.83        | Peak   |
| 6 | 16.226 | -3.86  | 39.83         | 35.97  | 69.54         | -33.57        | Peak   |

## 30MHz~1GHz



Site : Chamber  
 Condition : 3m HORIZONTAL  
 Job No. : 2504X24597E-RF Tester: Colin Lin  
 Test Mode : 2.4G WIFI Transmitting  
 Receiver Setting: RBW:100kHz VBW:300kHz

|   | Freq    | Factor | Read Level | Limit Level | Over Limit | Remark     |
|---|---------|--------|------------|-------------|------------|------------|
|   | MHz     | dB/m   | dBuV       | dBuV/m      | dBuV/m     | dB         |
| 1 | 113.665 | -12.13 | 49.78      | 37.65       | 43.50      | -5.85 QP   |
| 2 | 119.803 | -13.31 | 54.33      | 41.02       | 43.50      | -2.48 QP   |
| 3 | 125.942 | -14.31 | 56.12      | 41.81       | 43.50      | -1.69 QP   |
| 4 | 132.105 | -14.65 | 52.53      | 37.88       | 43.50      | -5.62 QP   |
| 5 | 138.266 | -14.94 | 55.76      | 40.82       | 43.50      | -2.68 QP   |
| 6 | 144.398 | -14.95 | 53.77      | 38.82       | 43.50      | -4.68 QP   |
| 7 | 273.474 | -9.56  | 48.81      | 39.25       | 46.00      | -6.75 Peak |
| 8 | 322.613 | -8.24  | 47.26      | 39.02       | 46.00      | -6.98 Peak |
| 9 | 789.580 | 0.27   | 38.20      | 38.47       | 46.00      | -7.53 QP   |



Site : Chamber  
 Condition : 3m VERTICAL  
 Job No. : 2504X24597E-RF Tester: Colin Lin  
 Test Mode : 2.4G WIFI Transmitting  
 Receiver Setting: RBW:100kHz VBW:300kHz

|   | Freq    | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|---------|--------|------------|--------|------------|------------|--------|
|   | MHz     | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 49.144  | -9.84  | 42.95      | 33.11  | 40.00      | -6.89      | Peak   |
| 2 | 64.518  | -12.25 | 45.62      | 33.37  | 40.00      | -6.63      | QP     |
| 3 | 89.081  | -13.97 | 49.40      | 35.43  | 43.50      | -8.07      | Peak   |
| 4 | 125.942 | -14.31 | 52.75      | 38.44  | 43.50      | -5.06      | QP     |
| 5 | 132.105 | -14.65 | 54.76      | 40.11  | 43.50      | -3.39      | QP     |
| 6 | 138.266 | -14.94 | 57.09      | 42.15  | 43.50      | -1.35      | QP     |
| 7 | 144.398 | -14.95 | 53.93      | 38.98  | 43.50      | -4.52      | QP     |
| 8 | 549.983 | -3.35  | 36.26      | 32.91  | 46.00      | -13.09     | Peak   |

1GHz-25GHz

Environmental Conditions

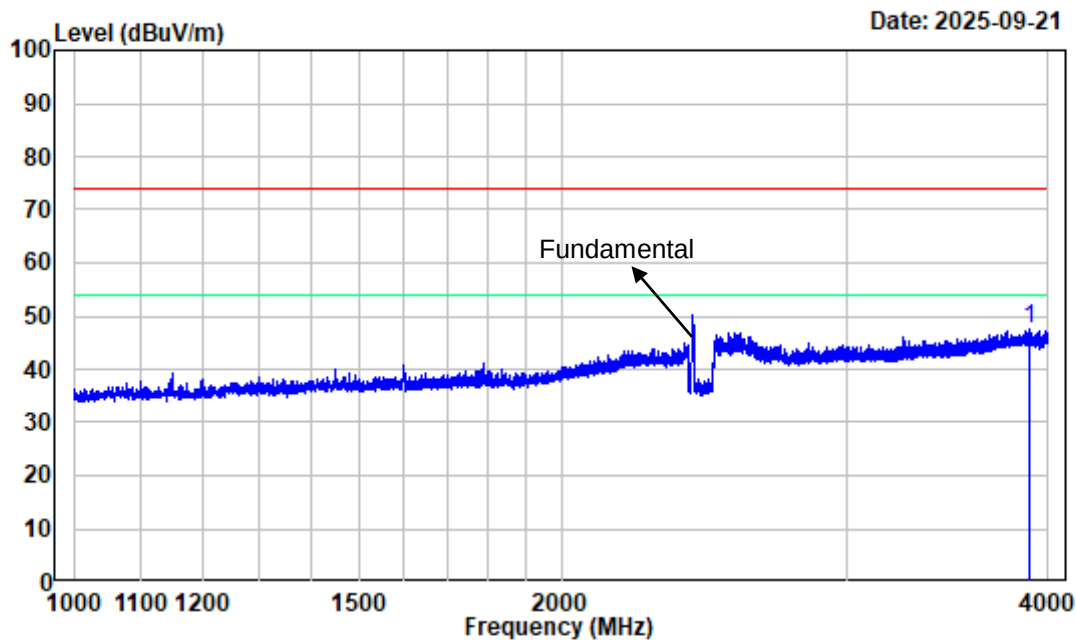
|                     |                          |
|---------------------|--------------------------|
| Temperature:        | 24.5 to 25.1 °C          |
| Relative Humidity:  | 54 to 56 %               |
| ATM Pressure:       | 100.2 to 101.1 kPa       |
| Test Engineer:      | Kevin Lv                 |
| Test Date:          | 2025-09-21 to 2025-11-25 |
| EUT Operation Mode: | Transmitting             |

**Test Result:** Compliance, please refer to the below data.

*Note 1: For 1GHz-4GHz, the fundamental with band reject filter.*

*Note 2: For 18GHz-25GHz, the maximum output power mode and channel: 802.11g High Channel was tested.*

2.4G WIFI 802.11b Low Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

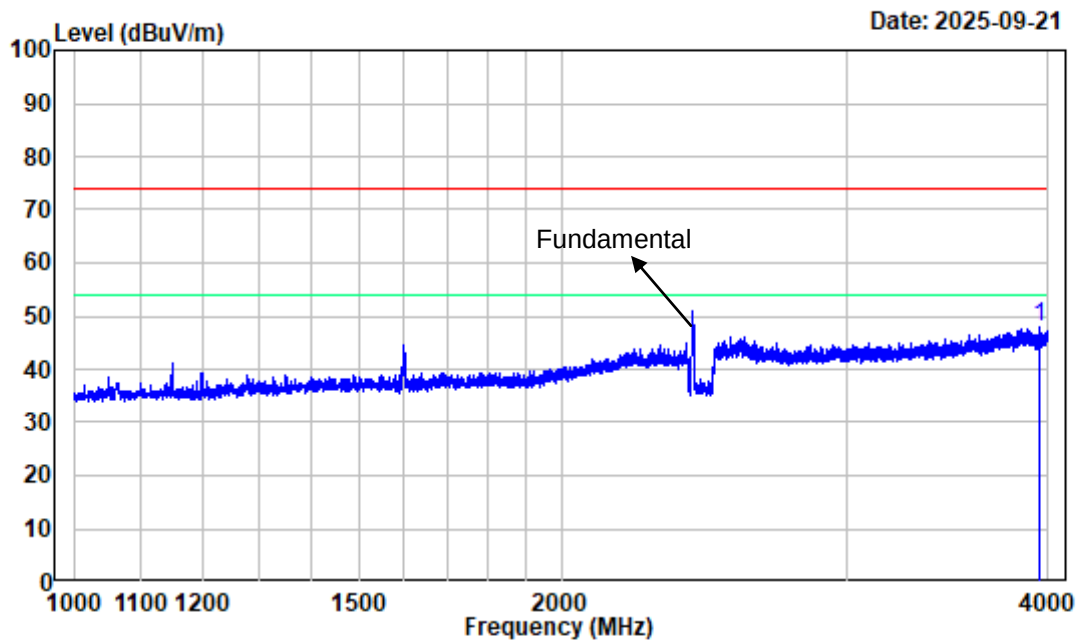
Note : 2.4G WIFI 802.11b Low Channel 2412MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

Tester:Kevin Lv

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 3890.875 | -7.95      | 55.40  | 47.45      | 74.00      | -26.55 peak |

2.4G WIFI 802.11b Low Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

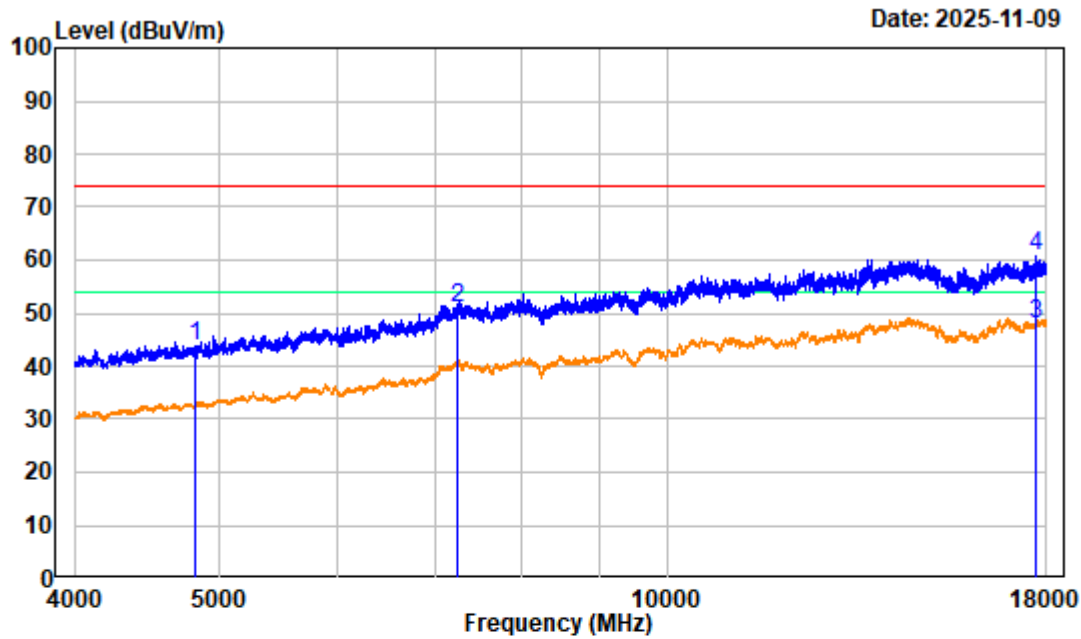
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b Low Channel 2412MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3951.250 | -8.45      | 56.35  | 47.90  | 74.00 | -26.10 peak |

2.4G WIFI 802.11b Low Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

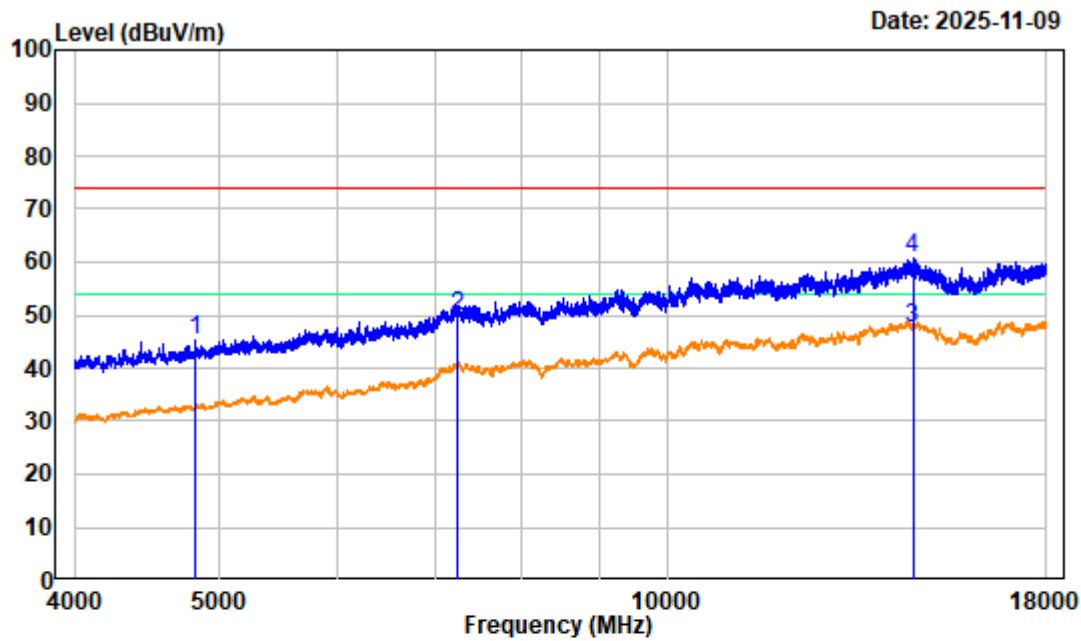
Tester:Kevin Lv

Note : 2.4G WIFI 802.11b Low Channel 2412MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq      | Factor | Read  |        | Limit  | Over   | Remark  |
|---|-----------|--------|-------|--------|--------|--------|---------|
|   |           |        | Level | Level  | Line   | Limit  |         |
|   | MHz       | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 4824.000  | -6.64  | 50.45 | 43.81  | 74.00  | -30.19 | peak    |
| 2 | 7236.000  | -1.32  | 52.23 | 50.91  | 74.00  | -23.09 | peak    |
| 3 | 17695.500 | 7.63   | 40.36 | 47.99  | 54.00  | -6.01  | Average |
| 4 | 17695.500 | 7.63   | 53.28 | 60.91  | 74.00  | -13.09 | Peak    |

2.4G WIFI 802.11b Low Channel 4GHz-18GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

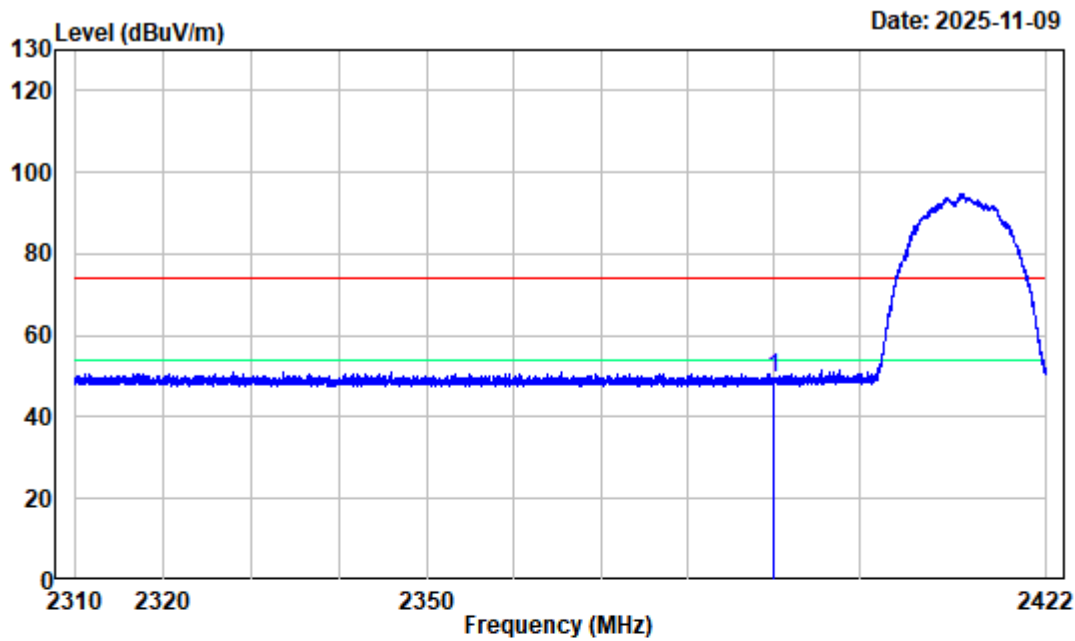
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b Low Channel 2412MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq      | Factor | Read  |        | Limit  | Over   | Remark  |
|---|-----------|--------|-------|--------|--------|--------|---------|
|   |           |        | Level | Level  | Line   | Limit  |         |
|   | MHz       | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 4824.000  | -6.64  | 52.03 | 45.39  | 74.00  | -28.61 | peak    |
| 2 | 7236.000  | -1.32  | 51.08 | 49.76  | 74.00  | -24.24 | peak    |
| 3 | 14636.500 | 8.59   | 39.13 | 47.72  | 54.00  | -6.28  | Average |
| 4 | 14636.500 | 8.59   | 52.16 | 60.75  | 74.00  | -13.25 | Peak    |

2.4G WIFI 802.11b Low Channel Bandedge\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

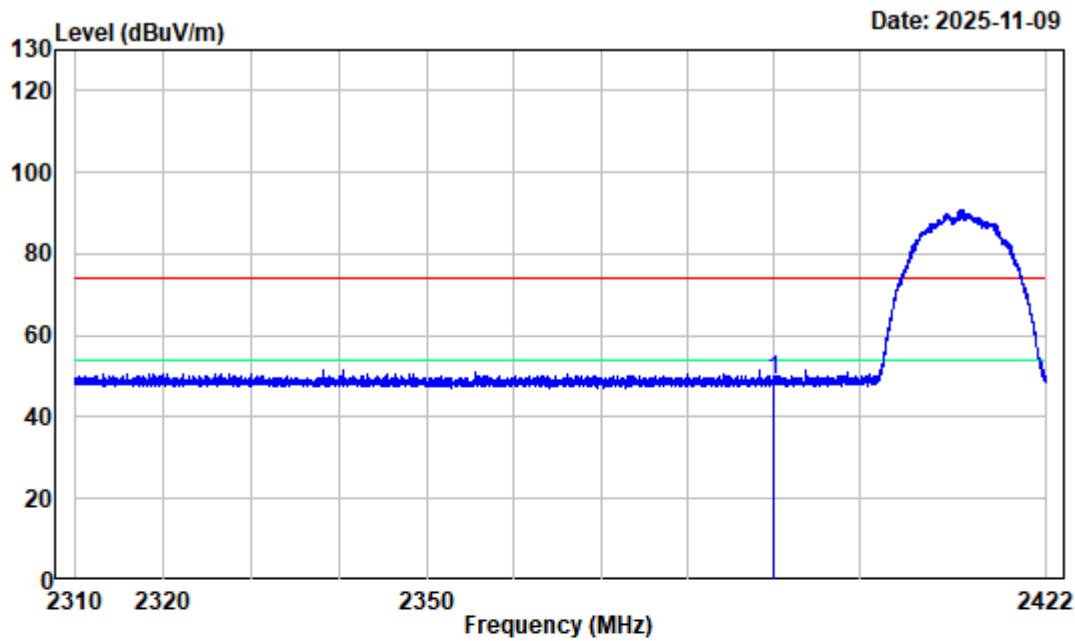
Tester:Kevin Lv

Note : 2.4G WIFI 802.11b Low Channel 2412MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 59.79      | 49.54  | 74.00      | -24.46     | Peak   |

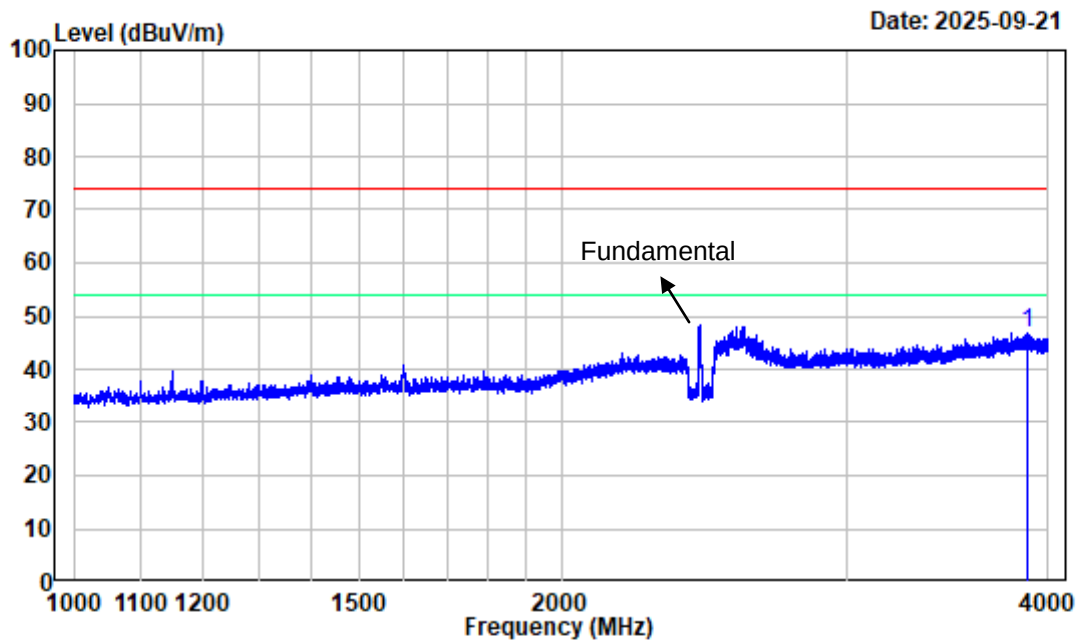
2.4G WIFI 802.11b Low Channel Bandedge\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11b Low Channel 2412MHz Bandedge  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read  | Limit  | Over   | Remark      |
|-------------|--------|-------|--------|--------|-------------|
|             |        | Level | Level  | Line   |             |
| MHz         | dB/m   | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 2390.000  | -10.25 | 59.10 | 48.85  | 74.00  | -25.15 Peak |

2.4G WIFI 802.11b Middle Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

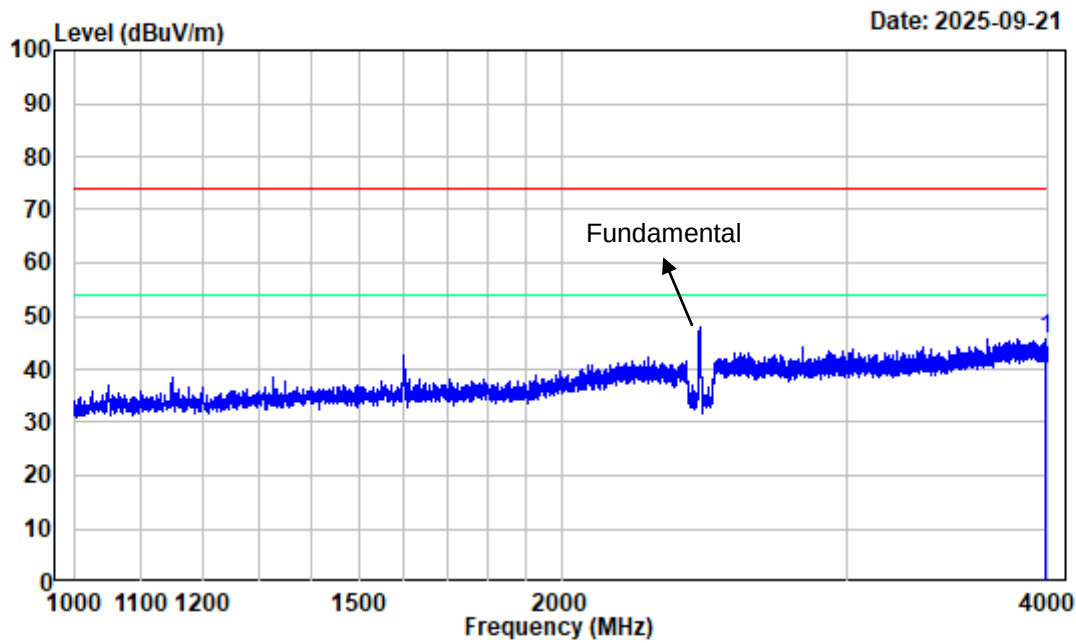
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3883.750 | -8.01      | 54.79  | 46.78  | 74.00 | -27.22 peak |

2.4G WIFI 802.11b Middle Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

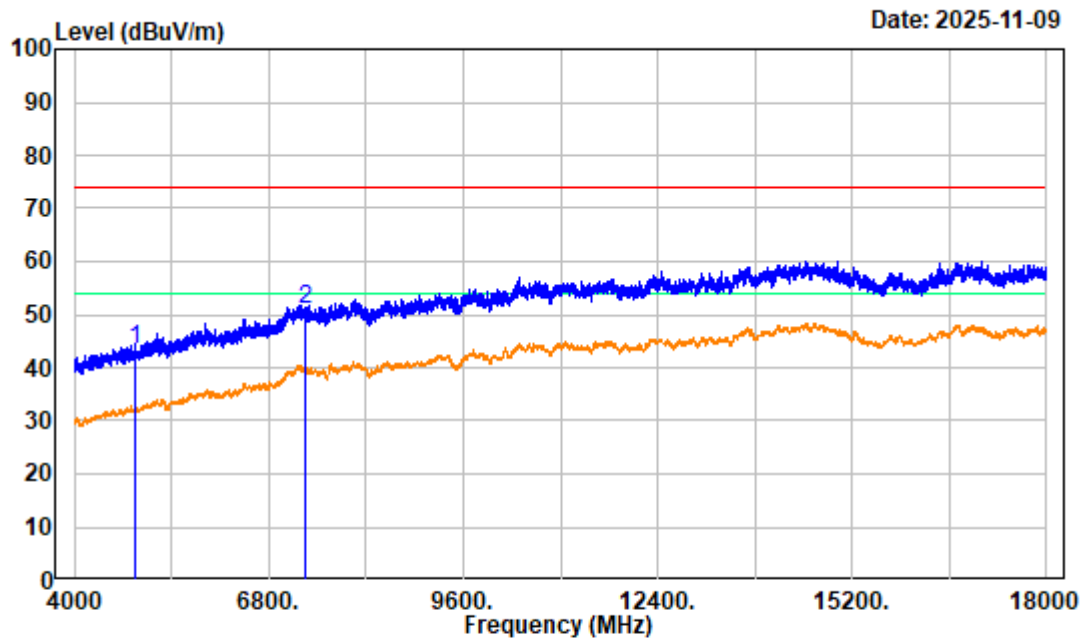
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3982.000 | -8.22      | 54.04  | 45.82  | 74.00 | -28.18 peak |

2.4G WIFI 802.11b Middle Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

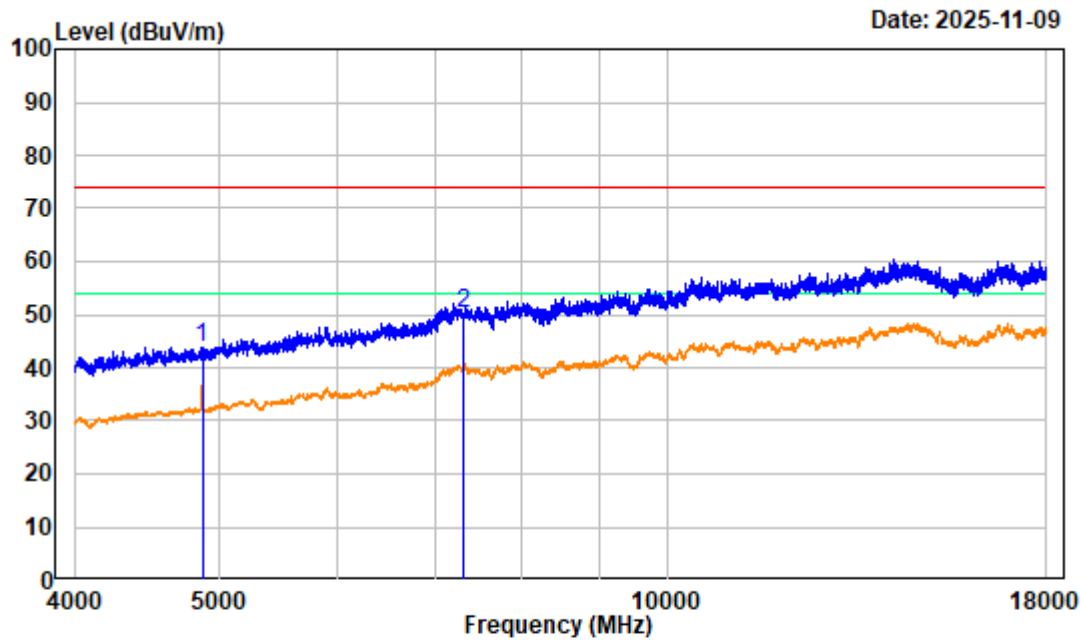
Tester:Kevin Lv

Note : 2.4G WIFI 802.11b Middle Channel 2437MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4874.000 | -6.58      | 50.08  | 43.50      | 74.00      | -30.50 Peak |
| 2           | 7311.000 | -1.12      | 52.04  | 50.92      | 74.00      | -23.08 Peak |

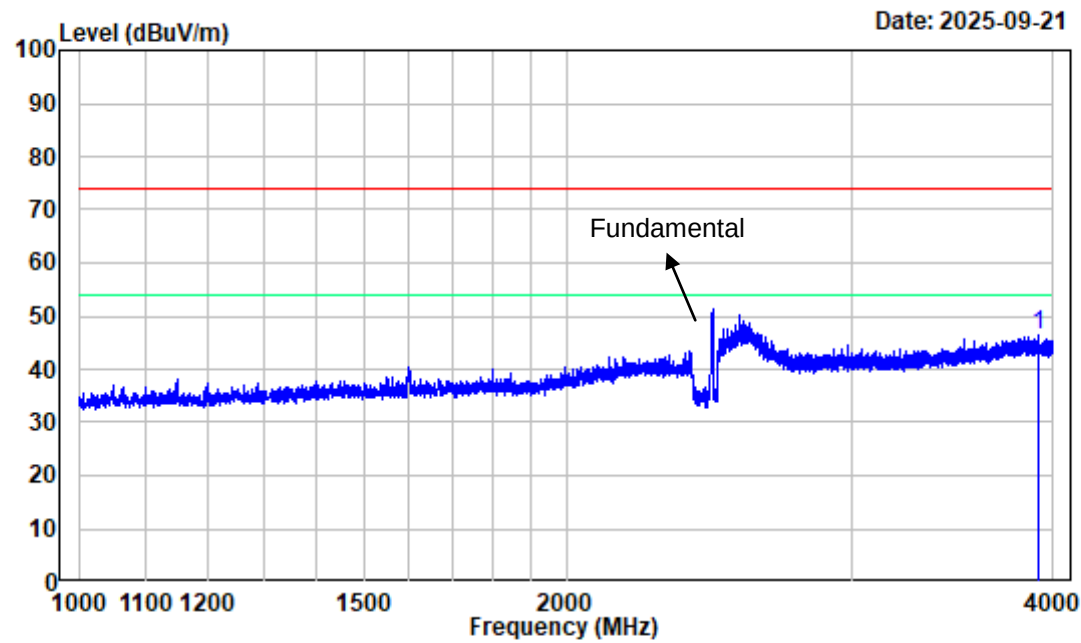
2.4G WIFI 802.11b Middle Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11b Middle Channel 2437MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4874.000 | -6.58      | 50.41  | 43.83      | 74.00      | -30.17 Peak |
| 2           | 7311.000 | -1.12      | 51.19  | 50.07      | 74.00      | -23.93 peak |

2.4G WIFI 802.11b High Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

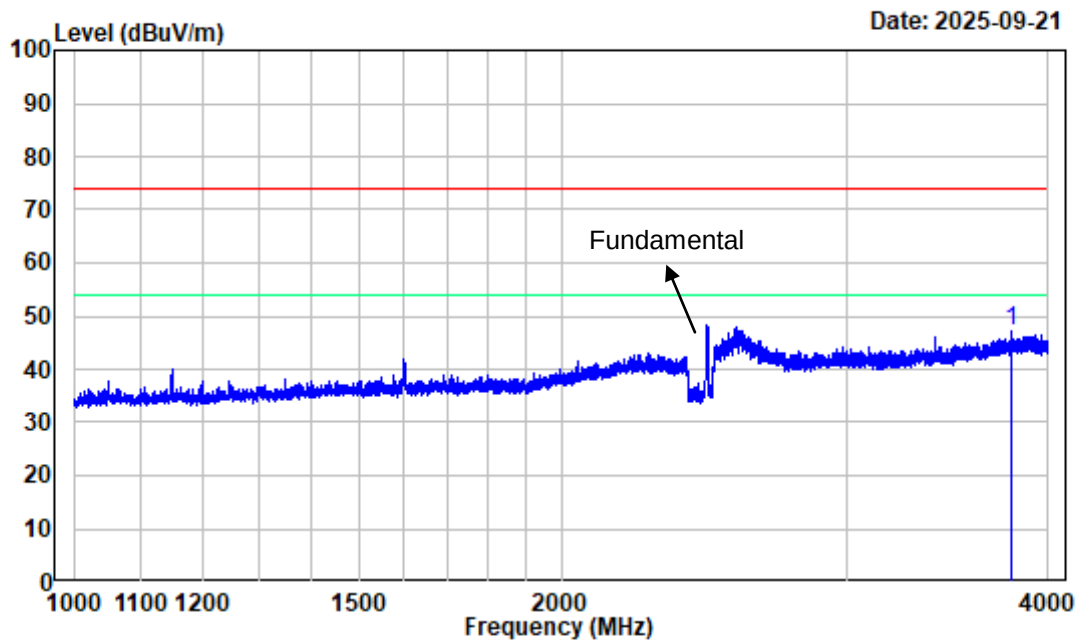
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b High Channel 2462MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3913.000 | -8.03      | 54.37  | 46.34  | 74.00 | -27.66 peak |

2.4G WIFI 802.11b High Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

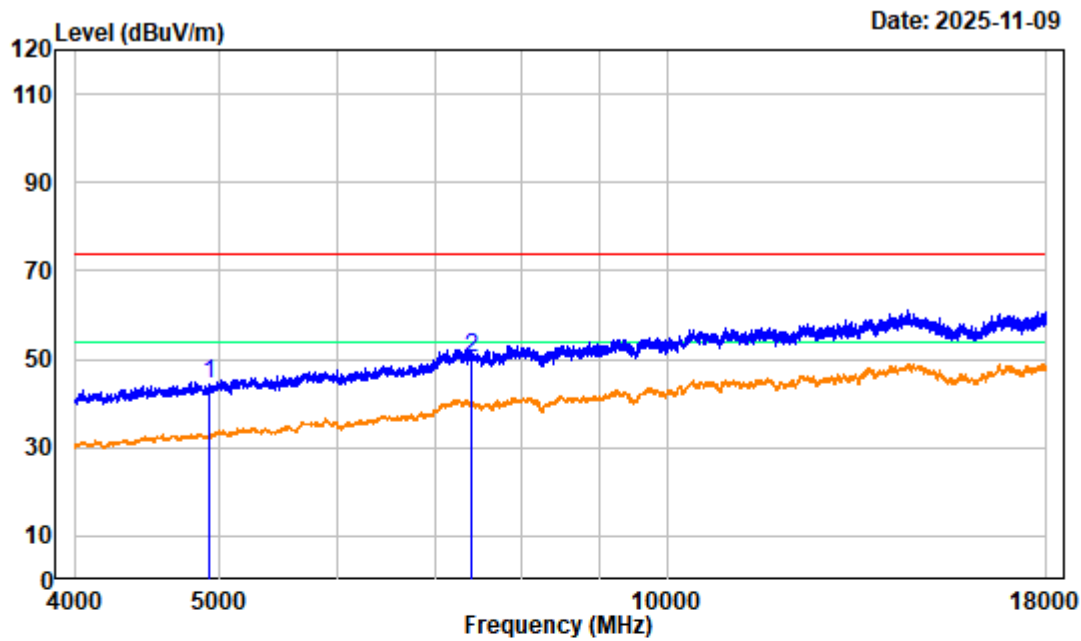
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b High Channel 2462MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |       | Read Level |        | Limit  | Over   | Remark |
|-------------|-------|------------|--------|--------|--------|--------|
|             |       | Level      |        | Line   | Limit  |        |
| MHz         | dB/m  | dBuV       | dBuV/m | dBuV/m | dB     |        |
| 1 3801.625  | -8.48 | 55.69      | 47.21  | 74.00  | -26.79 | peak   |

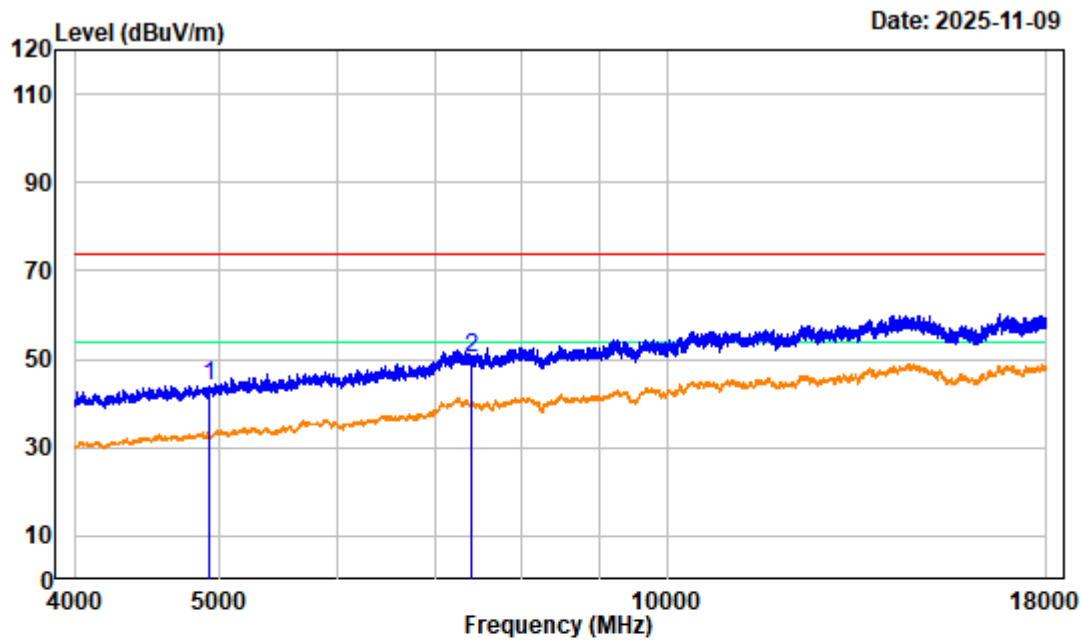
2.4G WIFI 802.11b High Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11b High Channel 2462MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4924.000 | -6.48  | 50.71 | 44.23  | 74.00  | -29.77 | peak   |
| 2 | 7386.000 | -1.31  | 51.51 | 50.20  | 74.00  | -23.80 | peak   |

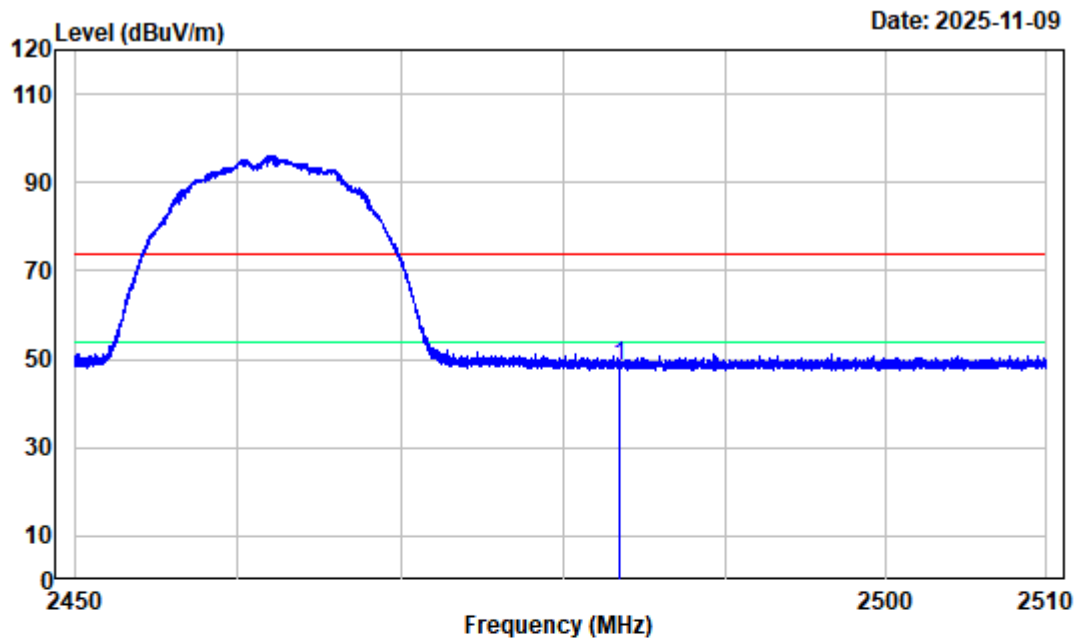
2.4G WIFI 802.11b High Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11b High Channel 2462MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4924.000 | -6.48  | 50.43 | 43.95  | 74.00  | -30.05 | peak   |
| 2 | 7386.000 | -1.31  | 51.41 | 50.10  | 74.00  | -23.90 | peak   |

2.4G WIFI 802.11b High Channel Bandedge\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

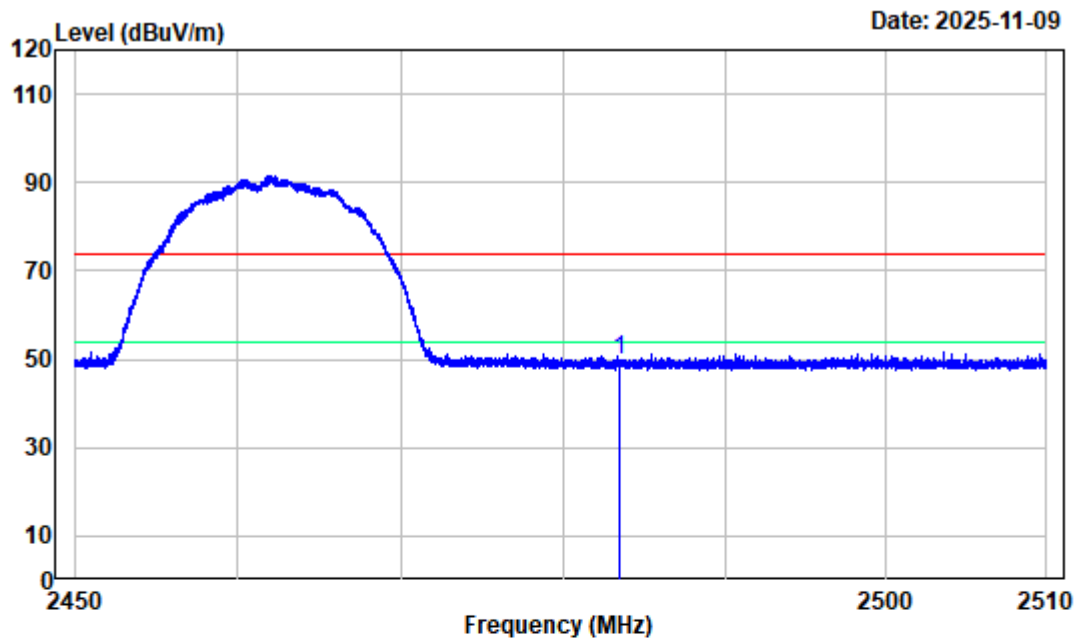
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11b High Channel 2462MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 58.69      | 48.46  | 74.00      | -25.54     | Peak   |

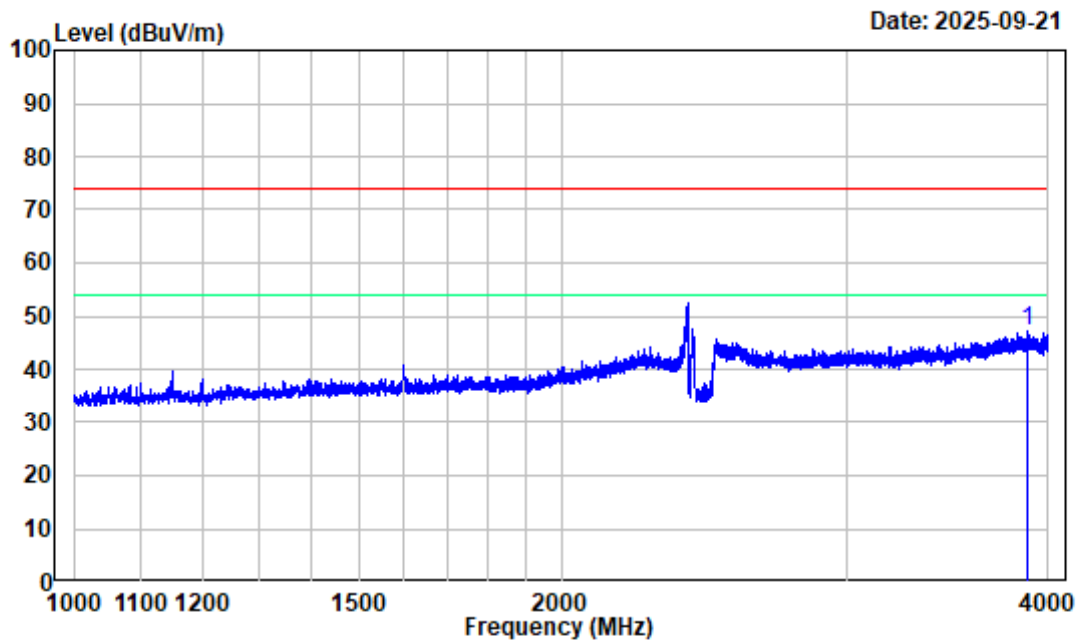
2.4G WIFI 802.11b High Channel Bandedge\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11b High Channel 2462MHz Bandedge  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 60.24      | 50.01  | 74.00      | -23.99     | peak   |

2.4G WIFI 802.11g Low Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

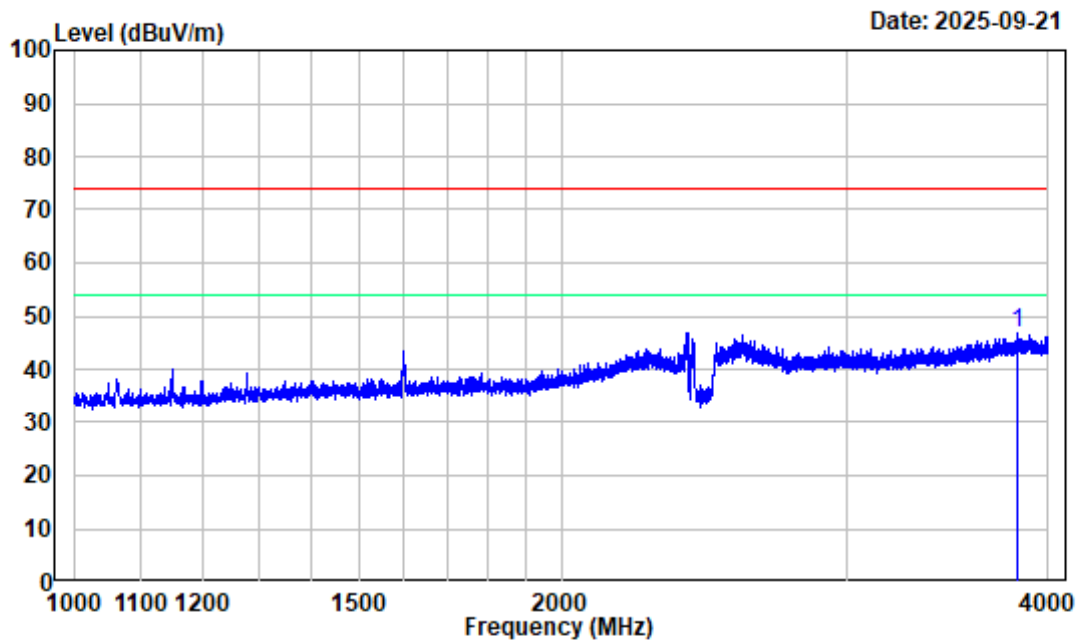
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g Low Channel 2412MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 3887.500 | -7.97      | 55.15  | 47.18      | 74.00      | -26.82 peak |

2.4G WIFI 802.11g Low Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

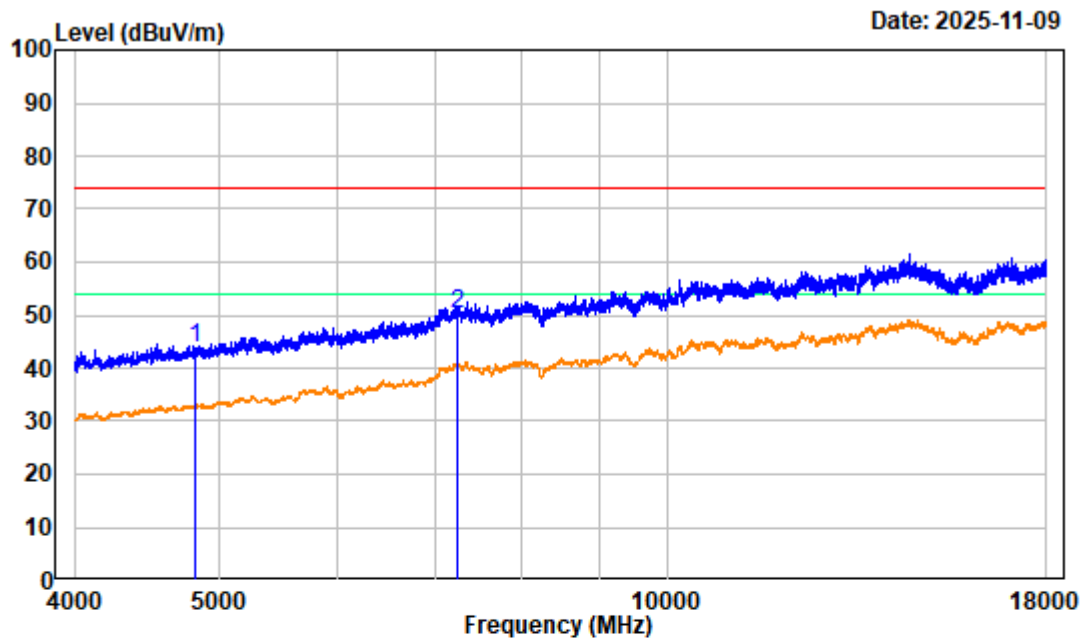
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g Low Channel 2412MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3832.750 | -8.32      | 54.97  | 46.65  | 74.00 | -27.35 peak |

2.4G WIFI 802.11g Low Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

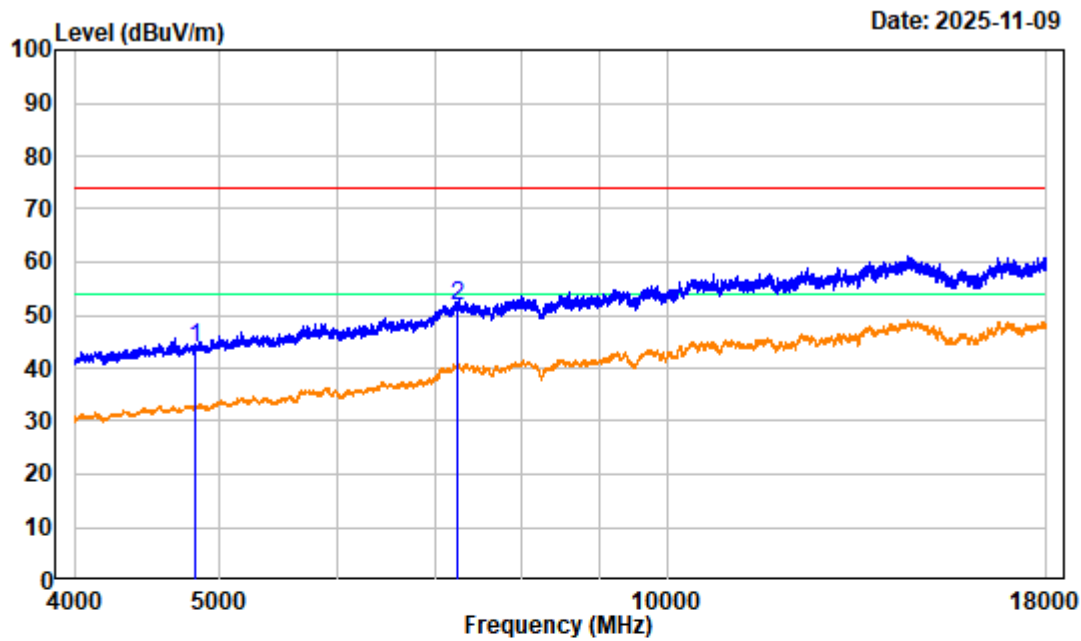
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g Low Channel 2412MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level |        | Limit | Over  | Remark      |
|-------------|----------|------------|--------|-------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | Line  | Limit |             |
| 1           | 4824.000 | -6.64      | 50.46  | 43.82 | 74.00 | -30.18 peak |
| 2           | 7236.000 | -1.32      | 51.41  | 50.09 | 74.00 | -23.91 peak |

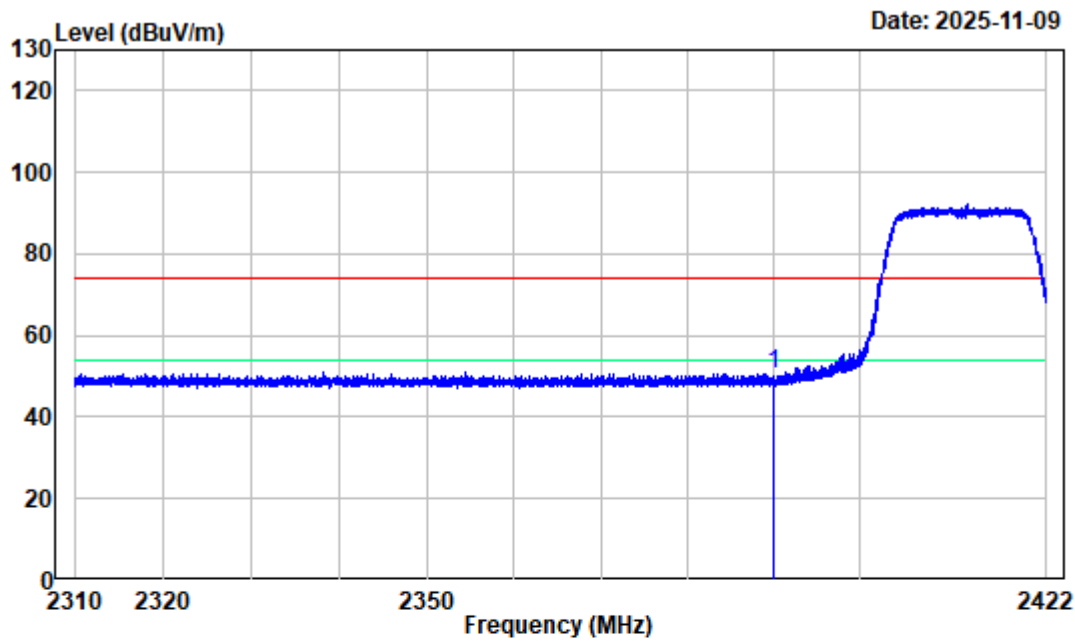
2.4G WIFI 802.11g Low Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11g Low Channel 2412MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4824.000 | -6.64      | 50.26  | 43.62      | 74.00      | -30.38 peak |
| 2           | 7236.000 | -1.32      | 53.01  | 51.69      | 74.00      | -22.31 peak |

2.4G WIFI 802.11g Low Channel Bandedge\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

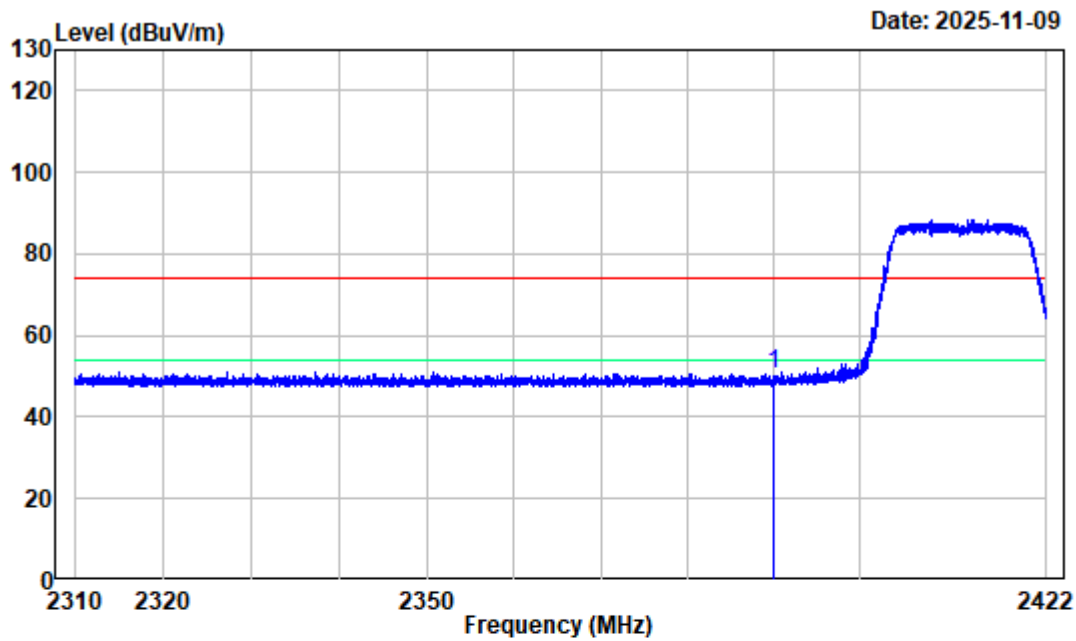
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g Low Channel 2412MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 60.76      | 50.51  | 74.00      | -23.49     | peak   |

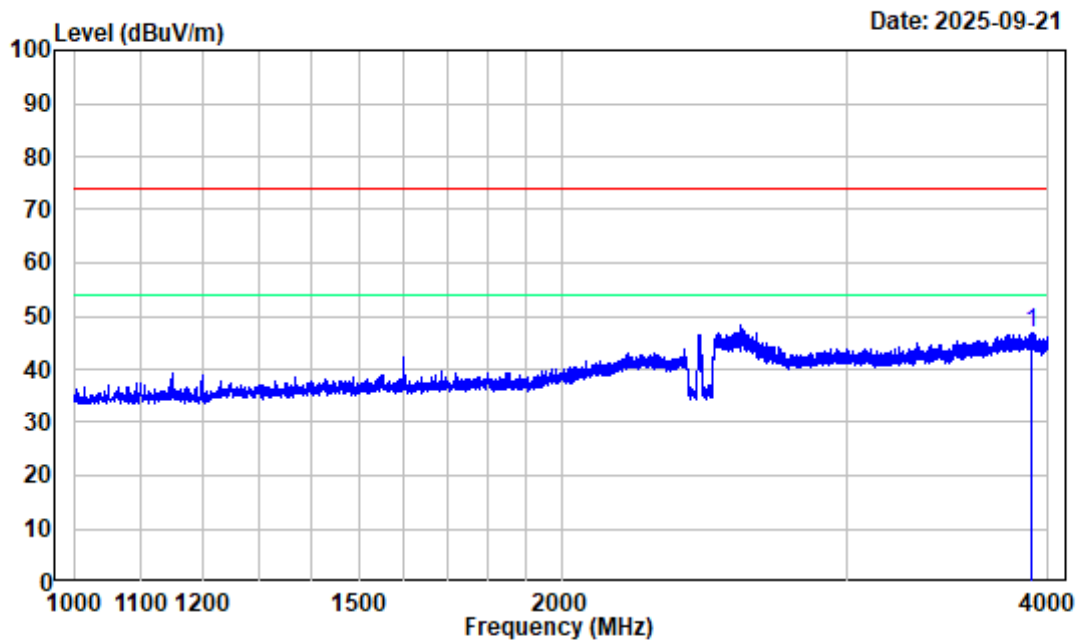
2.4G WIFI 802.11g Low Channel Bandedge\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11g Low Channel 2412MHz Bandedge  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 60.61      | 50.36  | 74.00      | -23.64     | peak   |

2.4G WIFI 802.11g Middle Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

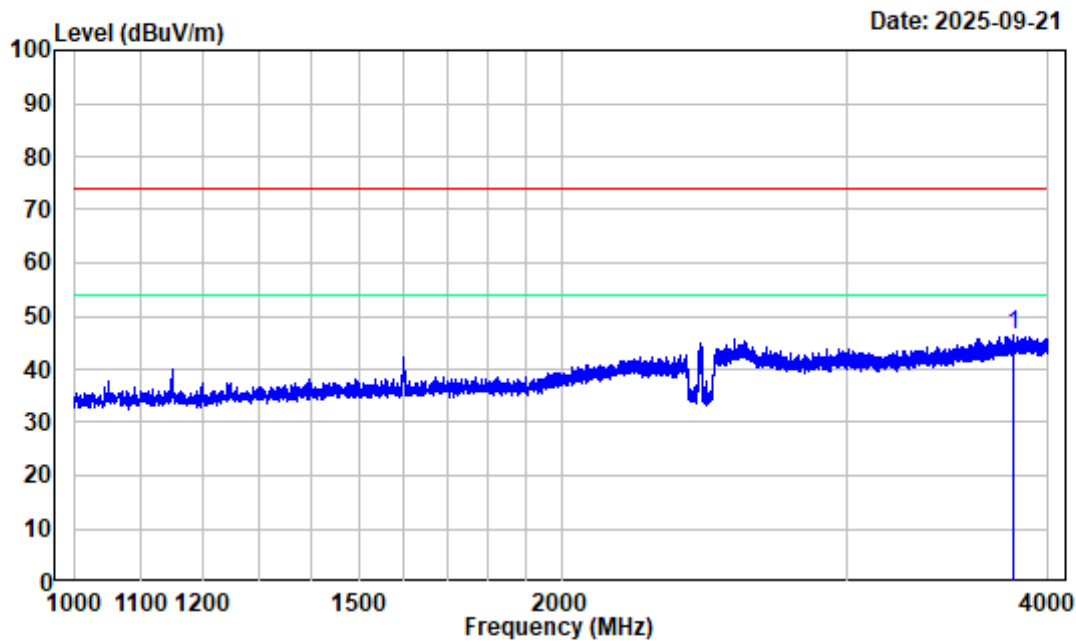
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3911.875 | -8.03      | 54.87  | 46.84  | 74.00 | -27.16 peak |

2.4G WIFI 802.11g Middle Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

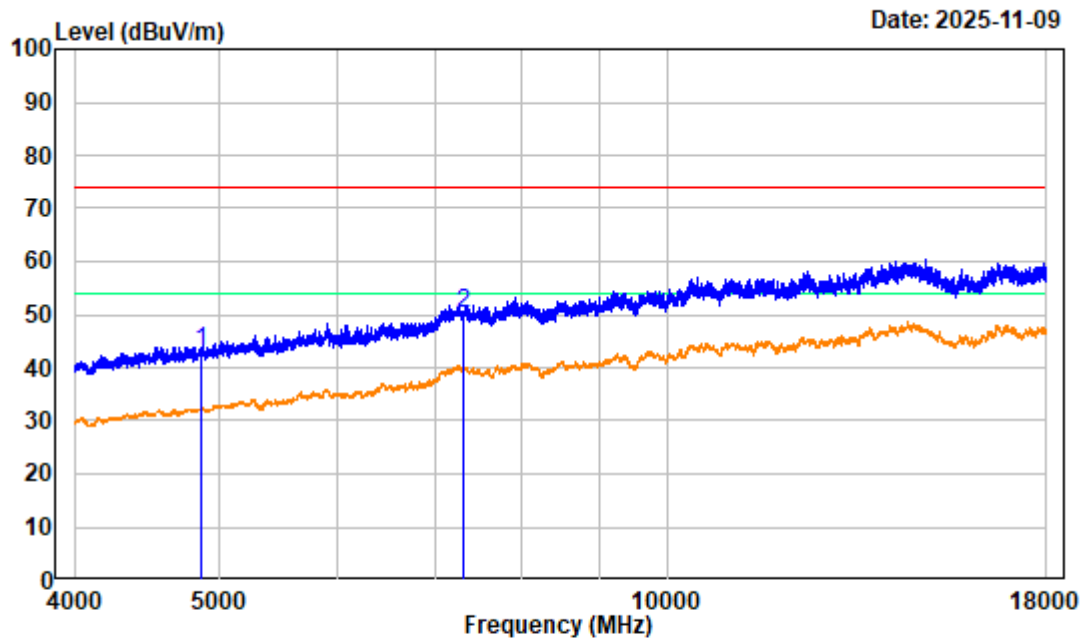
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3803.500 | -8.47      | 54.86  | 46.39  | 74.00 | -27.61 peak |

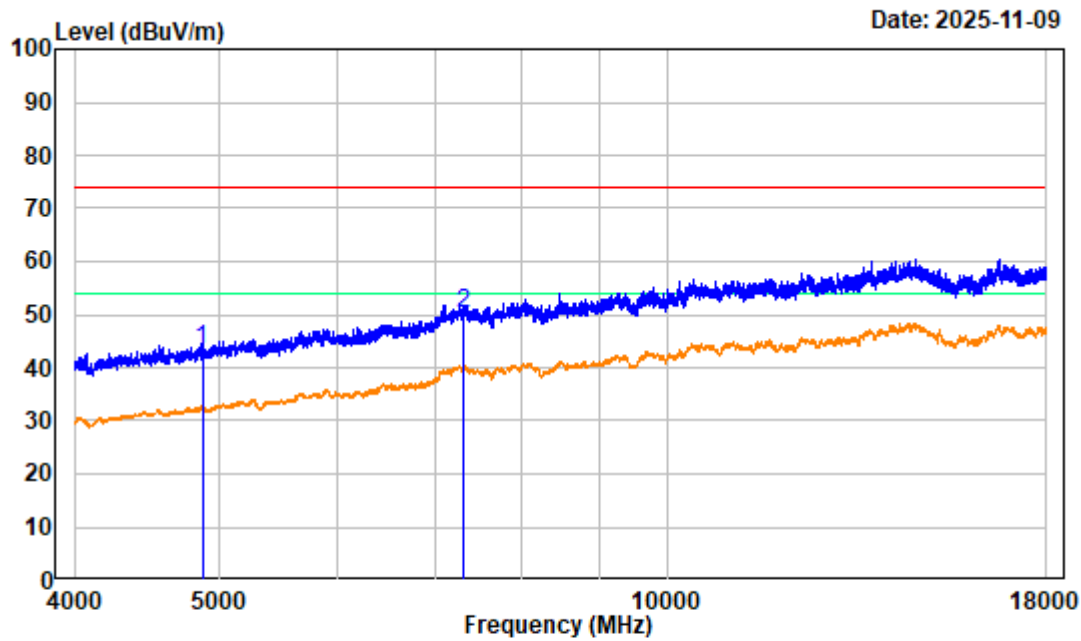
2.4G WIFI 802.11g Middle Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11g Middle Channel 2437MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBUV/m | dBUV/m     | dB         |             |
| 1           | 4873.250 | -6.59      | 49.73  | 43.14      | 74.00      | -30.86 Peak |
| 2           | 7311.000 | -1.12      | 51.31  | 50.19      | 74.00      | -23.81 peak |

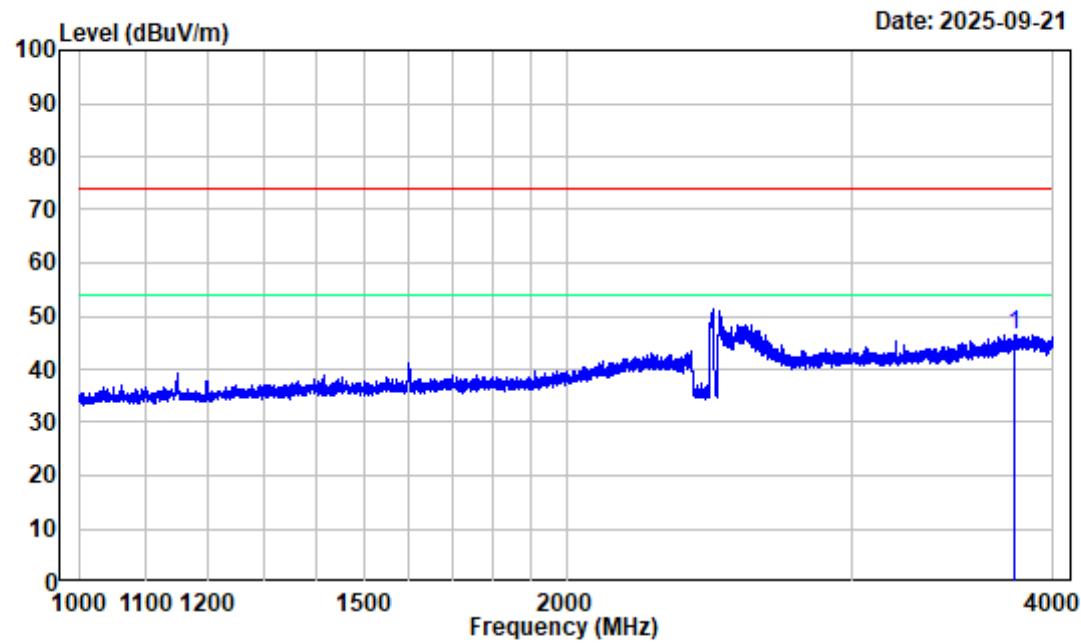
2.4G WIFI 802.11g Middle Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11g Middle Channel 2437MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read<br>Level | Level  | Limit<br>Line | Over<br>Limit | Remark |
|---|----------|--------|---------------|--------|---------------|---------------|--------|
|   | MHz      | dB/m   | dBuV          | dBuV/m | dBuV/m        | dB            |        |
| 1 | 4874.000 | -6.58  | 50.12         | 43.54  | 74.00         | -30.46        | Peak   |
| 2 | 7311.000 | -1.12  | 51.13         | 50.01  | 74.00         | -23.99        | peak   |

2.4G WIFI 802.11g High Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

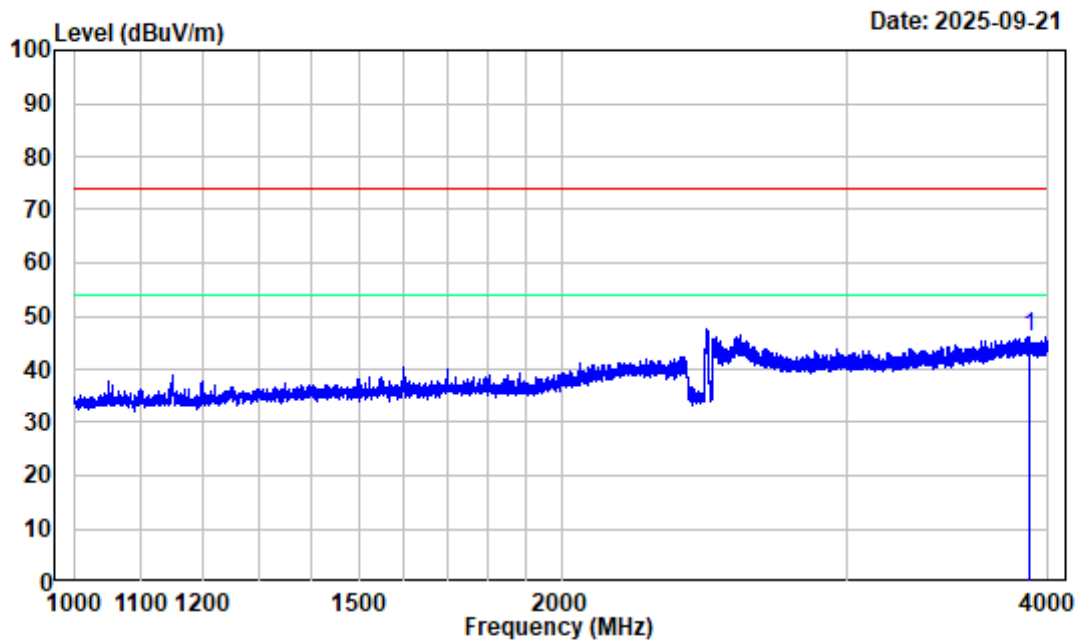
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g High Channel 2462MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 3781.750 | -8.54      | 55.03  | 46.49      | 74.00      | -27.51 peak |

2.4G WIFI 802.11g High Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

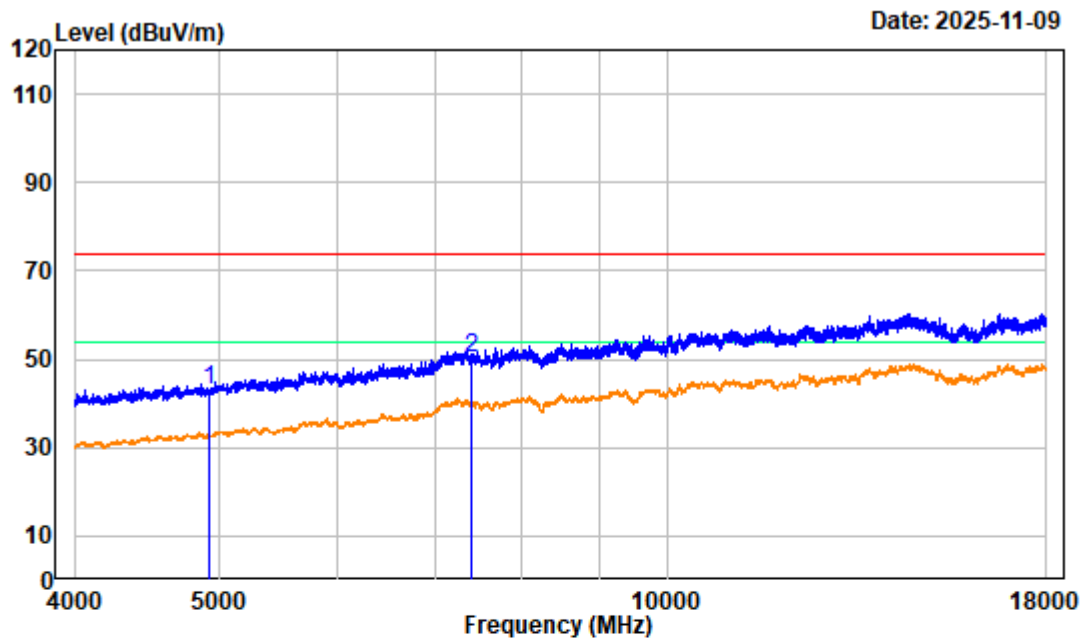
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11g High Channel 2462MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3897.250 | -7.91      | 53.96  | 46.05  | 74.00 | -27.95 peak |

2.4G WIFI 802.11g High Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

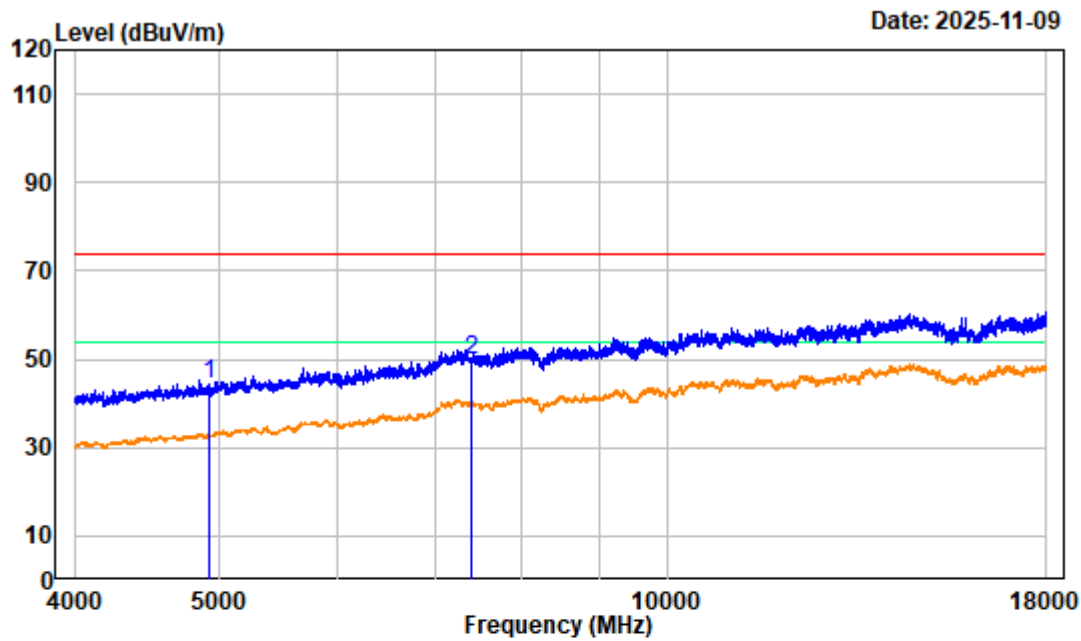
Tester:Kevin Lv

Note : 2.4G WIFI 802.11g High Channel 2462MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4924.000 | -6.48      | 49.68  | 43.20      | 74.00      | -30.80 peak |
| 2           | 7386.000 | -1.31      | 51.52  | 50.21      | 74.00      | -23.79 peak |

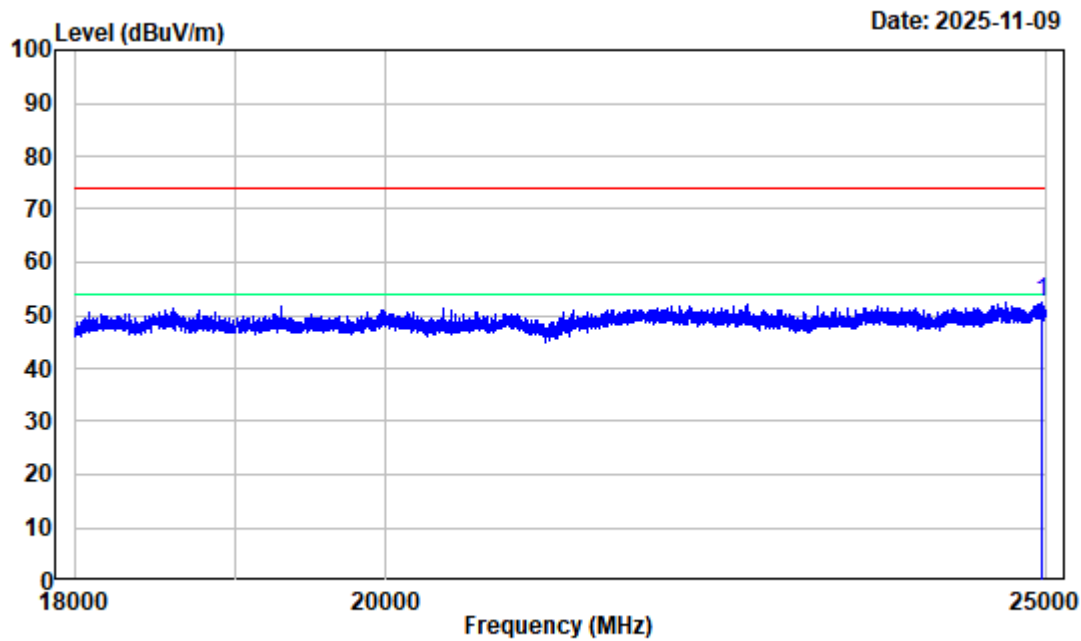
2.4G WIFI 802.11g High Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11g High Channel 2462MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level |        | Limit | Over  | Remark      |
|-------------|----------|------------|--------|-------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | Line  | Limit |             |
| 1           | 4924.000 | -6.48      | 50.70  | 44.22 | 74.00 | -29.78 peak |
| 2           | 7386.000 | -1.31      | 50.91  | 49.60 | 74.00 | -24.40 peak |

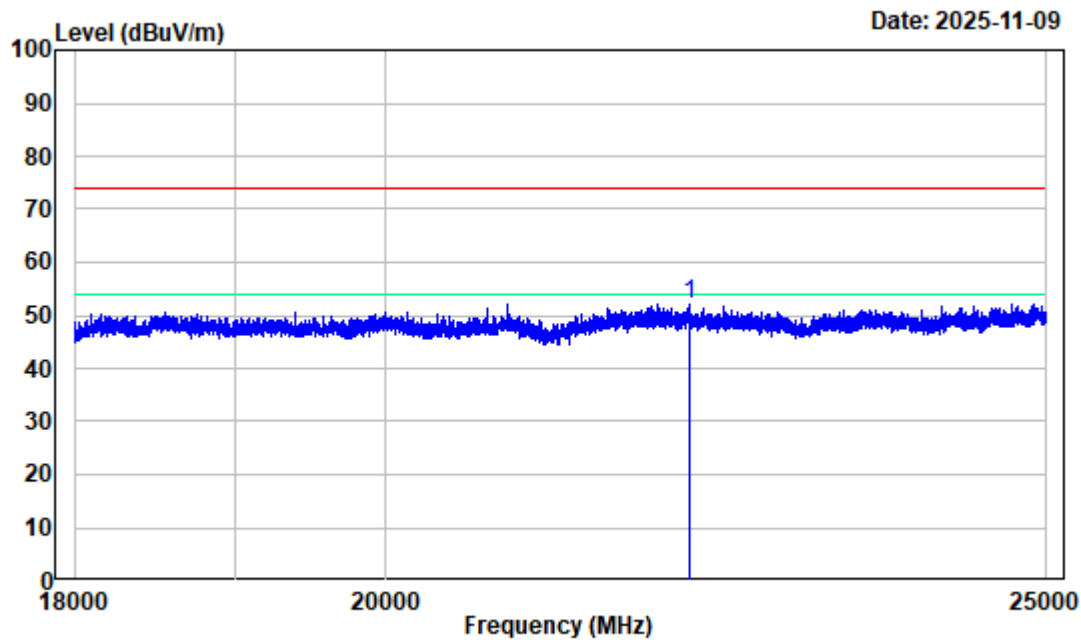
802.11g High Channel 18GHz-25GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 802.11g High Channel 2462MHz 18GHz-25GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |      | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|------|------------|--------|------------|------------|--------|
| MHz         | dB/m | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 24963.250 | 4.25 | 48.12      | 52.37  | 74.00      | -21.63     | Peak   |

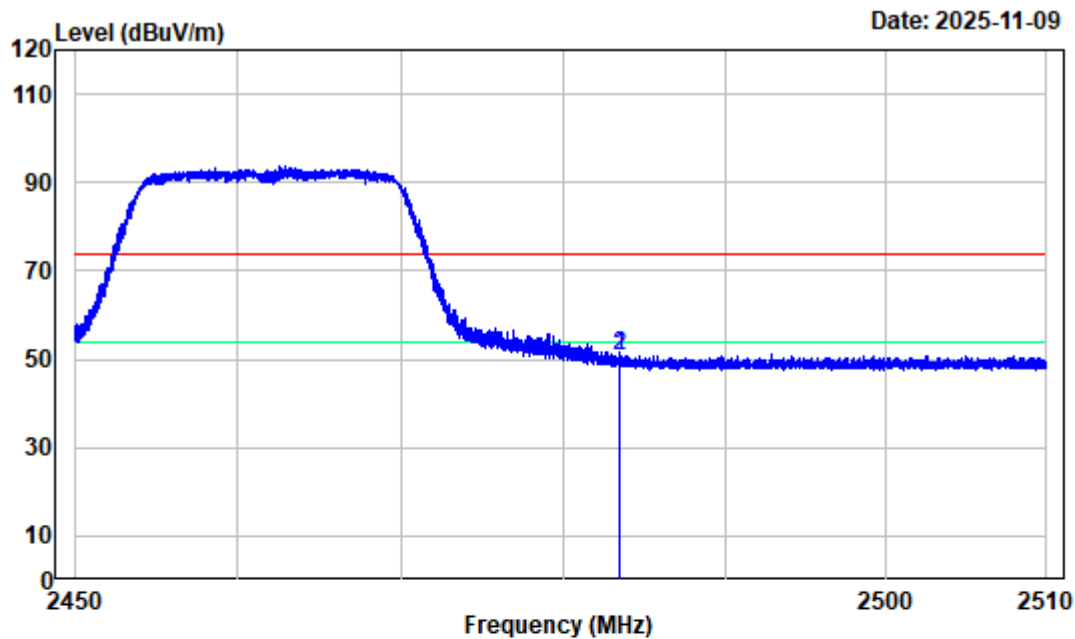
802.11g High Channel 18GHz-25GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 802.11g High Channel 2462MHz 18GHz-25GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |      | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|------|------------|--------|------------|------------|--------|
| MHz         | dB/m | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 22163.250 | 0.77 | 51.49      | 52.26  | 74.00      | -21.74     | Peak   |

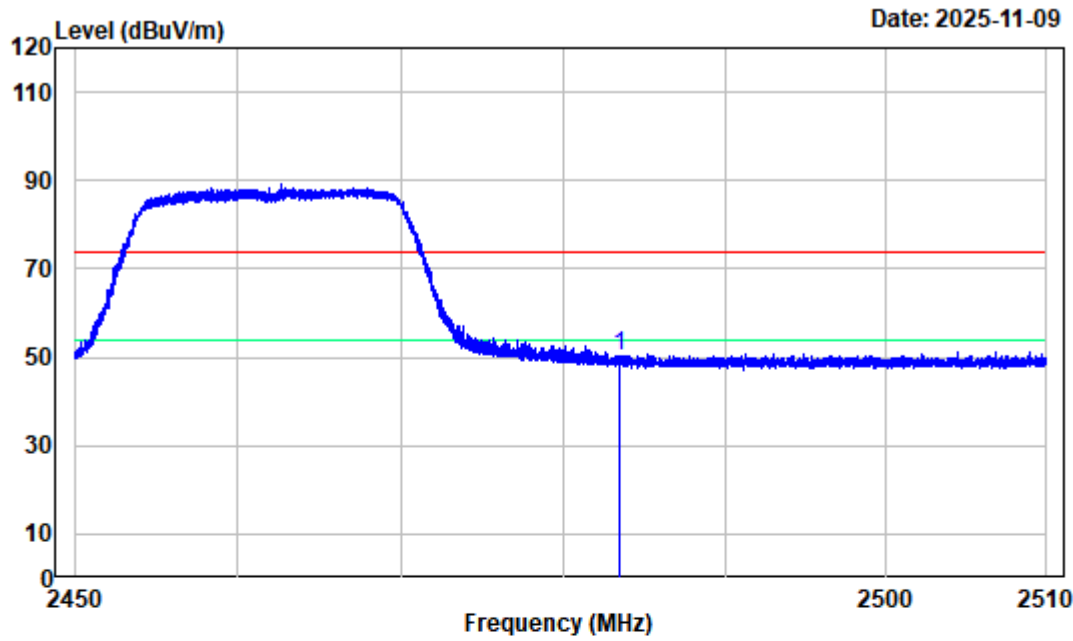
2.4G WIFI 802.11g High Channel Bandedge\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11g High Channel 2462MHz Bandedge  
SA setting : Peak:RBW:1MHz,VBW:3MHz

|   | Freq     | Factor | Read Level | Level  | Limit Line | Over Limit | Remark |
|---|----------|--------|------------|--------|------------|------------|--------|
|   | MHz      | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 | 2483.500 | -10.23 | 61.08      | 50.85  | 74.00      | -23.15     | peak   |
| 2 | 2483.500 | -10.23 | 61.08      | 50.85  | 74.00      | -23.15     | peak   |

2.4G WIFI 802.11g High Channel Bandedge\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

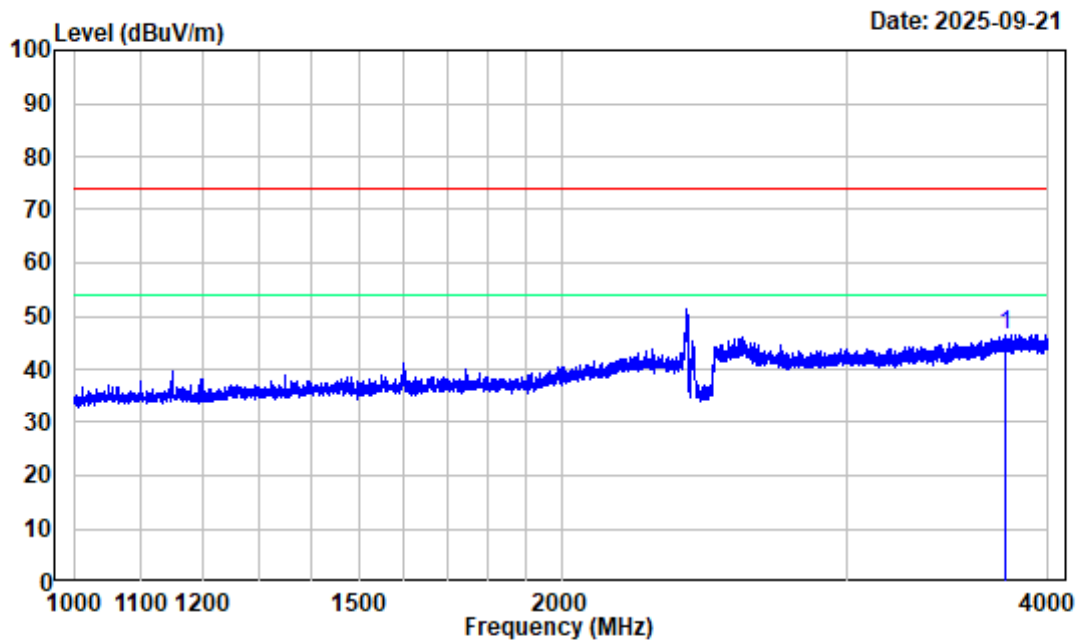
Tester:Kevin Lv

Note : 2.4G WIFI 802.11g High Channel 2462MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 60.67      | 50.44  | 74.00      | -23.56     | peak   |

2.4G WIFI 802.11n20 Low Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

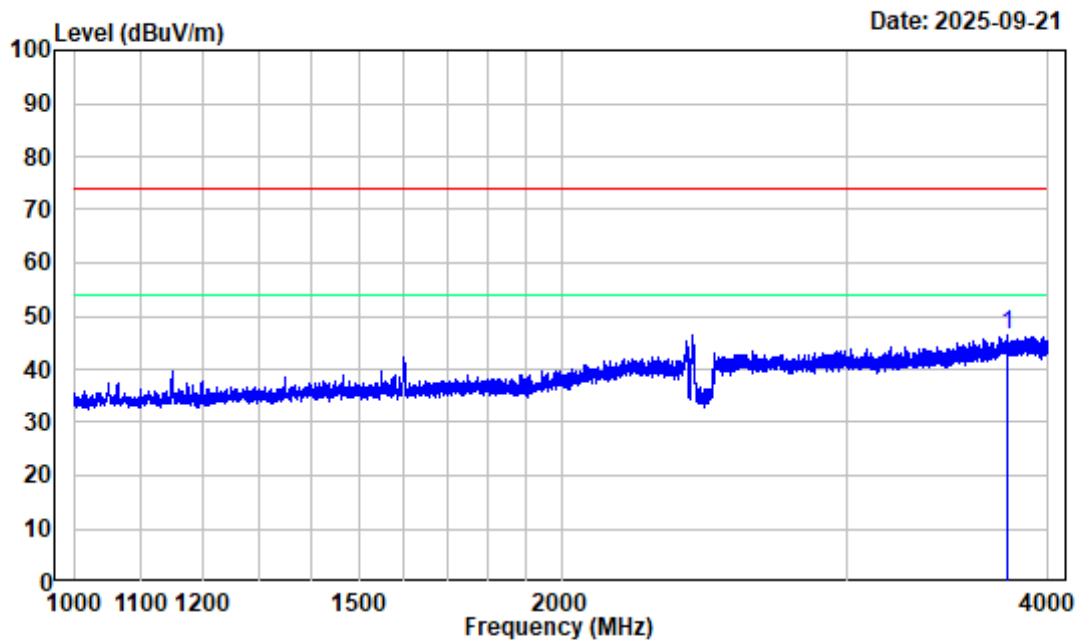
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n20 Low Channel 2412MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3768.625 | -8.57      | 55.05  | 46.48  | 74.00 | -27.52 peak |

2.4G WIFI 802.11n20 Low Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

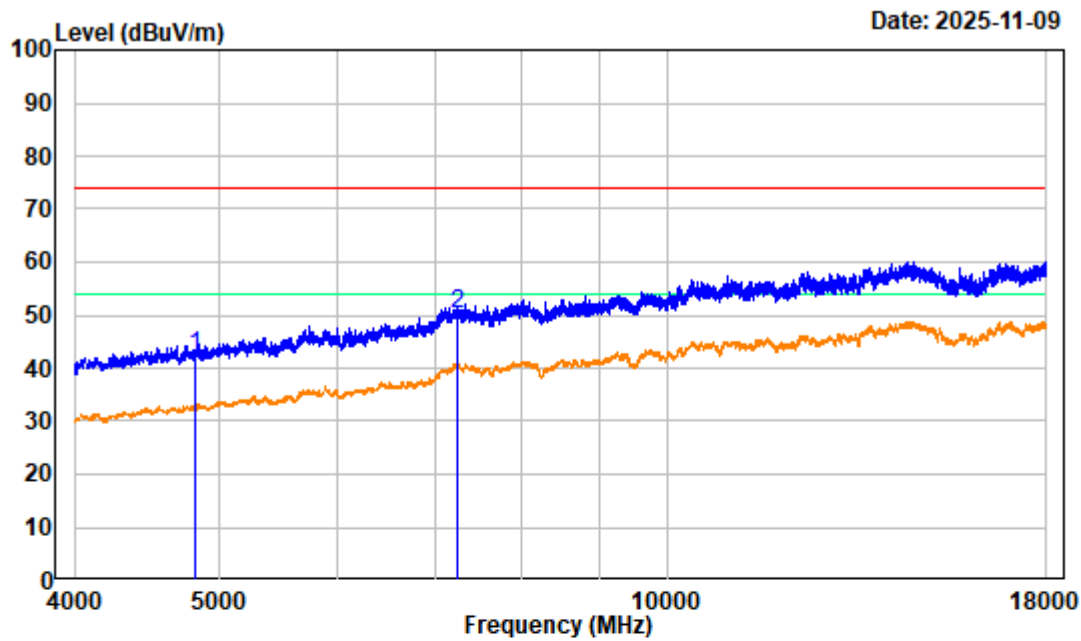
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n20 Low Channel 2412MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3774.250 | -8.56      | 54.88  | 46.32  | 74.00 | -27.68 peak |

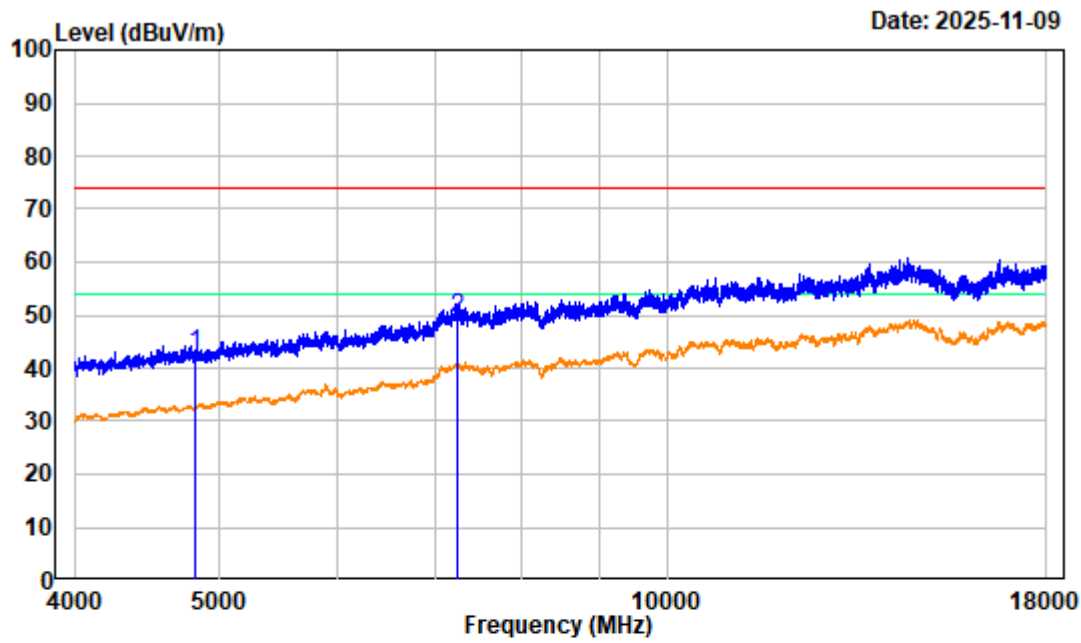
2.4G WIFI 802.11n20 Low Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11N20 Low Channel 2412MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4824.000 | -6.64      | 48.73  | 42.09      | 74.00      | -31.91 peak |
| 2           | 7236.000 | -1.32      | 51.50  | 50.18      | 74.00      | -23.82 peak |

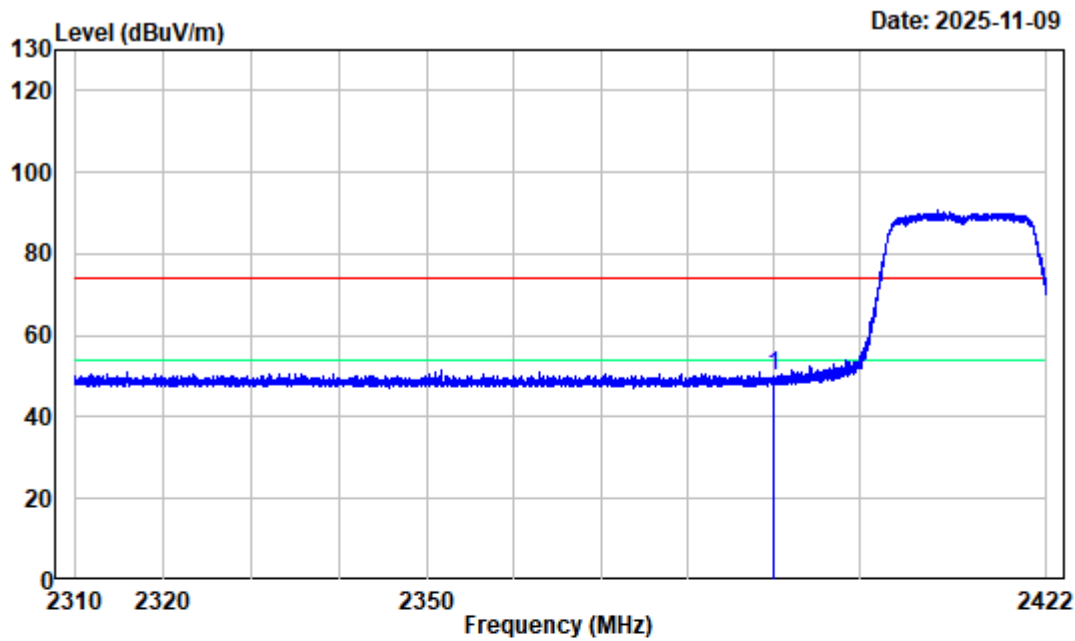
2.4G WIFI 802.11n20 Low Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11N20 Low Channel 2412MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4824.000 | -6.64  | 49.10 | 42.46  | 74.00  | -31.54 | peak   |
| 2 | 7236.000 | -1.32  | 50.79 | 49.47  | 74.00  | -24.53 | peak   |

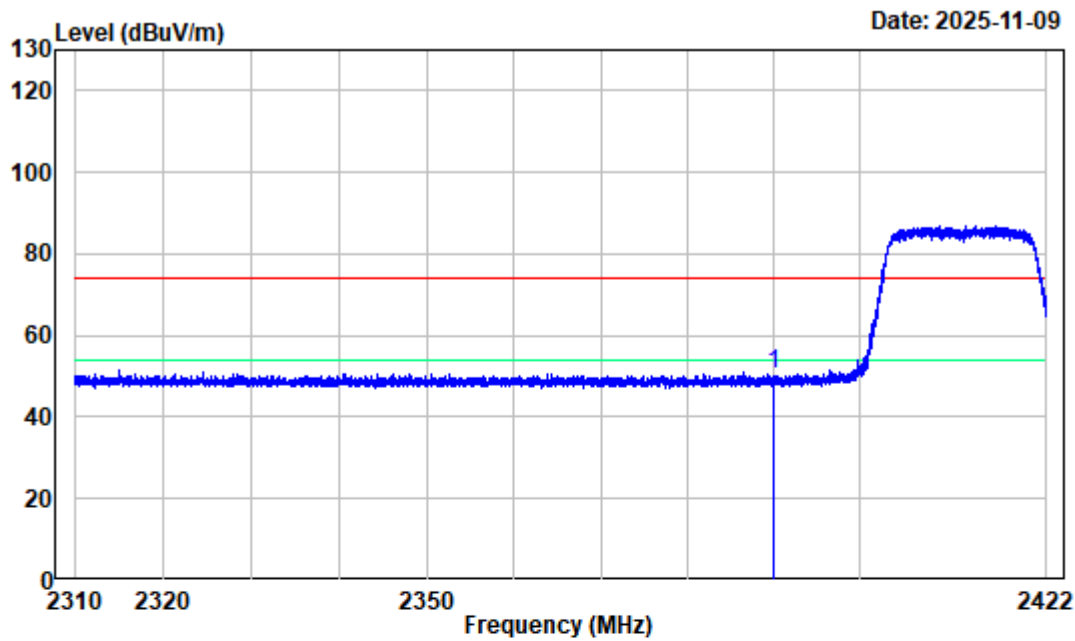
2.4G WIFI 802.11n20 Low Channel Bandedge\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting                      Tester:Kevin Lv  
Note : 2.4G WIFI 802.11n20 Low Channel 2412MHz Bandedge  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 60.07      | 49.82  | 74.00      | -24.18     | peak   |

2.4G WIFI 802.11n20 Low Channel Bandedge\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

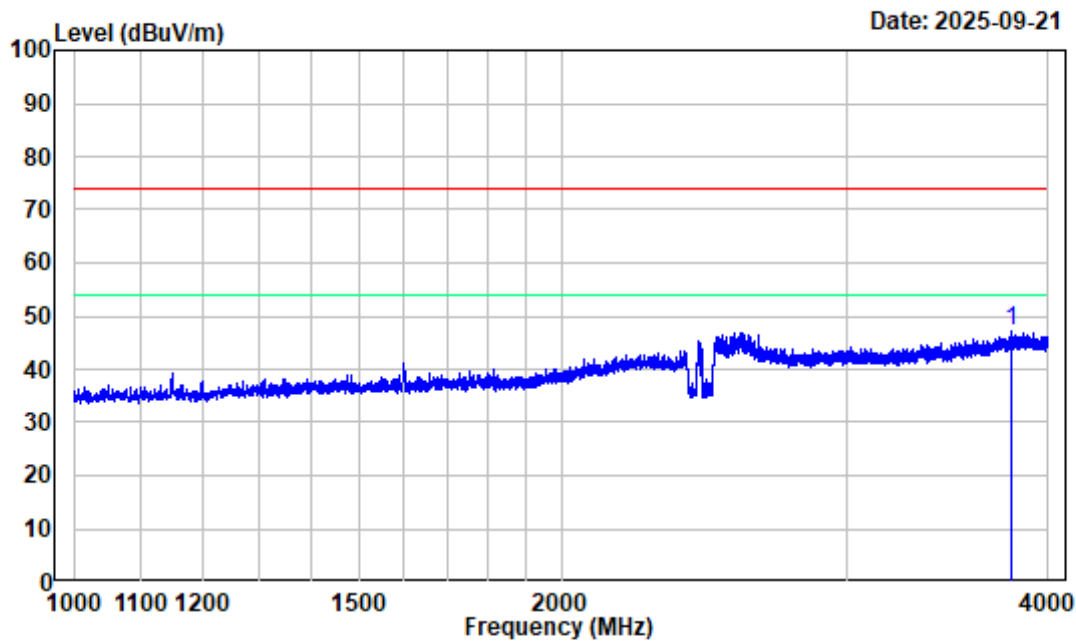
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n20 Low Channel 2412MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 60.70      | 50.45  | 74.00      | -23.55     | peak   |

2.4G WIFI 802.11n20 Middle Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

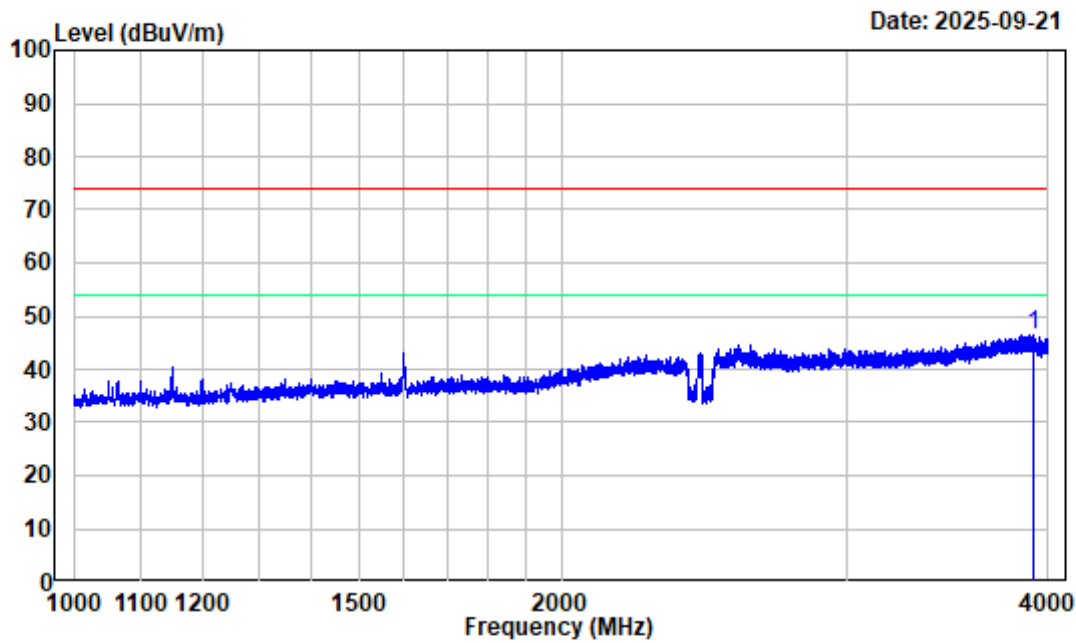
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n20 Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 3797.500 | -8.49      | 55.56  | 47.07      | 74.00      | -26.93 peak |

2.4G WIFI 802.11n20 Middle Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

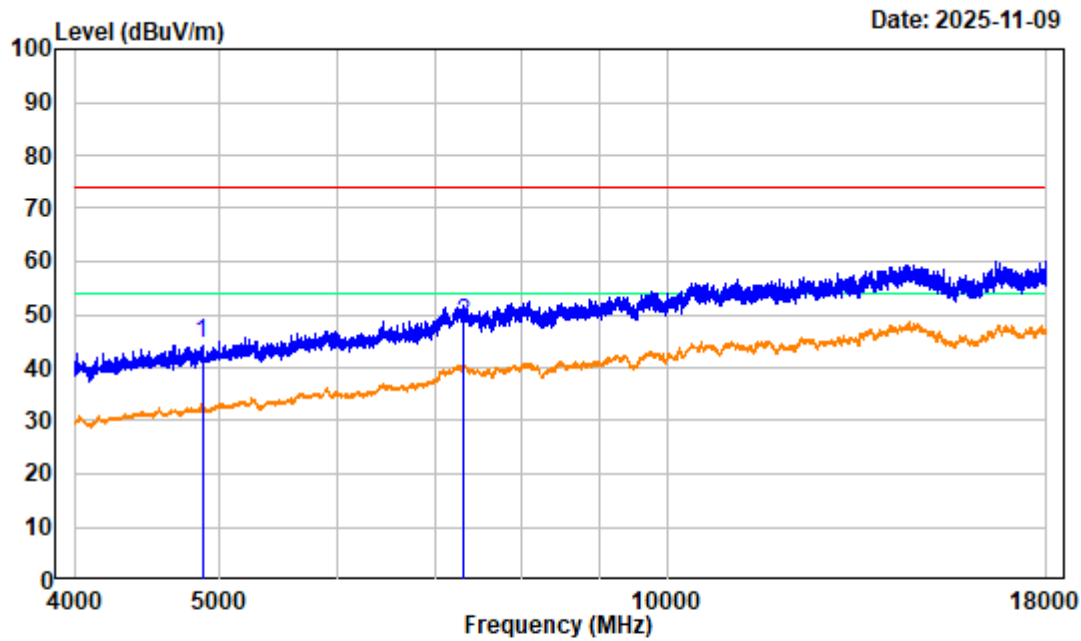
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n20 Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 3917.875 | -8.09      | 54.64  | 46.55      | 74.00      | -27.45 peak |

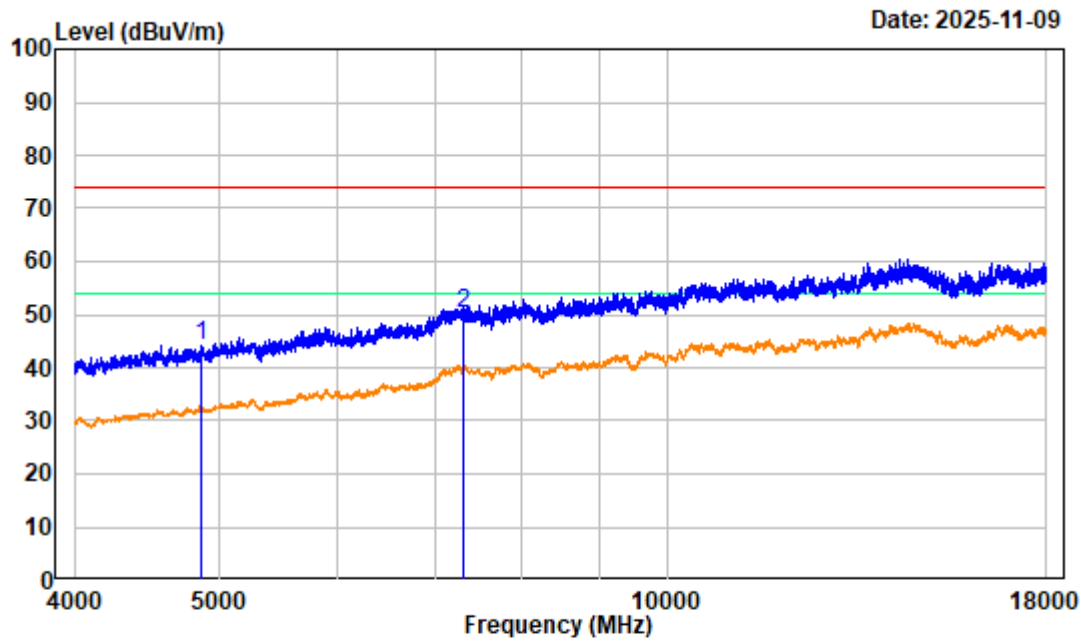
2.4G WIFI 802.11n20 Middle Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11n20 Middle Channel 2437MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4874.000 | -6.58      | 50.94  | 44.36      | 74.00      | -29.64 peak |
| 2           | 7311.000 | -1.12      | 49.42  | 48.30      | 74.00      | -25.70 peak |

2.4G WIFI 802.11n20 Middle Channel 4GHz-18GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

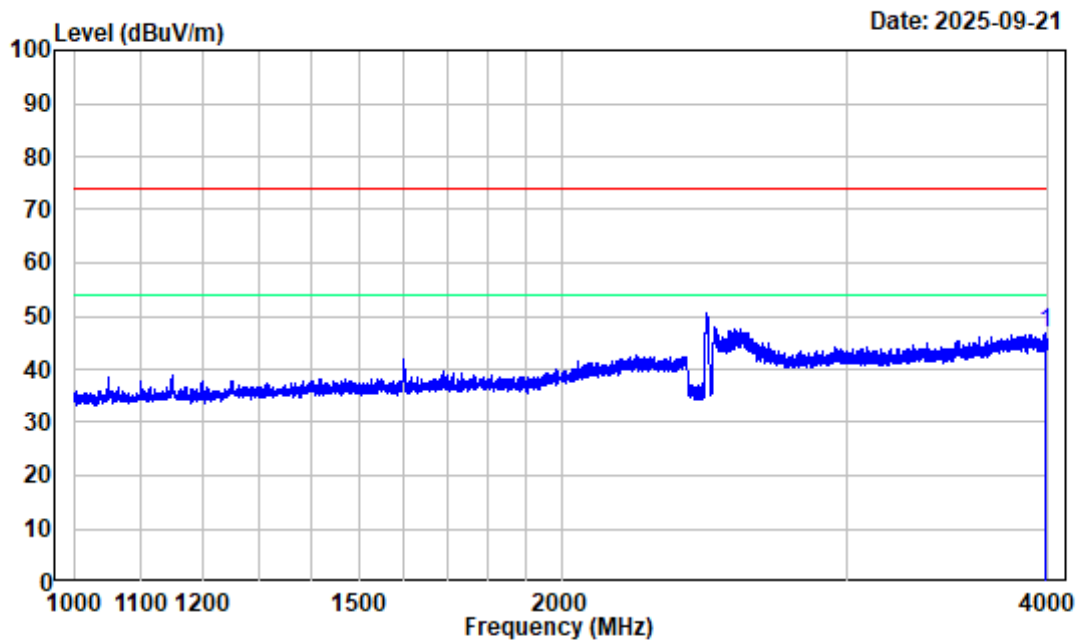
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n20 Middle Channel 2437MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4873.250 | -6.59      | 50.55  | 43.96      | 74.00      | -30.04 Peak |
| 2           | 7311.000 | -1.12      | 51.24  | 50.12      | 74.00      | -23.88 peak |

2.4G WIFI 802.11n20 High Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

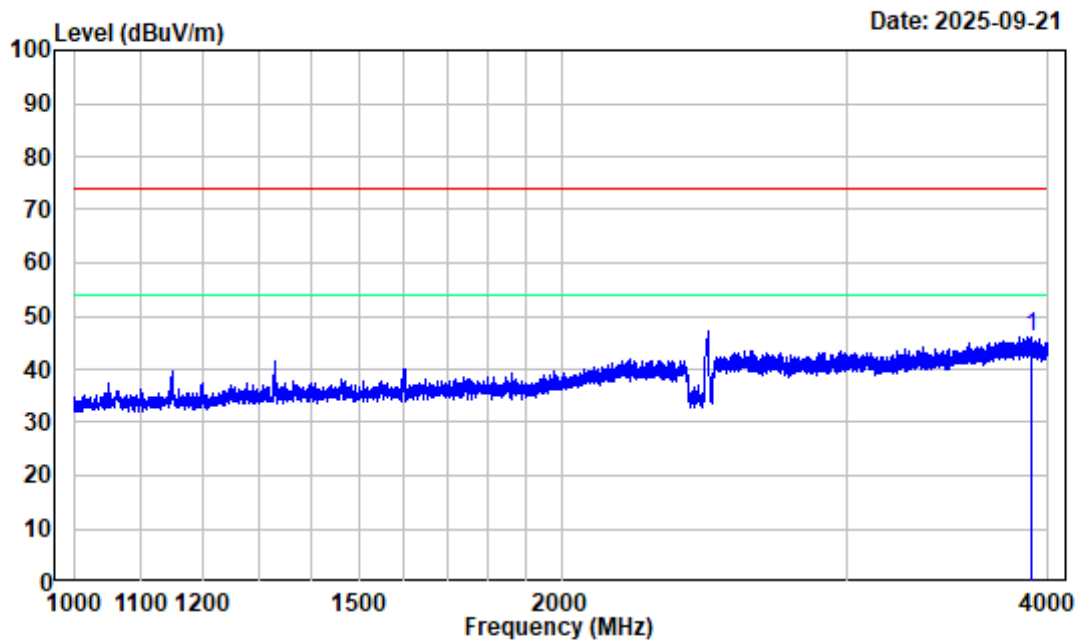
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n20 High Channel 2462MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 3986.875 | -8.19      | 54.86  | 46.67      | 74.00      | -27.33 peak |

2.4G WIFI 802.11n20 High Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

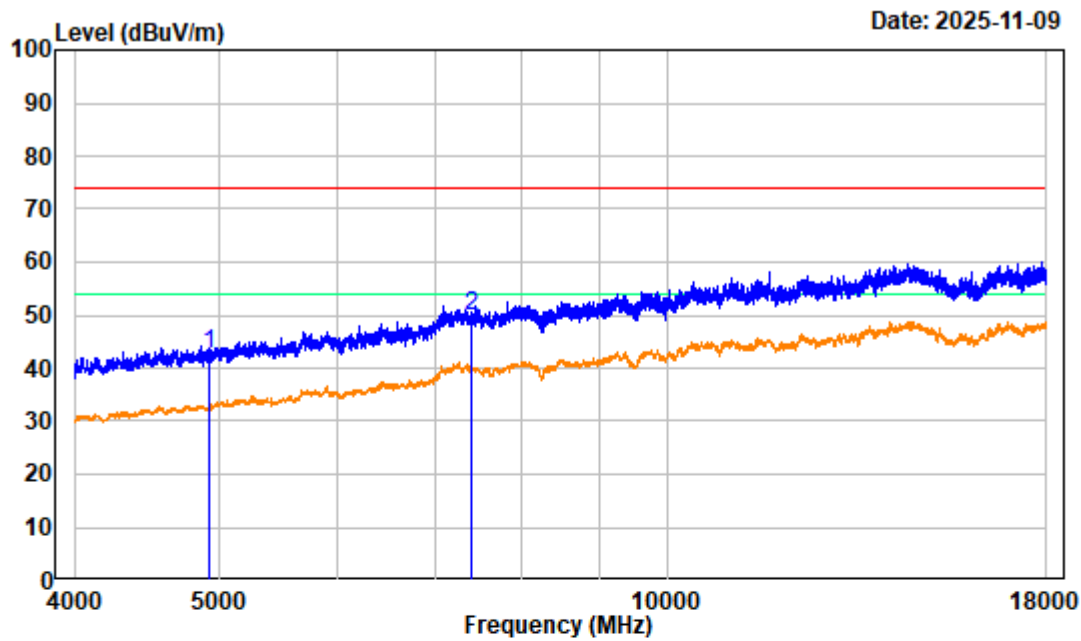
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n20 High Channel 2462MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |       | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|-------|------------|--------|------------|------------|--------|
| MHz         | dB/m  | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 3910.375  | -8.01 | 54.05      | 46.04  | 74.00      | -27.96     | peak   |

2.4G WIFI 802.11n20 High Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

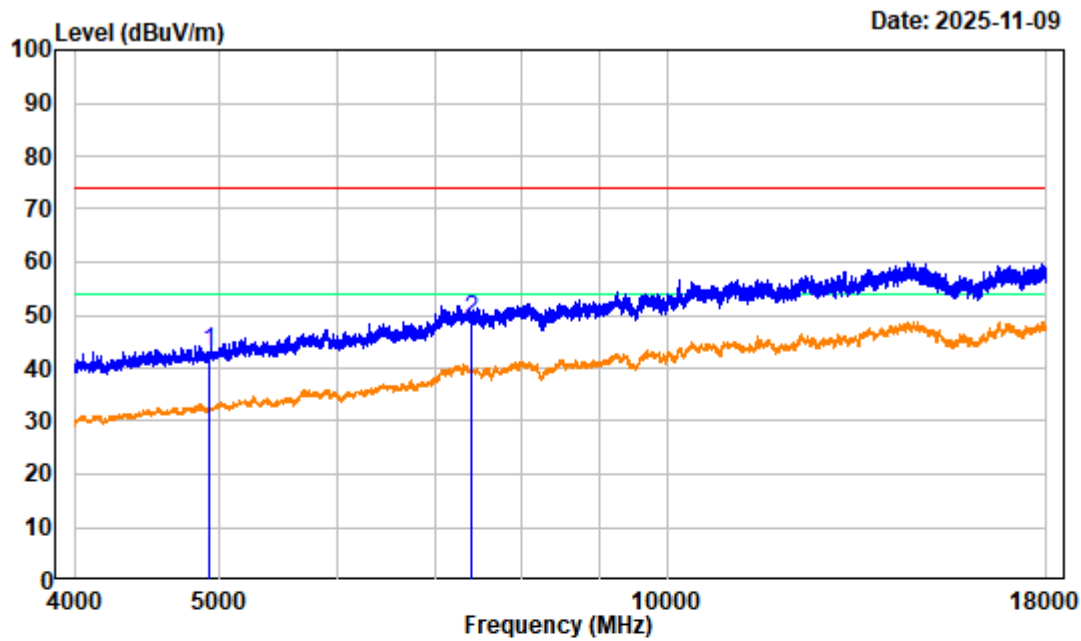
Tester:Kevin Lv

Note : 2.4G WIFI 802.11N20 High Channel 2462MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4924.000 | -6.48  | 49.12 | 42.64  | 74.00  | -31.36 | peak   |
| 2 | 7386.000 | -1.31  | 50.98 | 49.67  | 74.00  | -24.33 | peak   |

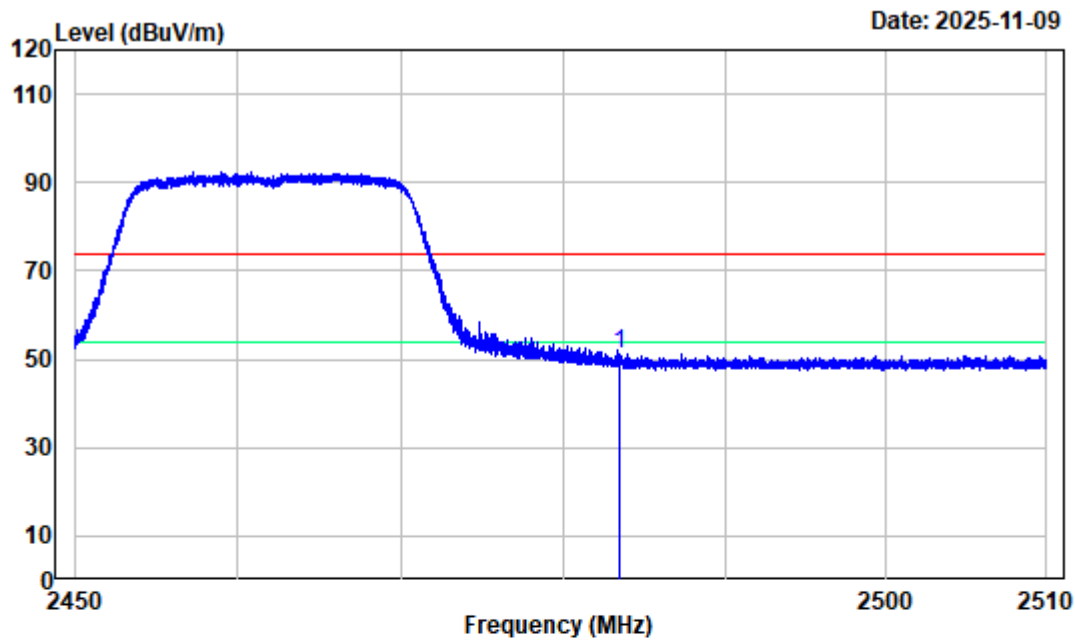
2.4G WIFI 802.11n20 High Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11N20 High Channel 2462MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4924.000 | -6.48  | 49.66 | 43.18  | 74.00  | -30.82 | peak   |
| 2 | 7386.000 | -1.31  | 50.43 | 49.12  | 74.00  | -24.88 | peak   |

2.4G WIFI 802.11n20 High Channel Bandedge\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

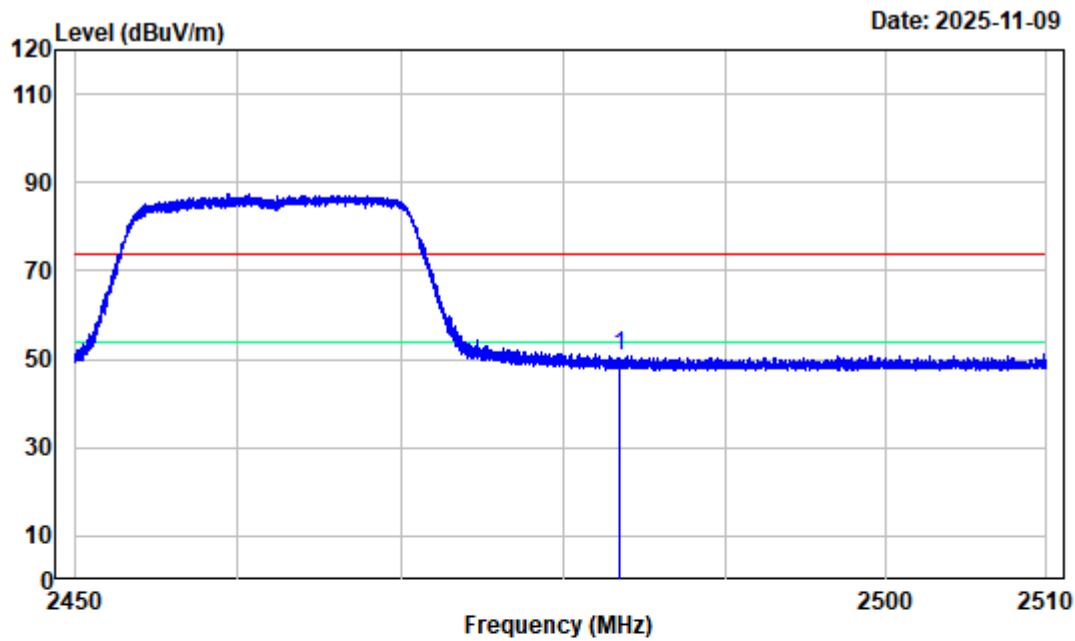
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n20 High Channel 2462MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 61.35      | 51.12  | 74.00      | -22.88     | peak   |

2.4G WIFI 802.11n20 High Channel Bandedge\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

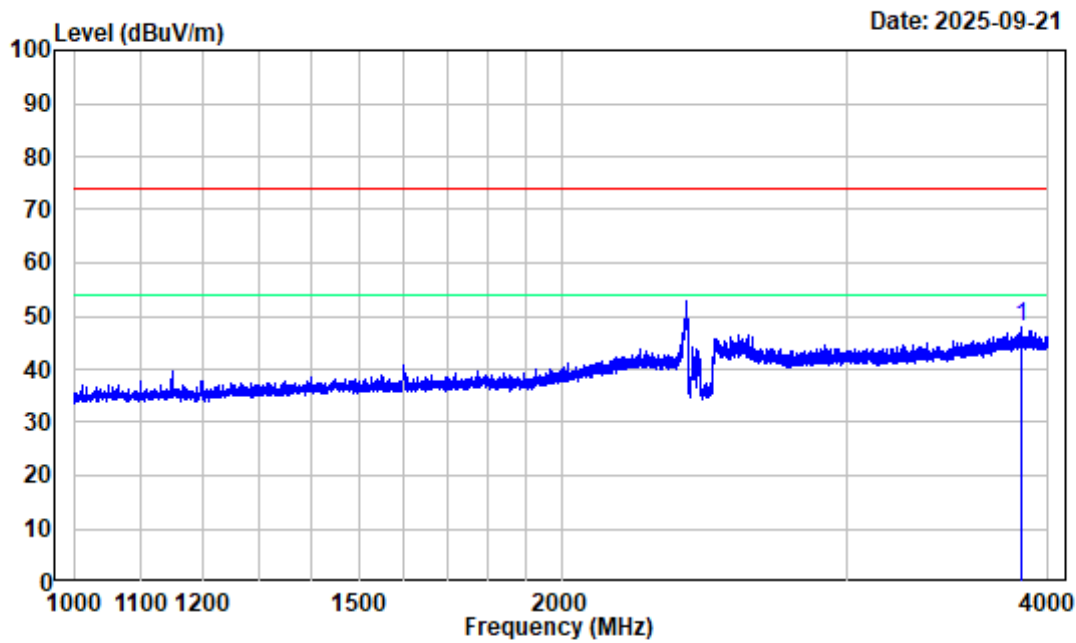
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n20 High Channel 2462MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 60.91      | 50.68  | 74.00      | -23.32     | peak   |

2.4G WIFI 802.11n40 Low Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

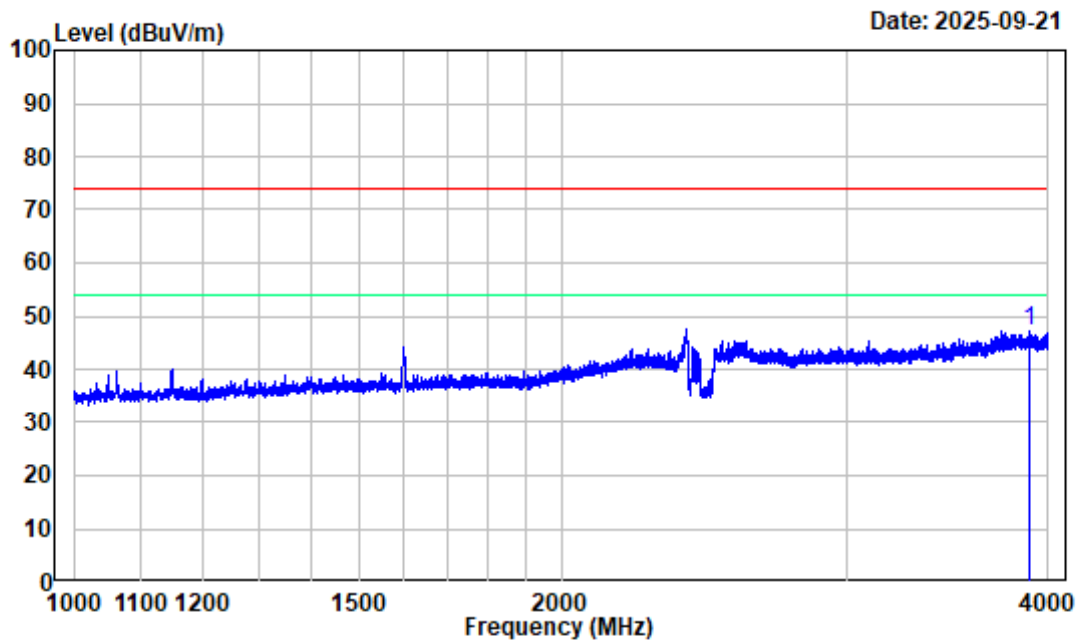
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n40 Low Channel 2422MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3849.625 | -8.23      | 56.10  | 47.87  | 74.00 | -26.13 peak |

2.4G WIFI 802.11n40 Low Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

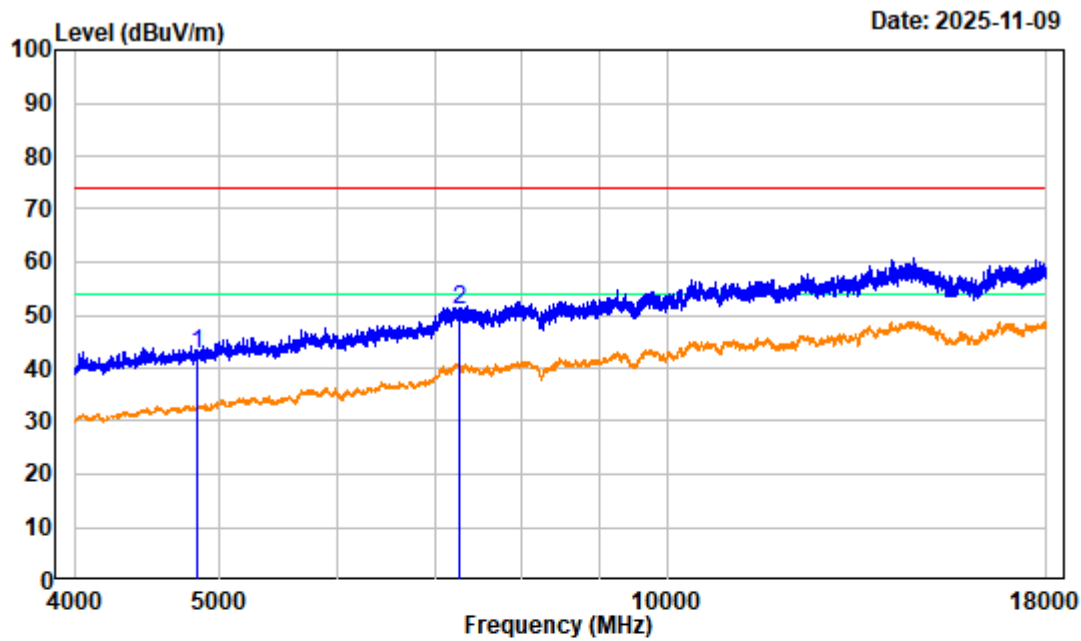
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n40 Low Channel 2422MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3896.500 | -7.91      | 55.26  | 47.35  | 74.00 | -26.65 peak |

2.4G WIFI 802.11n40 Low Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

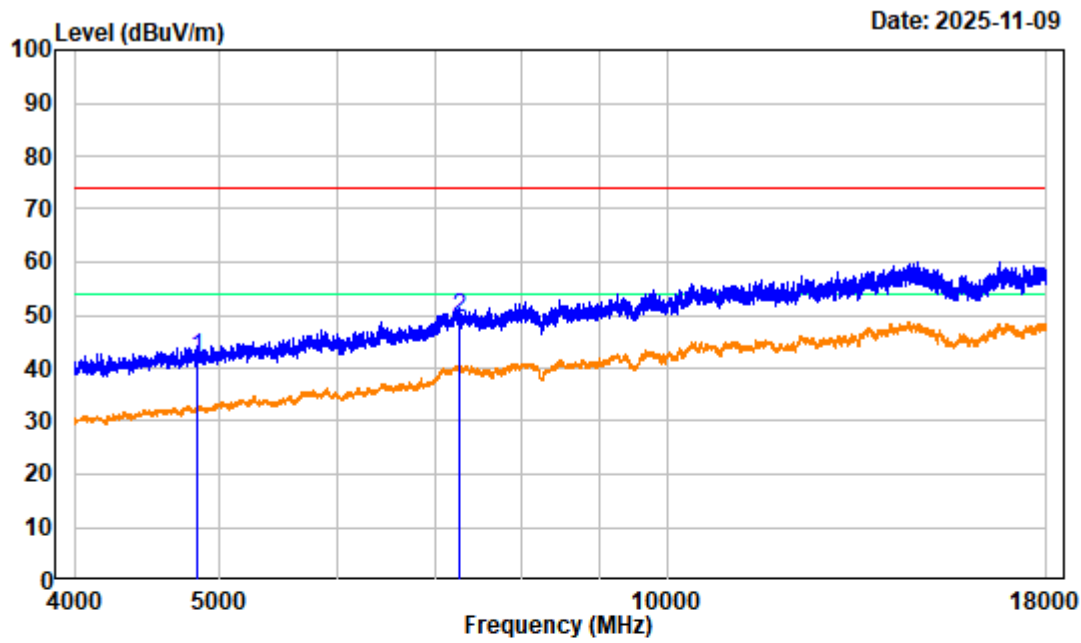
Note : 2.4G WIFI 802.11N40 Low Channel 2422MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Tester:Kevin Lv

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4843.500 | -6.64      | 49.34  | 42.70      | 74.00      | -31.30 peak |
| 2           | 7265.500 | -1.23      | 52.32  | 51.09      | 74.00      | -22.91 peak |

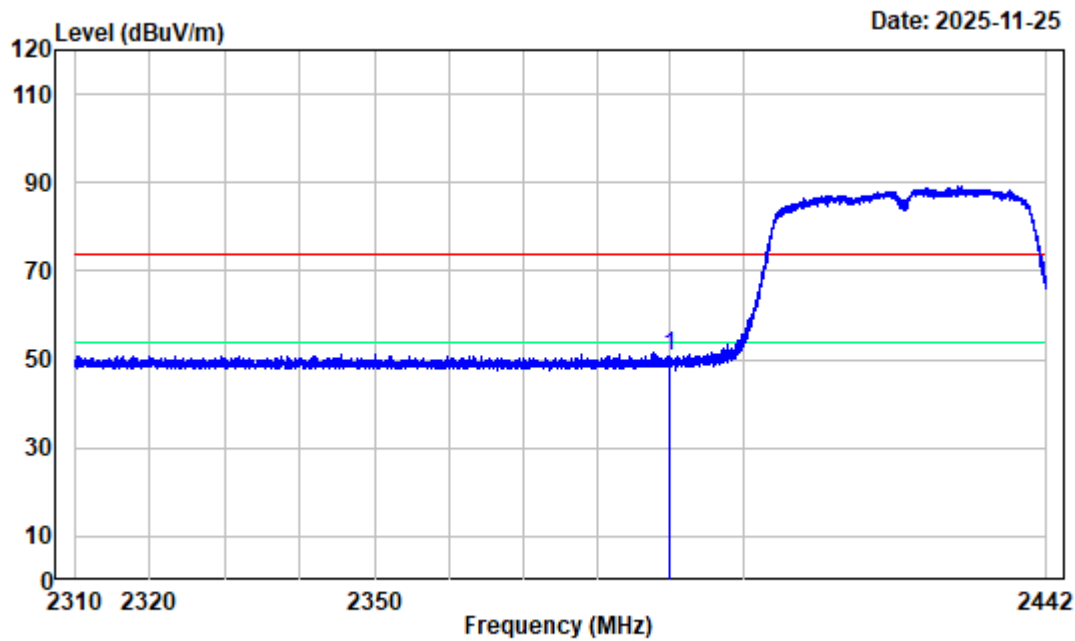
2.4G WIFI 802.11n40 Low Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11N40 Low Channel 2422MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4843.500 | -6.64  | 48.39 | 41.75  | 74.00  | -32.25 | peak   |
| 2 | 7265.500 | -1.23  | 50.49 | 49.26  | 74.00  | -24.74 | peak   |

2.4G WIFI 802.11n40 Low Channel Bandedge\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

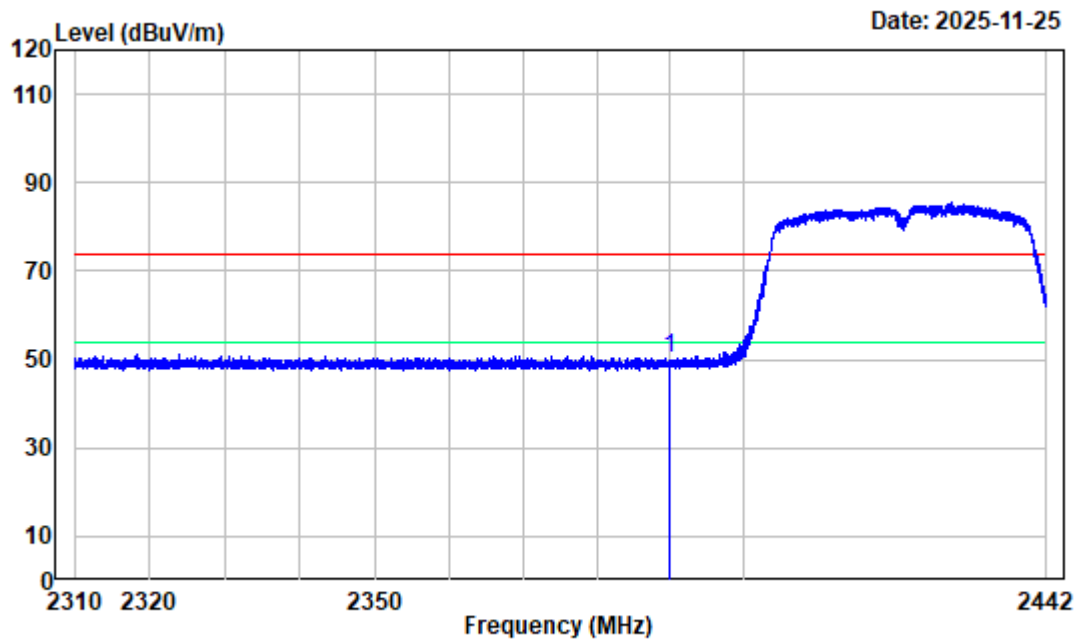
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n40 Low Channel 2422MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 60.96      | 50.71  | 74.00      | -23.29     | peak   |

2.4G WIFI 802.11n40 Low Channel Bandedge\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

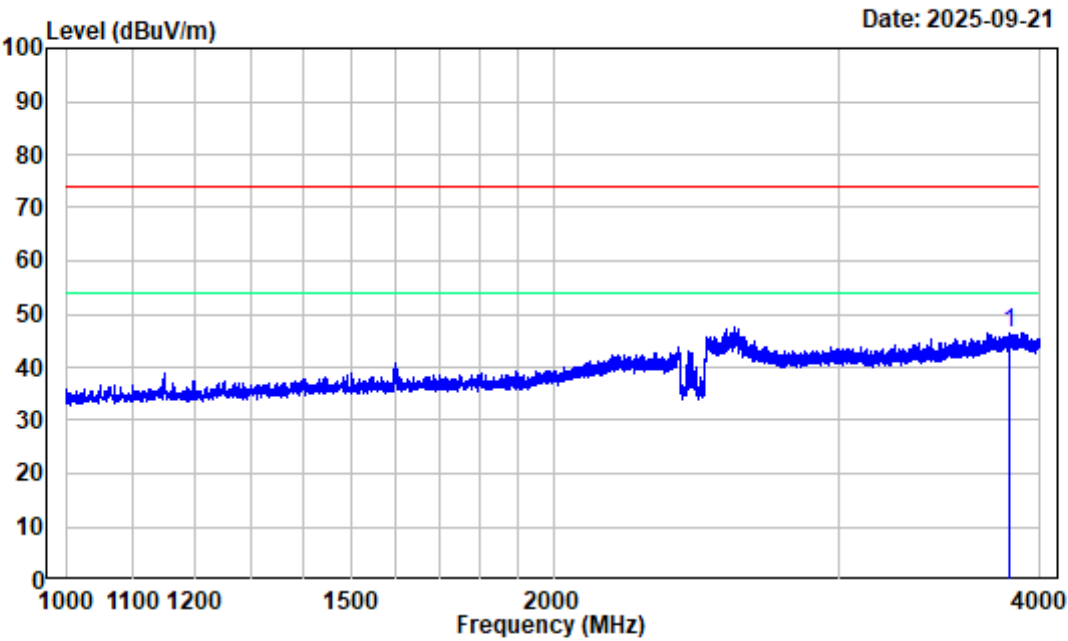
Note : 2.4G WIFI 802.11n40 Low Channel 2422MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

Tester:Kevin Lv

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2390.000  | -10.25 | 60.38      | 50.13  | 74.00      | -23.87     | peak   |

2.4G WIFI 802.11n40 Middle Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

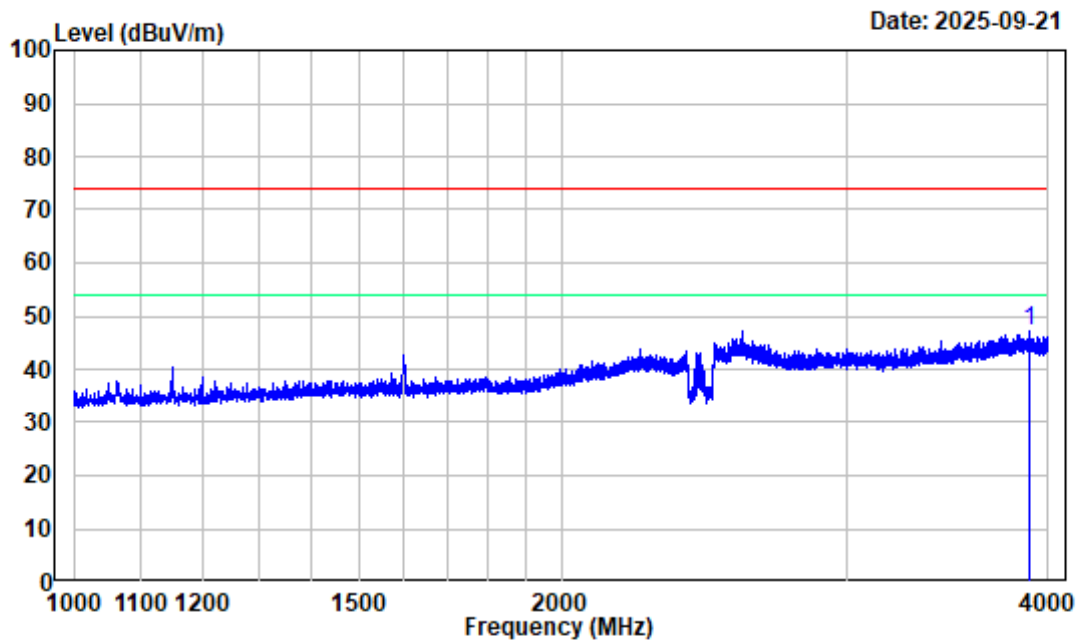
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n40 Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |       | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|-------|------------|--------|------------|------------|--------|
| MHz         | dB/m  | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 3834.250  | -8.31 | 54.71      | 46.40  | 74.00      | -27.60     | peak   |

2.4G WIFI 802.11n40 Middle Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

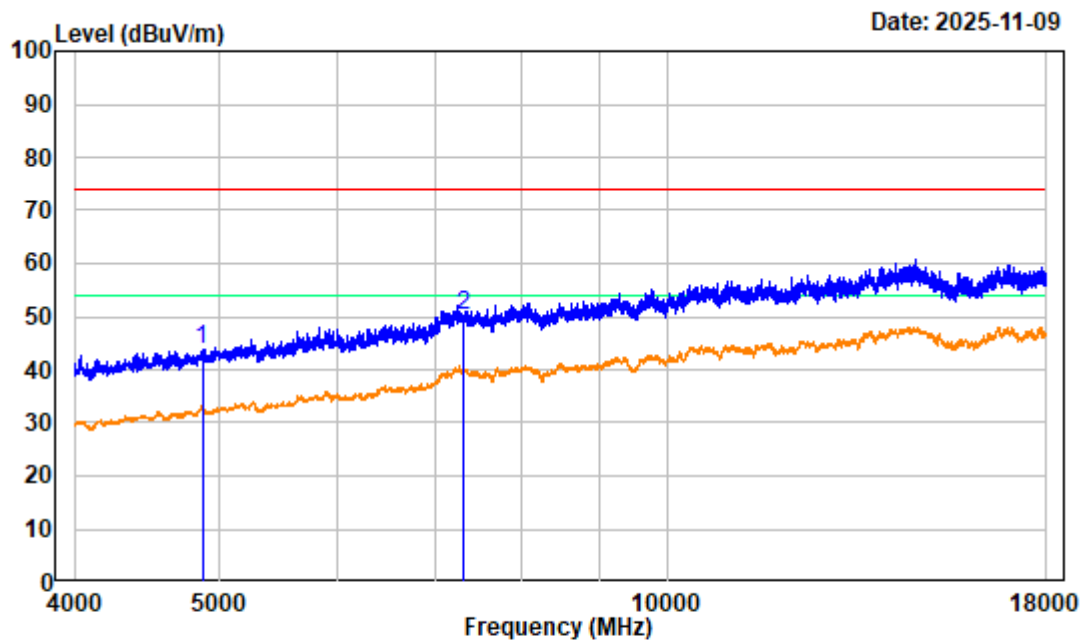
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n40 Middle Channel 2437MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3898.750 | -7.90      | 54.92  | 47.02  | 74.00 | -26.98 peak |

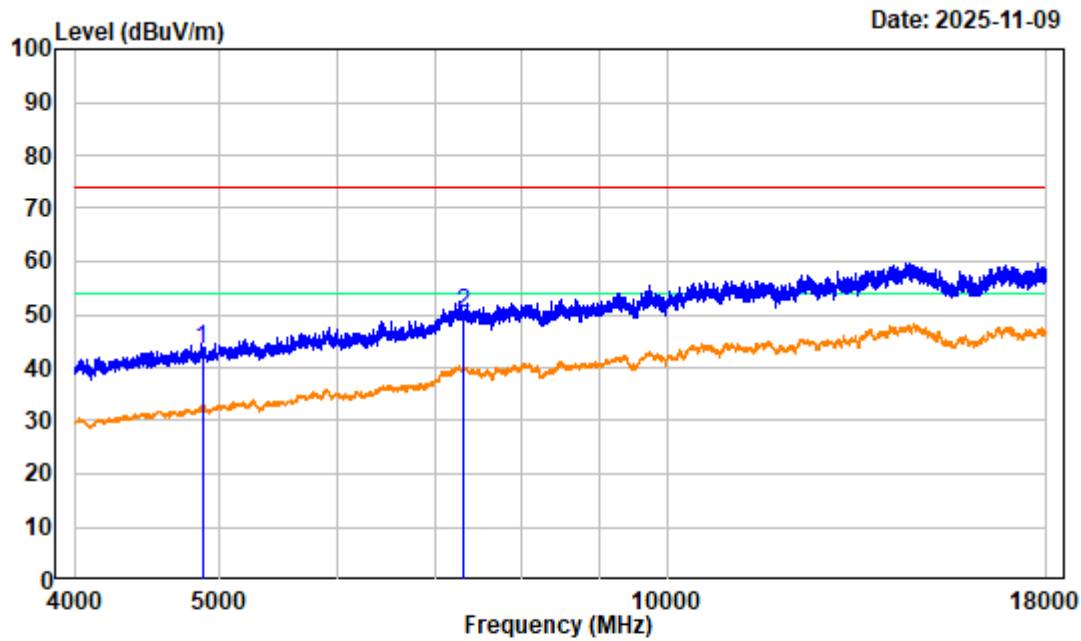
2.4G WIFI 802.11n40 Middle Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11n40 Middle Channel 2437MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4874.000 | -6.58      | 50.41  | 43.83      | 74.00      | -30.17 peak |
| 2           | 7311.000 | -1.12      | 51.38  | 50.26      | 74.00      | -23.74 peak |

2.4G WIFI 802.11n40 Middle Channel 4GHz-18GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

Test Mode : Transmitting

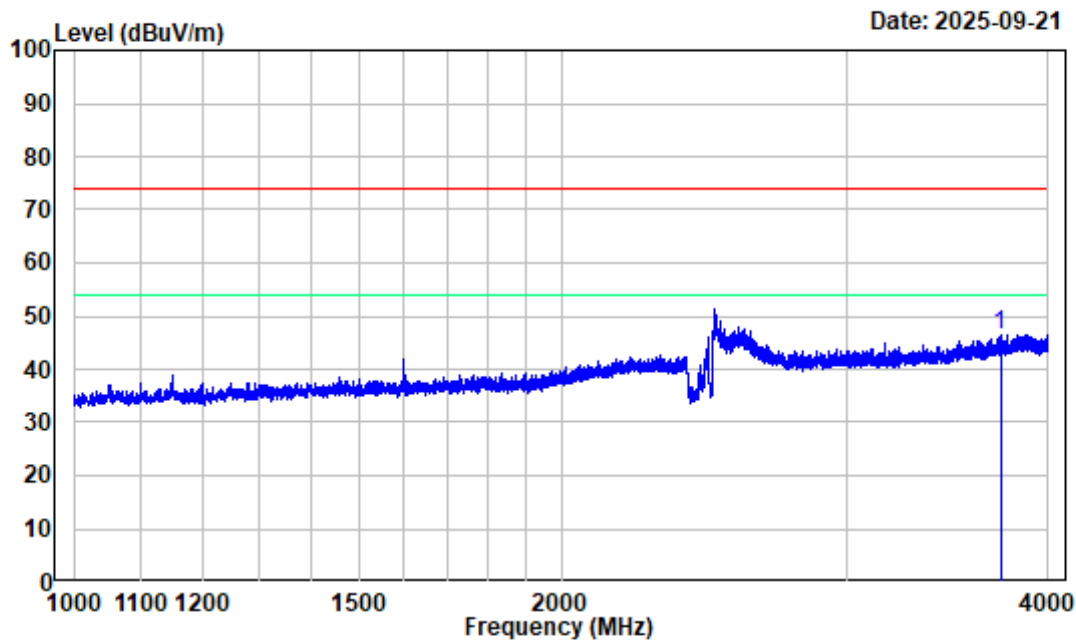
Tester:Kevin Lv

Note : 2.4G WIFI 802.11n40 Middle Channel 2437MHz 4GHz-18GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |          | Read Level | Level  | Limit Line | Over Limit | Remark      |
|-------------|----------|------------|--------|------------|------------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m     | dB         |             |
| 1           | 4874.000 | -6.58      | 49.98  | 43.40      | 74.00      | -30.60 Peak |
| 2           | 7311.000 | -1.12      | 51.37  | 50.25      | 74.00      | -23.75 Peak |

2.4G WIFI 802.11n40 High Channel 1GHz-4GHz\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

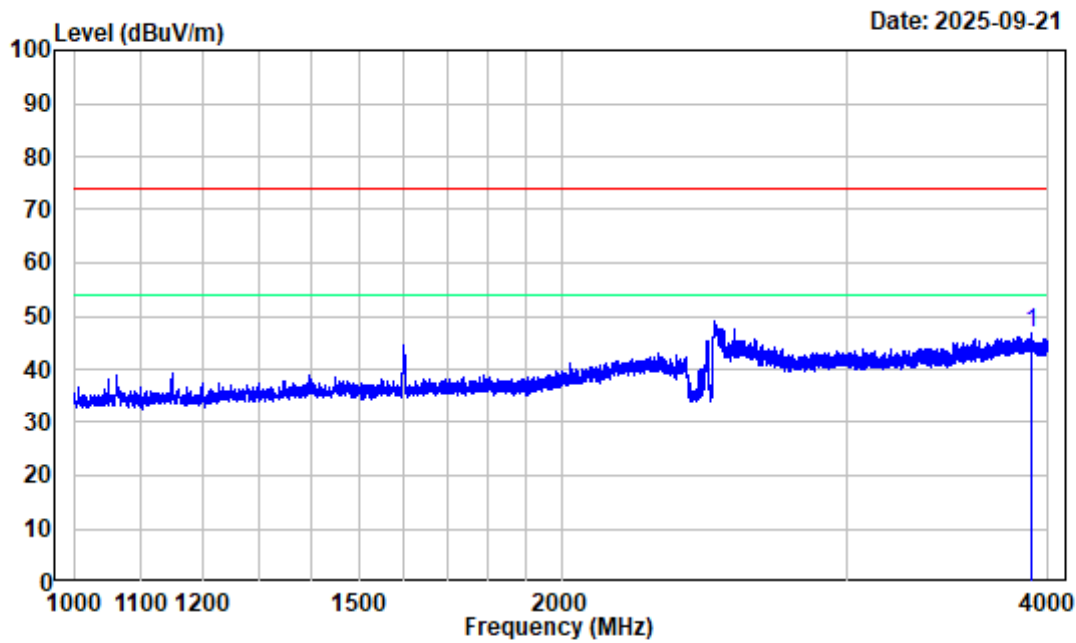
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n40 High Channel 2452MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |          | Read Level |        | Limit  | Over  | Remark      |
|-------------|----------|------------|--------|--------|-------|-------------|
| MHz         | dB/m     | dBuV       | dBuV/m | dBuV/m | dB    |             |
| 1           | 3737.500 | -8.71      | 55.28  | 46.57  | 74.00 | -27.43 peak |

2.4G WIFI 802.11n40 High Channel 1GHz-4GHz\_VERTICAL



Site : chamber

Condition : 3m VERTICAL

Project No.: 2504X24597E-RF

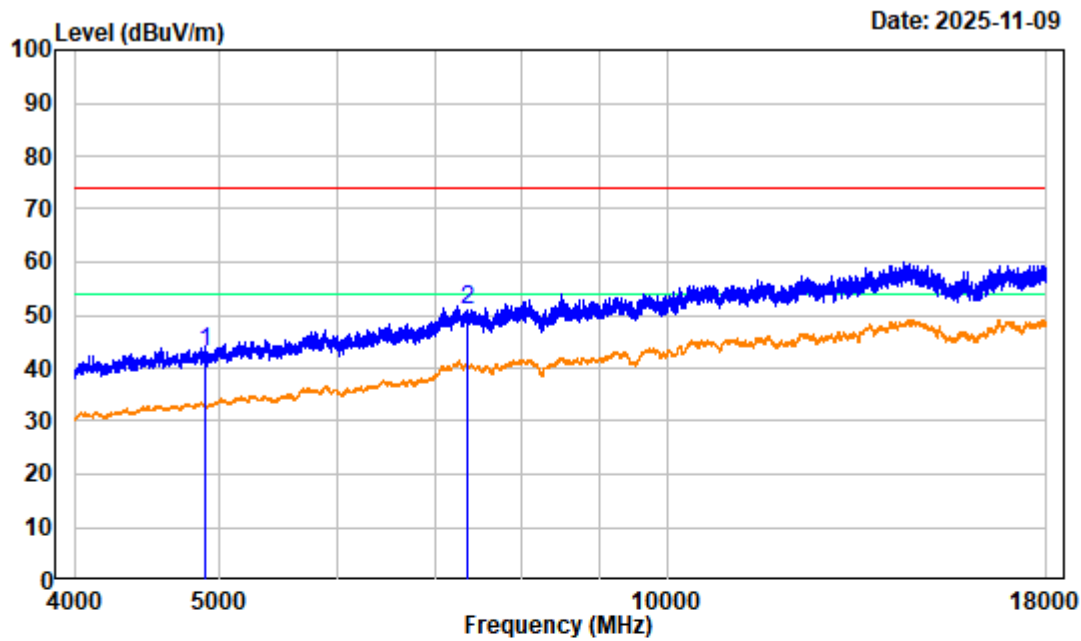
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n40 High Channel 2452MHz 1GHz-4GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |       | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|-------|------------|--------|------------|------------|--------|
| MHz         | dB/m  | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 3910.000  | -8.00 | 54.91      | 46.91  | 74.00      | -27.09     | peak   |

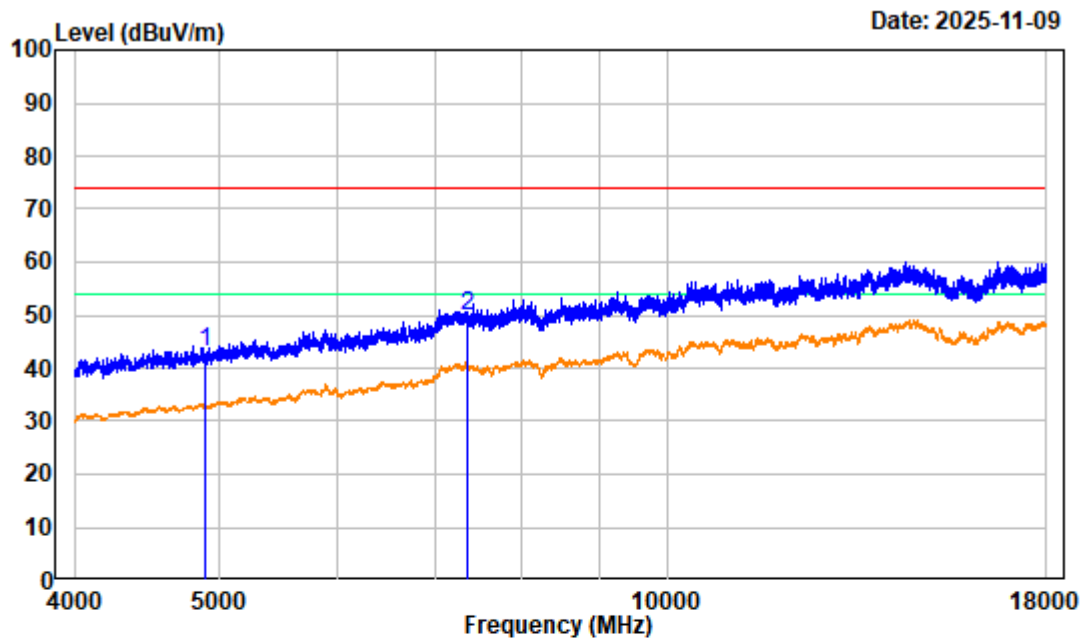
2.4G WIFI 802.11n40 High Channel 4GHz-18GHz\_HORIZONTAL



Site : chamber  
Condition : 3m HORIZONTAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11N40 High Channel 2452MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

|   | Freq     | Factor | Read  |        | Limit  | Over   | Remark |
|---|----------|--------|-------|--------|--------|--------|--------|
|   |          |        | Level | Level  | Line   | Limit  |        |
|   | MHz      | dB/m   | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 4904.000 | -6.52  | 49.56 | 43.04  | 74.00  | -30.96 | peak   |
| 2 | 7356.000 | -1.26  | 52.37 | 51.11  | 74.00  | -22.89 | peak   |

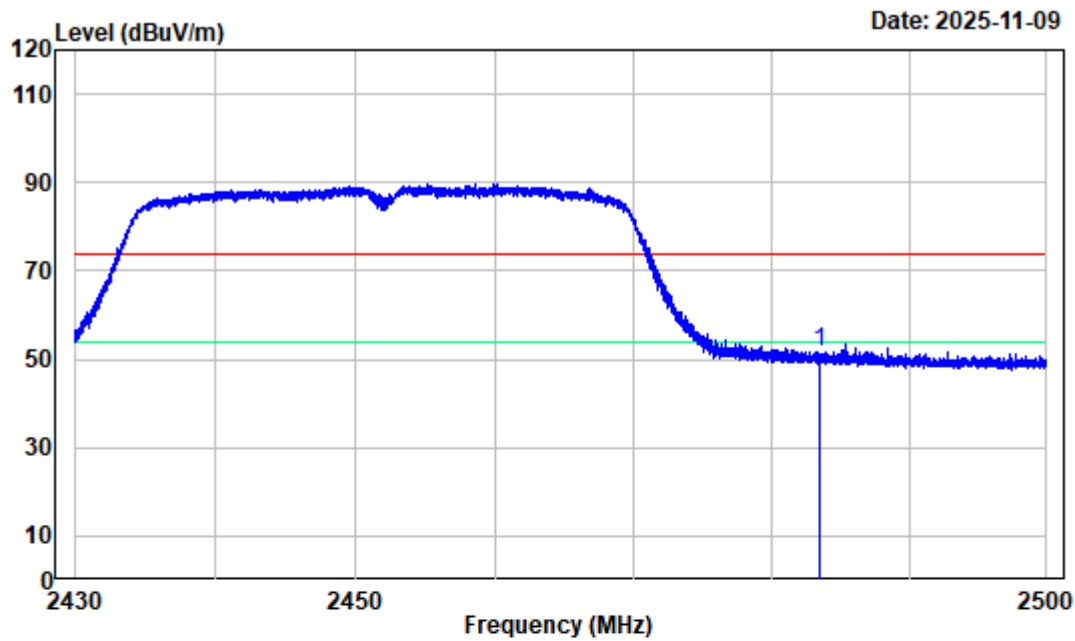
2.4G WIFI 802.11n40 High Channel 4GHz-18GHz\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11N40 High Channel 2452MHz 4GHz-18GHz  
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

| Freq Factor |       | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|-------|------------|--------|------------|------------|--------|
| MHz         | dB/m  | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 4904.000  | -6.52 | 49.71      | 43.19  | 74.00      | -30.81     | peak   |
| 2 7356.000  | -1.26 | 51.00      | 49.74  | 74.00      | -24.26     | peak   |

2.4G WIFI 802.11n40 High Channel Bandedge\_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504X24597E-RF

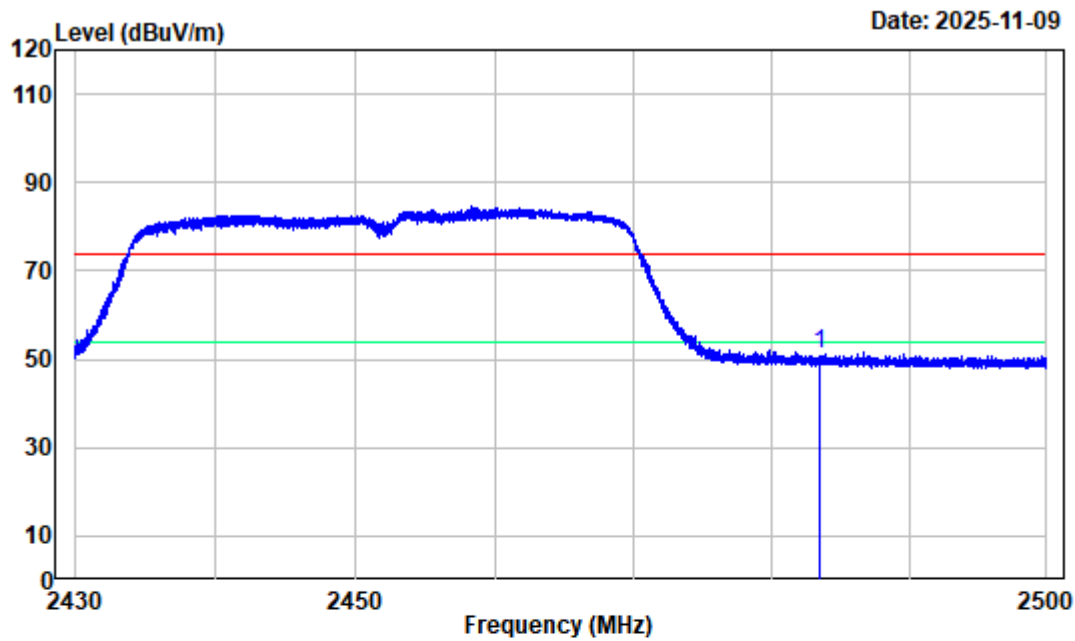
Test Mode : TransmittingTester:Kevin Lv

Note : 2.4G WIFI 802.11n40 High Channel 2452MHz Bandedge

SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 61.78      | 51.55  | 74.00      | -22.45     | peak   |

2.4G WIFI 802.11n40 High Channel Bandedge\_VERTICAL



Site : chamber  
Condition : 3m VERTICAL  
Project No.: 2504X24597E-RF  
Test Mode : Transmitting Tester:Kevin Lv  
Note : 2.4G WIFI 802.11n40 High Channel 2452MHz Bandedge  
SA setting : Peak:RBW:1MHz,VBW:3MHz

| Freq Factor |        | Read Level | Level  | Limit Line | Over Limit | Remark |
|-------------|--------|------------|--------|------------|------------|--------|
| MHz         | dB/m   | dBuV       | dBuV/m | dBuV/m     | dB         |        |
| 1 2483.500  | -10.23 | 61.19      | 50.96  | 74.00      | -23.04     | peak   |

## 6 dB EMISSION BANDWIDTH & OCCUPIED BANDWIDTH

### Applicable Standard

According to FCC §15.247(a)(2), systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### Test Procedure

According to ANSI C63.10-2020, section 11.8 and section 6.9

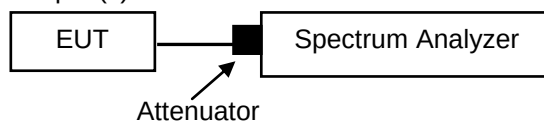
The steps for the first option are as follows:

- Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- Set the VBW  $\geq [3 \times \text{RBW}]$ .
- Detector = peak.
- Trace mode = max-hold.
- Sweep = No faster than coupled (auto) time.
- Allow the trace to stabilize.
- Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB down amplitude” value, then it shall be as close as possible to this value.

According to ANSI C63.10-2020, section 7.8.6 and section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
- Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (\text{OBW}/\text{RBW})]$  below the reference level. Specific guidance is given in 4.1.6.2.
- Step a) through step c) might require iteration to adjust within the specified range.
- Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.
- Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



### Test Data

**Test Result:** Compliance. Please refer to the Appendix.

## MAXIMUM CONDUCTED OUTPUT POWER

### Applicable Standard

According to 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.

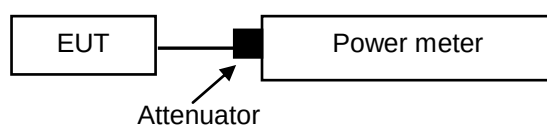
### Test Procedure

According to ANSI C63.10-2020, 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.

According to ANSI C63.10-2020, section 11.9.2.3

- Measurement using a power meter (PM)(Method AVGPM)
  - a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent, if all of the conditions listed below are satisfied:
    - 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
    - 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
    - 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
  - b) If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal as described in 11.6.
  - c) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
  - d) Correct the measurement in dBm by adding  $[10 \log (1 / D)]$ , where D is the duty cycle.



### Test Data

**Test Result:** Compliance. Please refer to the Appendix.

## CONDUCTED SPURIOUS EMISSION

### Applicable Standard

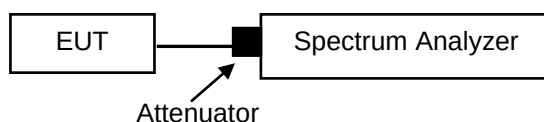
According to FCC §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within 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)).

### Test Procedure

According to ANSI C63.10-2020, section 11.11

- Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution. NOTE—the number of points can also be increased for large spans to retain frequency resolution
- Set the RBW: 1MHz(Conducted Spurious), 100 kHz(Band edge)
- Set the VBW  $\geq [3 \times \text{RBW}]$ .
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max-hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.



### Test Data

**Test Result:** Compliance. Please refer to the Appendix.

## POWER SPECTRAL DENSITY

### Applicable Standard

According to FCC §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### Test Procedure

According to ANSI C63.10-2020, section 11.10.2

- Method PKPSD (peak PSD)

The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:

- Set analyzer center frequency to DTS channel center frequency.
- Set the span  $> 1.5$  times the DTS bandwidth.
- Set the RBW to  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- Set the VBW  $\geq [3 \times \text{RBW}]$ .
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max-hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.
- If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

According to ANSI C63.10-2020, section 11.10.3

- Method AVGPS-1: (for duty cycle  $\geq 98\%$ )

The following procedure may be used when the maximum (average) conducted output power was used to determine compliance to the fundamental output power limit. This is the baseline method for determining the maximum (average) conducted PSD level. If the instrument has a power averaging (rms) detector, then it must be used; otherwise, use the sample detector. The EUT must be configured to transmit continuously ( $D \geq 98\%$ ), or else sweep triggering/signal gating must be implemented to help ensure that measurements are made only when the EUT is transmitting at its maximum power control level (no transmitter OFF time to be considered):

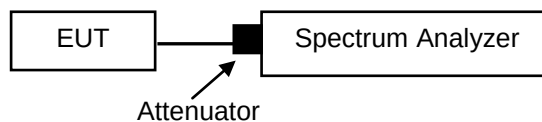
- Set instrument center frequency to DTS channel center frequency.
- Set span to  $> 1.5$  times the OBW.
- Set RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- Set VBW  $\geq [3 \times \text{RBW}]$ .
- Detector = power averaging (rms) or sample detector (when rms not available).
- Ensure that the number of measurement points in the sweep  $\geq [2 \times \text{span} / \text{RBW}]$ .
- Sweep time = auto couple.
- Employ trace averaging (rms) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.
- If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this might require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

According to ANSI C63.10-2020, section 11.10.5

● Method AVGPSD-2: (for duty cycle < 98% and constant duty cycle)

The following procedure is applicable when the EUT cannot be configured to transmit continuously (i.e.,  $D < 98\%$ ), when sweep triggering/signal gating cannot be used to measure only when the EUT is transmitting at its maximum power control level, and when the transmission duty cycle is constant (i.e., duty cycle variations are less than  $\pm 2\%$ ):

- a) Measure the duty cycle (D) of the transmitter output signal as described in 11.6.
- b) Set instrument center frequency to DTS channel center frequency.
- c) Set span to  $> 1.5$  times the OBW.
- d) Set RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- e) Set VBW  $\geq [3 \times \text{RBW}]$ .
- f) Detector = power averaging (rms) or sample detector (when rms not available).
- g) Ensure that the number of measurement points in the sweep  $\geq [2 \times \text{span} / \text{RBW}]$ .
- h) Sweep time = auto couple.
- i) Do not use sweep triggering; allow sweep to "free run."
- j) Employ trace averaging (rms) mode over a minimum of 100 traces.
- k) Use the peak marker function to determine the maximum amplitude level.
- l) Add  $[10 \log (1 / D)]$ , where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.
- m) If measured value exceeds requirement specified by regulatory agency, then reduce RBW (but no less than 3 kHz) and repeat (note that this might require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).



## Test Data

**Test Result:** Compliance. Please refer to the Appendix.

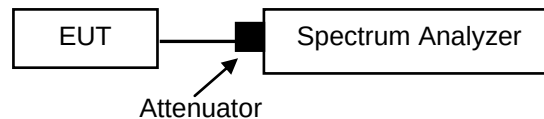
## DUTY CYCLE

### Test Procedure

According to ANSI C63.10-2020 Section 11.6

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.
- b) 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  $T \leq 16.7 \mu s$ .)



### Test Data

**Test Result:** Compliance. Please refer to the Appendix.

APPENDIX

Test Information:

|             |           |              |                      |
|-------------|-----------|--------------|----------------------|
| Sample No.: | 39YZ-2    | Test Date:   | 2025/9/27~2025/11/10 |
| Test Site:  | RF        | Test Mode:   | Transmitting         |
| Tester:     | Cayde Hou | Test Result: | Pass                 |

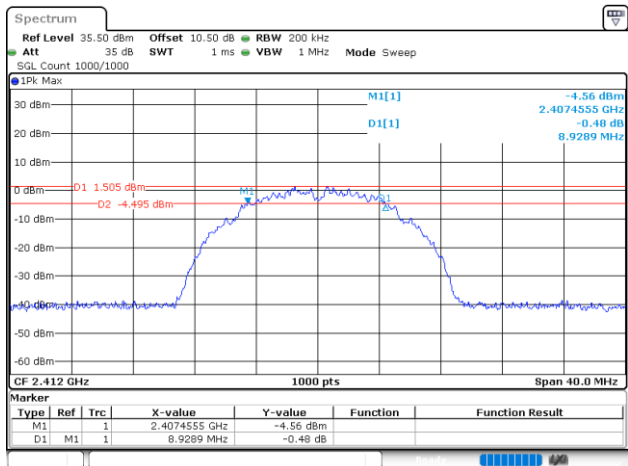
Environmental Conditions:

|                      |           |                              |       |                        |             |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|
| Temperature:<br>(°C) | 25.8~26.1 | Relative<br>Humidity:<br>(%) | 48~59 | ATM Pressure:<br>(kPa) | 100.1~100.7 |
|----------------------|-----------|------------------------------|-------|------------------------|-------------|

6dB Emission Bandwidth

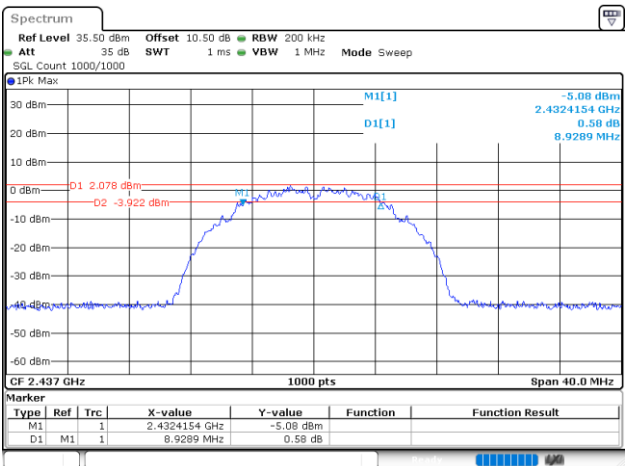
| Mode      | Test Frequency (MHz) | Result (MHz) | Limit (MHz) | Verdict |
|-----------|----------------------|--------------|-------------|---------|
| 802.11b   | 2412                 | 8.929        | ≥0.5        | Pass    |
|           | 2437                 | 8.929        | ≥0.5        | Pass    |
|           | 2462                 | 8.809        | ≥0.5        | Pass    |
| 802.11g   | 2412                 | 16.416       | ≥0.5        | Pass    |
|           | 2437                 | 16.416       | ≥0.5        | Pass    |
|           | 2462                 | 16.457       | ≥0.5        | Pass    |
| 802.11n20 | 2412                 | 17.257       | ≥0.5        | Pass    |
|           | 2437                 | 17.137       | ≥0.5        | Pass    |
|           | 2462                 | 17.297       | ≥0.5        | Pass    |
| 802.11n40 | 2422                 | 34.995       | ≥0.5        | Pass    |
|           | 2437                 | 35.155       | ≥0.5        | Pass    |
|           | 2452                 | 35.315       | ≥0.5        | Pass    |

802.11b\_2412MHz



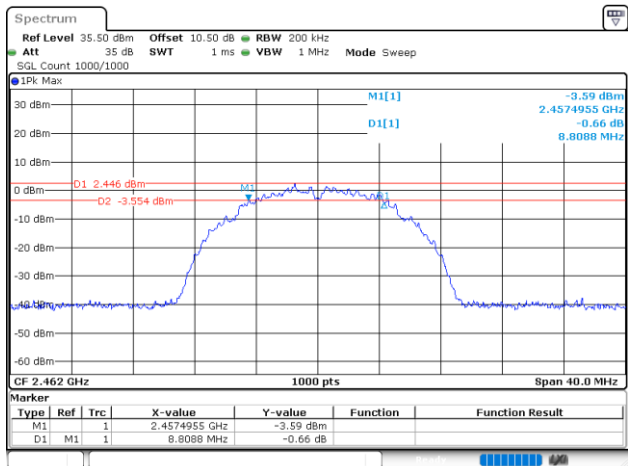
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 14:46:47

802.11b\_2437MHz



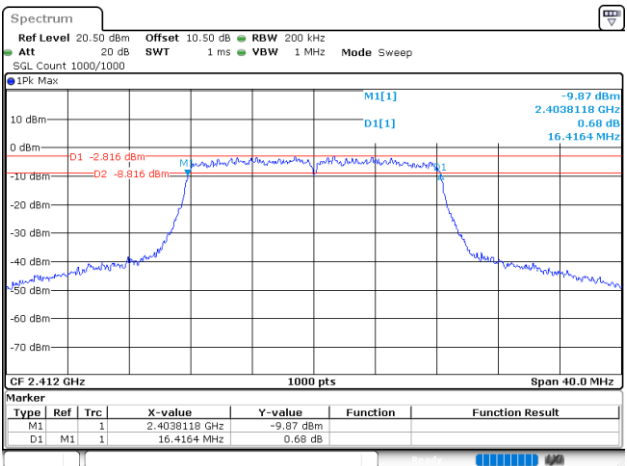
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Date: 9.NOV.2025 14:48:51

802.11b\_2462MHz



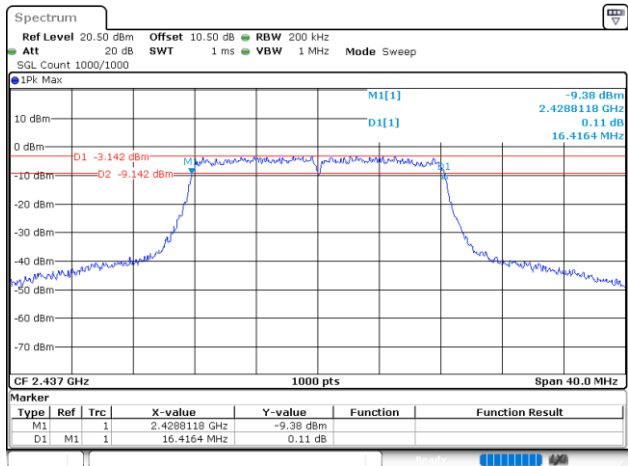
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Date: 9.NOV.2025 14:50:54

802.11g\_2412MHz



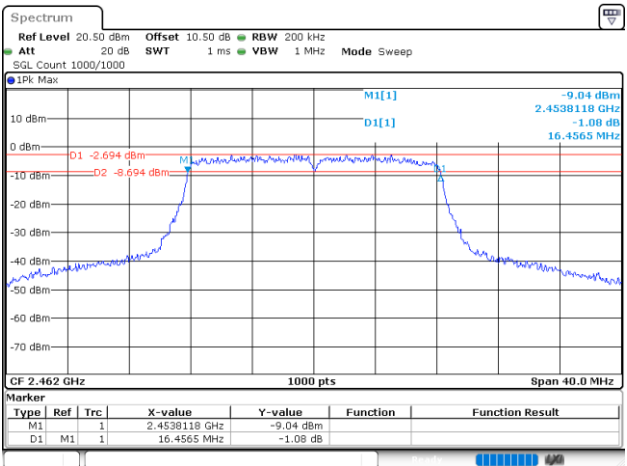
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Date: 9.NOV.2025 14:59:43

802.11g\_2437MHz



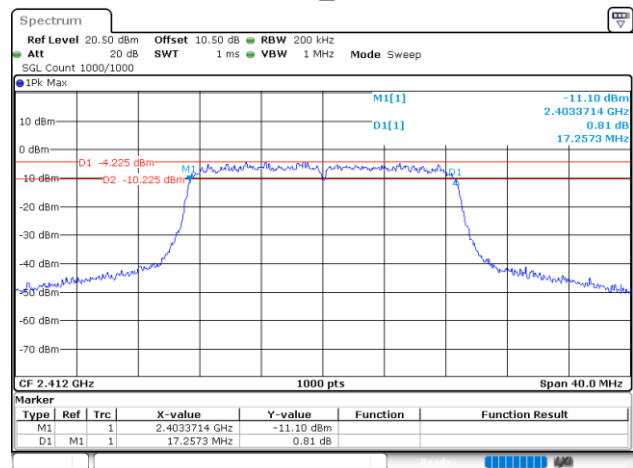
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Date: 9.NOV.2025 15:01:42

802.11g\_2462MHz



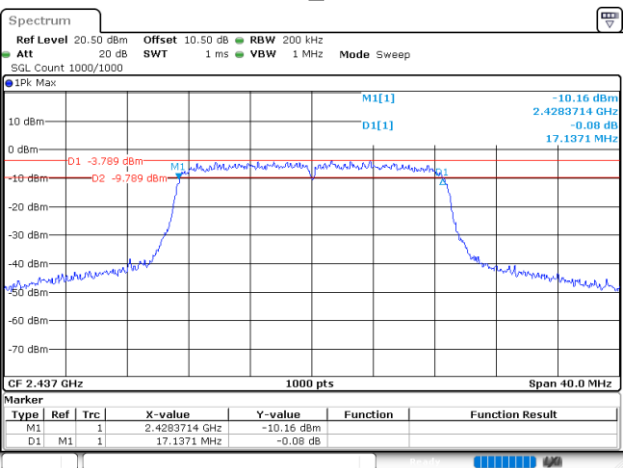
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:03:25

802.11n20\_2412MHz



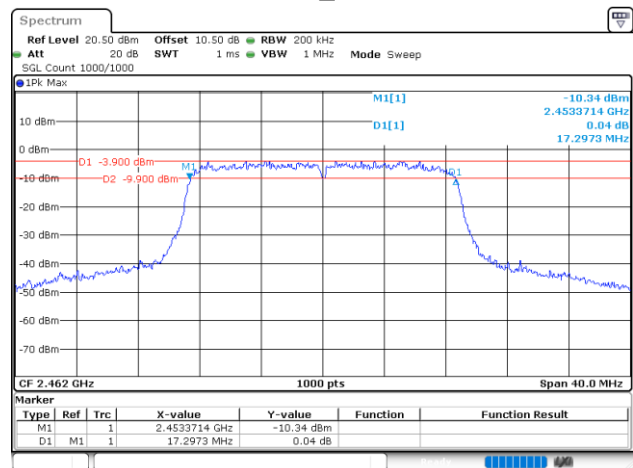
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:05:30

802.11n20\_2437MHz



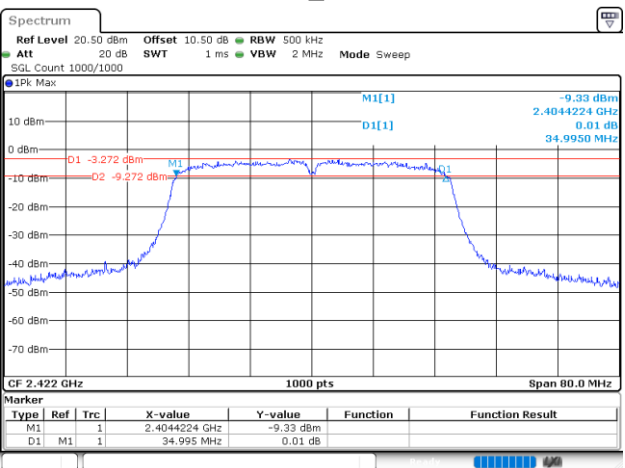
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:07:29

802.11n20\_2462MHz



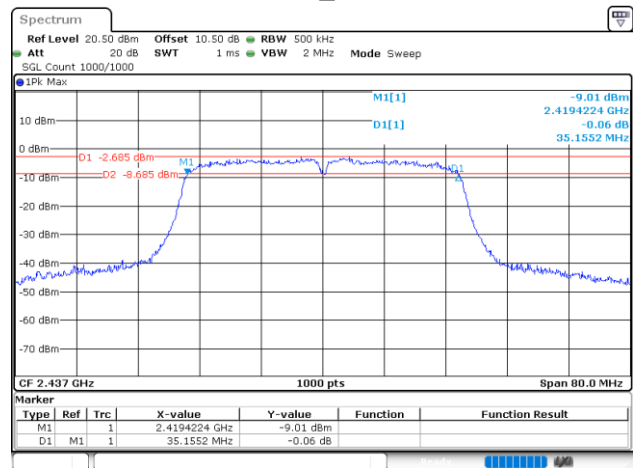
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:09:10

802.11n40\_2422MHz



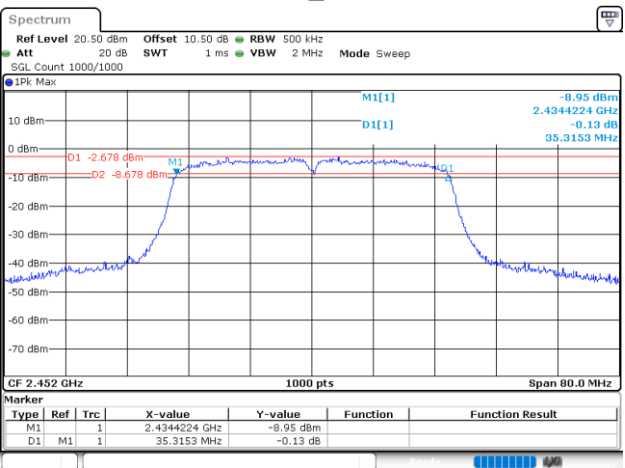
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:11:41

802.11n40\_2437MHz



ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:13:08

802.11n40\_2452MHz

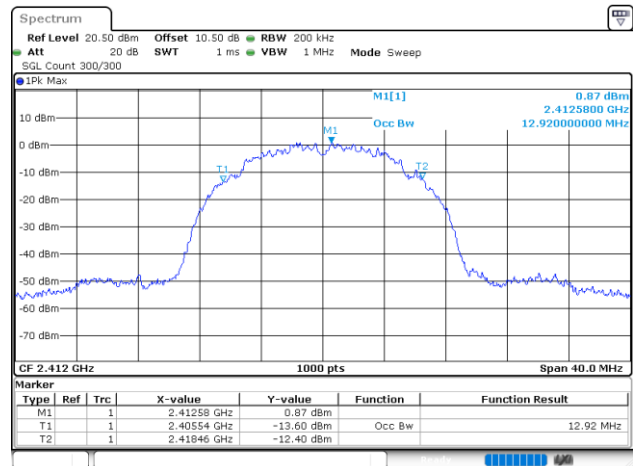


ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:14:18

99% Occupied Bandwidth

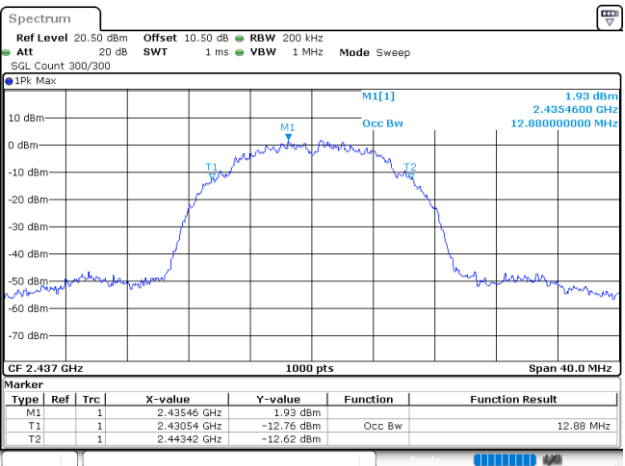
| Mode      | Test Frequency (MHz) | 99% OBW (MHz) |
|-----------|----------------------|---------------|
| 802.11b   | 2412                 | 12.920        |
|           | 2437                 | 12.880        |
|           | 2462                 | 12.920        |
| 802.11g   | 2412                 | 16.360        |
|           | 2437                 | 16.360        |
|           | 2462                 | 16.400        |
| 802.11n20 | 2412                 | 17.280        |
|           | 2437                 | 17.240        |
|           | 2462                 | 17.240        |
| 802.11n40 | 2422                 | 35.600        |
|           | 2437                 | 35.600        |
|           | 2452                 | 35.680        |

802.11b\_2412MHz



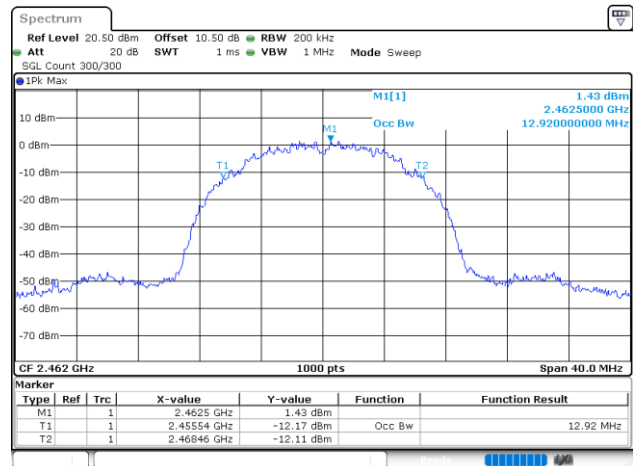
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Date: 9.NOV.2025 14:46:22

802.11b\_2437MHz



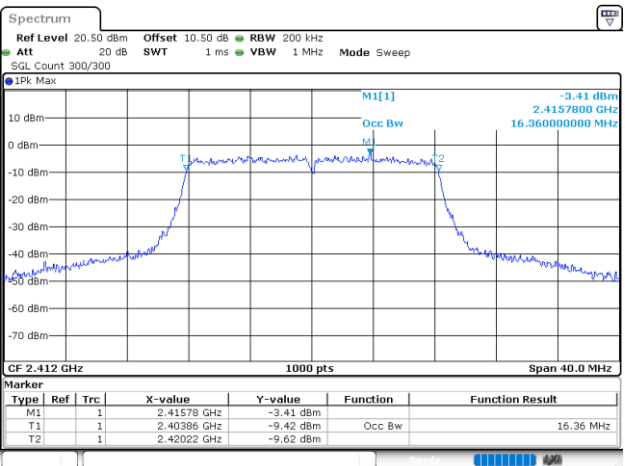
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 14:48:30

802.11b\_2462MHz



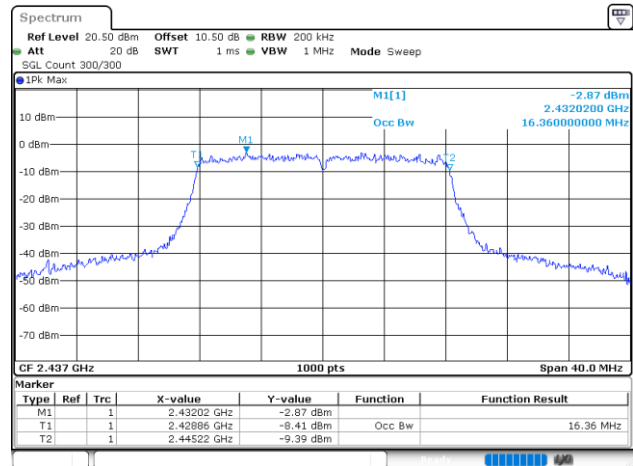
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 14:50:32

802.11g\_2412MHz



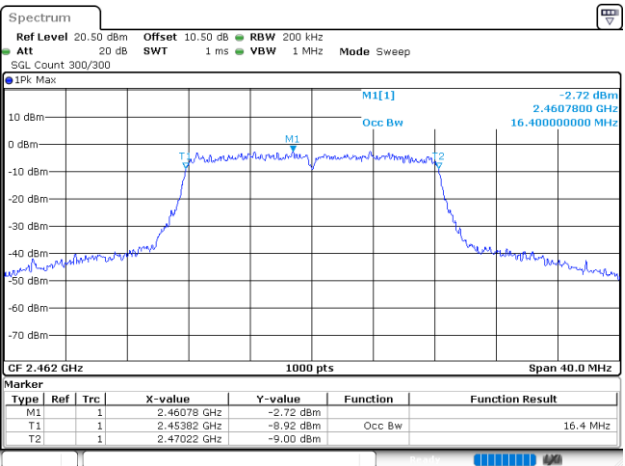
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802.11g\_2437MHz



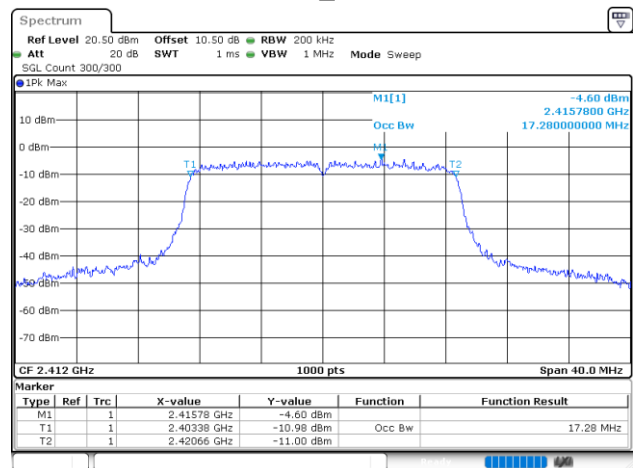
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802.11g\_2462MHz



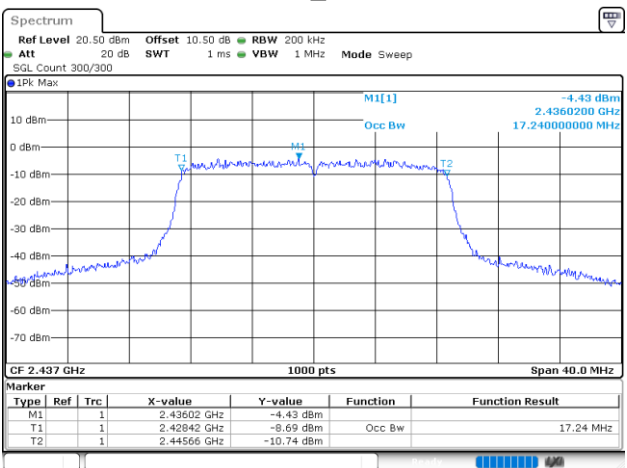
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Date: 9.NOV.2025 15:03:02

802.11n20\_2412MHz



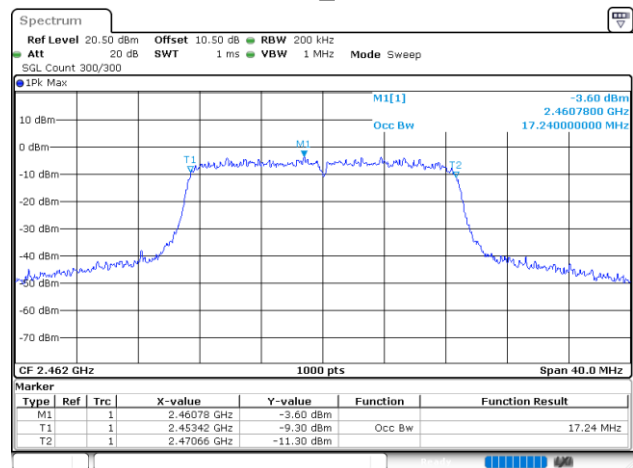
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Date: 9.NOV.2025 15:05:03

802.11n20\_2437MHz



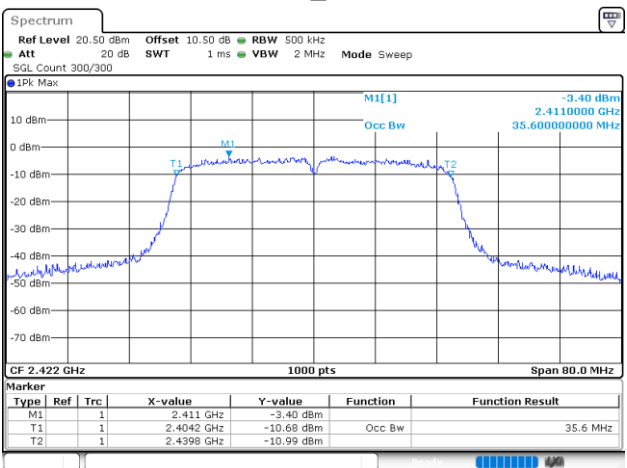
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802.11n20\_2462MHz



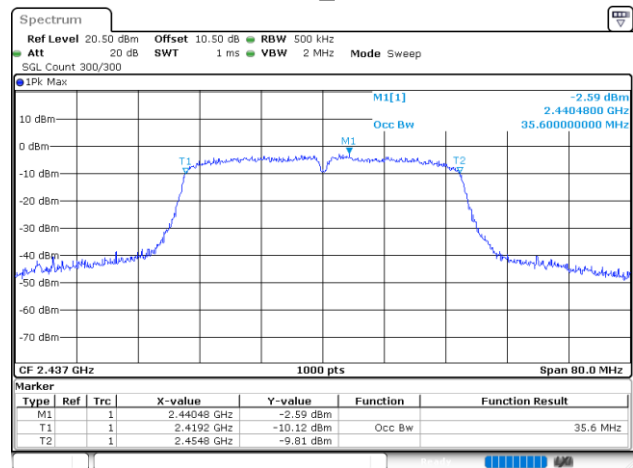
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Date: 9.NOV.2025 15:08:47

802.11n40\_2422MHz



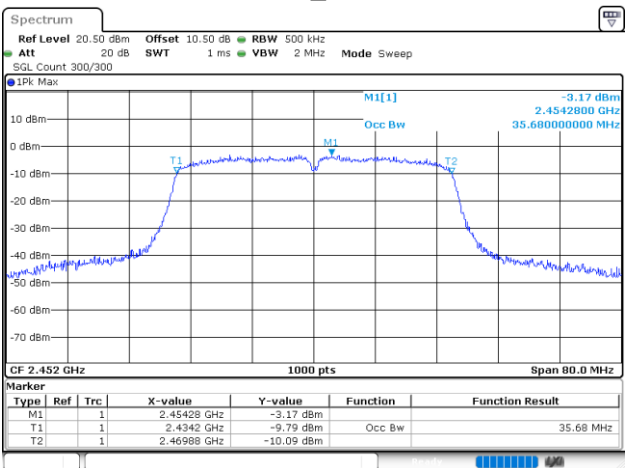
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Date: 9.NOV.2025 15:11:33

802.11n40\_2437MHz



ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:12:59

802.11n40\_2452MHz



ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 9.NOV.2025 15:14:10

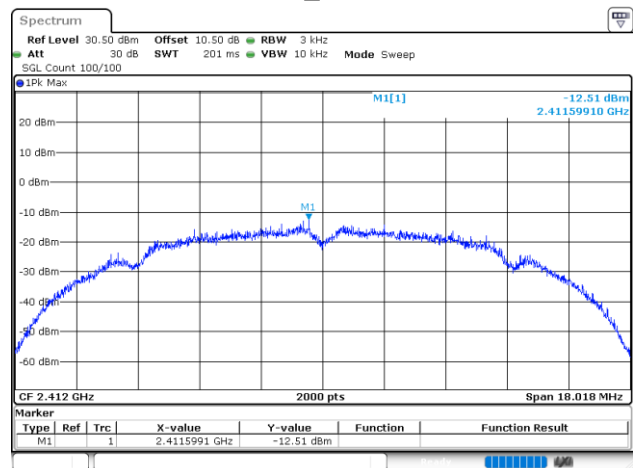
Maximum Conducted Output Power

| Mode      | Test Frequency (MHz) | Peak Output Power(dBm) | Average Output Power(dBm) | Limit (dBm) | Verdict |
|-----------|----------------------|------------------------|---------------------------|-------------|---------|
| 802.11b   | 2412                 | 11.27                  | 8.14                      | 30          | Pass    |
|           | 2437                 | 11.66                  | 8.60                      | 30          | Pass    |
|           | 2462                 | 11.99                  | 8.91                      | 30          | Pass    |
| 802.11g   | 2412                 | 16.95                  | 7.85                      | 30          | Pass    |
|           | 2437                 | 17.31                  | 8.18                      | 30          | Pass    |
|           | 2462                 | 17.56                  | 8.40                      | 30          | Pass    |
| 802.11n20 | 2412                 | 15.90                  | 6.60                      | 30          | Pass    |
|           | 2437                 | 16.44                  | 7.09                      | 30          | Pass    |
|           | 2462                 | 16.70                  | 7.37                      | 30          | Pass    |
| 802.11n40 | 2422                 | 16.02                  | 6.49                      | 30          | Pass    |
|           | 2437                 | 16.37                  | 6.84                      | 30          | Pass    |
|           | 2452                 | 16.57                  | 6.99                      | 30          | Pass    |

Power Spectral Density

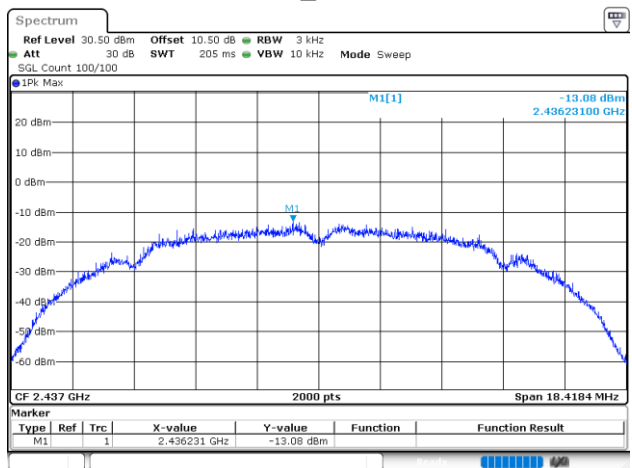
| Mode      | Test Frequency (MHz) | Result (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|----------------------|-------------------|------------------|---------|
| 802.11b   | 2412                 | -12.51            | 8                | Pass    |
|           | 2437                 | -13.08            | 8                | Pass    |
|           | 2462                 | -11.66            | 8                | Pass    |
| 802.11g   | 2412                 | -17.11            | 8                | Pass    |
|           | 2437                 | -16.89            | 8                | Pass    |
|           | 2462                 | -16.63            | 8                | Pass    |
| 802.11n20 | 2412                 | -17.37            | 8                | Pass    |
|           | 2437                 | -17.18            | 8                | Pass    |
|           | 2462                 | -16.74            | 8                | Pass    |
| 802.11n40 | 2422                 | -20.63            | 8                | Pass    |
|           | 2437                 | -20.13            | 8                | Pass    |
|           | 2452                 | -20.03            | 8                | Pass    |

802.11b\_2412MHz



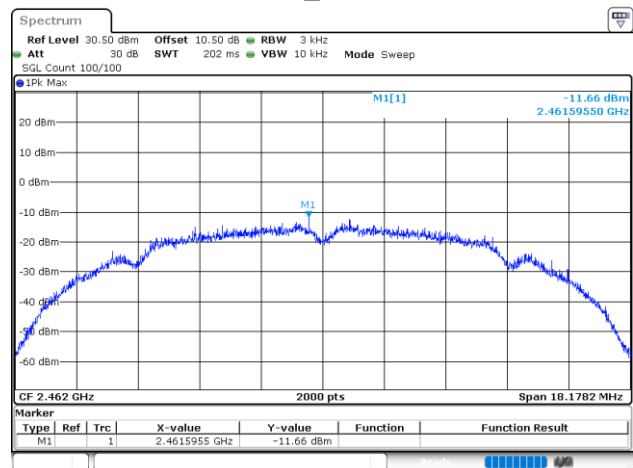
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Date: 5.NOV.2025 10:40:20

802.11b\_2437MHz



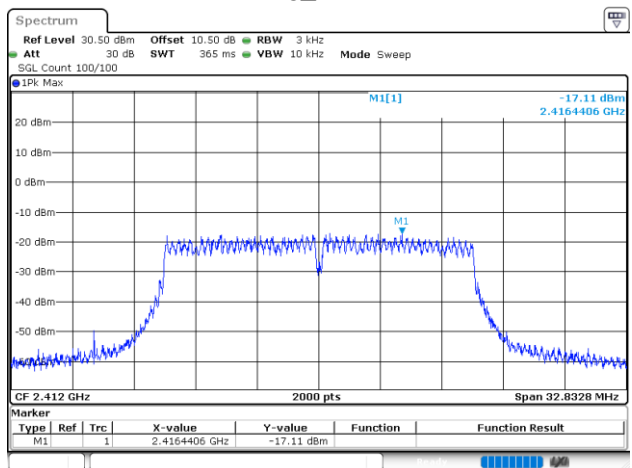
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Date: 5.NOV.2025 10:42:53

802.11b\_2462MHz



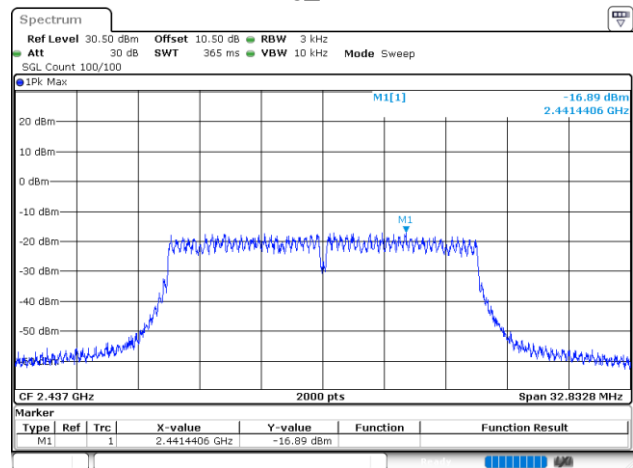
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802.11g\_2412MHz



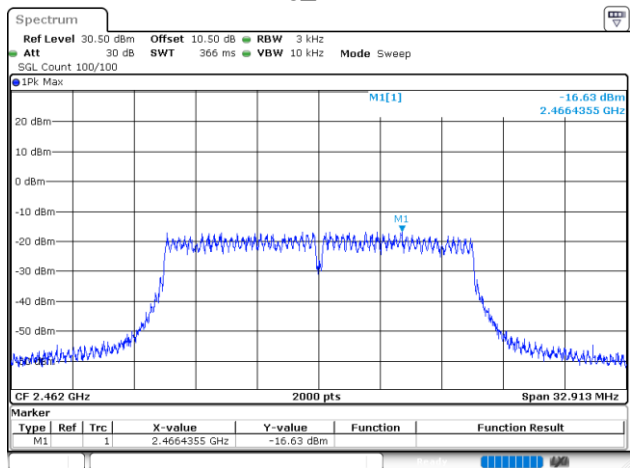
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802.11g\_2437MHz



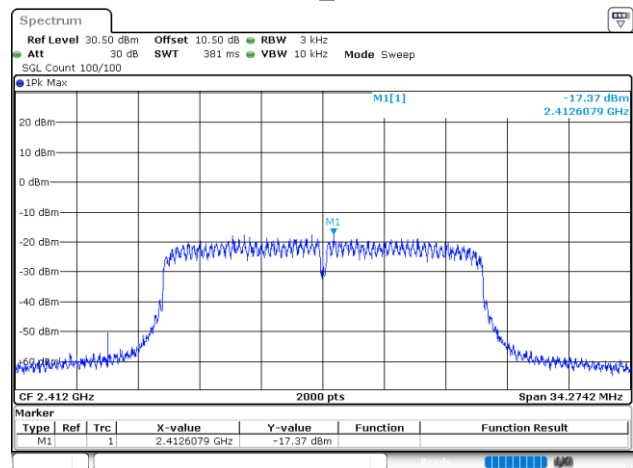
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Date: 5.NOV.2025 10:49:54

802.11g\_2462MHz



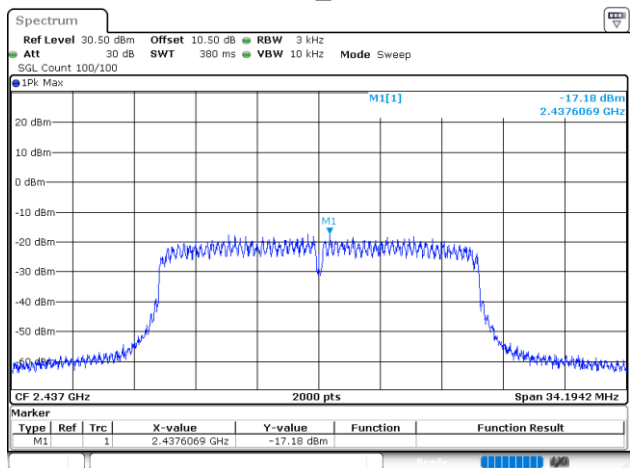
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Date: 5.NOV.2025 10:52:16

802.11n20\_2412MHz



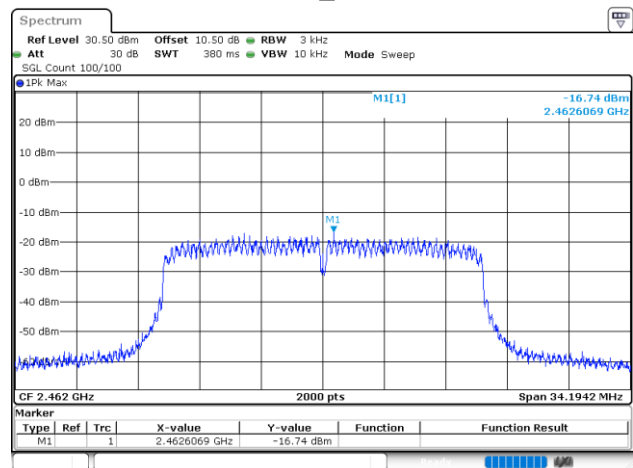
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802.11n20\_2437MHz



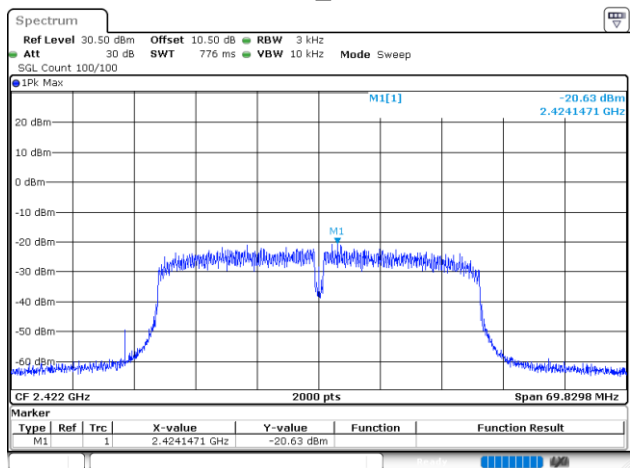
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802.11n20\_2462MHz



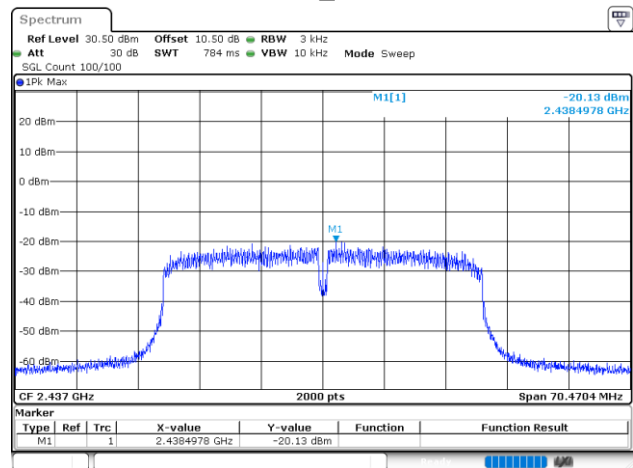
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802.11n40\_2422MHz



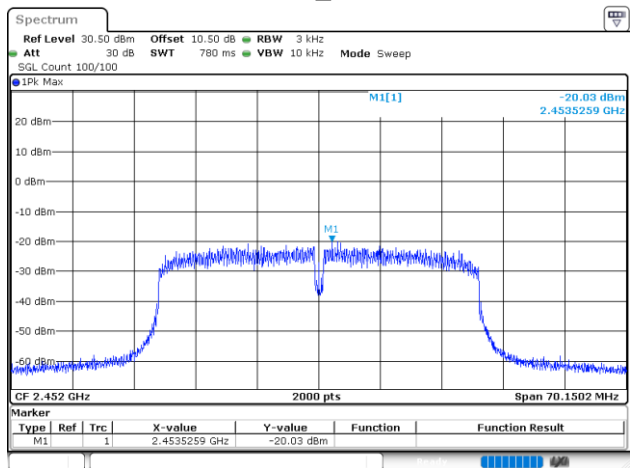
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Date: 5.NOV.2025 11:06:35

802.11n40\_2437MHz



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Date: 5.NOV.2025 11:09:16

802.11n40\_2452MHz



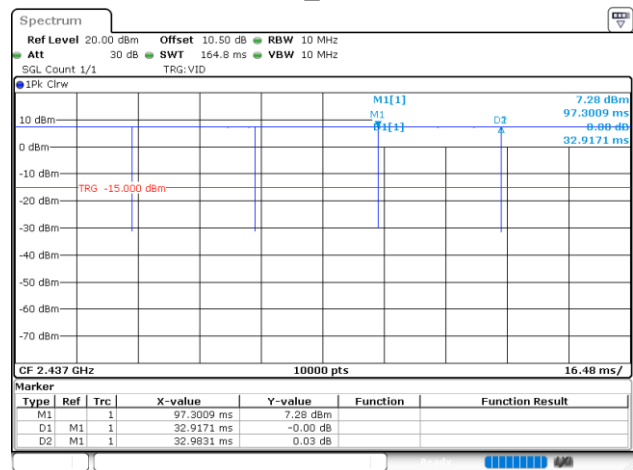
ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 5.NOV.2025 11:13:44

Duty Cycle

| Mode      | Test Frequency (MHz) | Ton (ms) | Ton+Toff (ms) | Duty Cycle (%) | Duty Cycle Factor(dB) | 1/Ton (Hz) | VBW Setting (kHz) |
|-----------|----------------------|----------|---------------|----------------|-----------------------|------------|-------------------|
| 802.11b   | 2437                 | 32.917   | 32.983        | 99.80          | /                     | /          | 0.010             |
| 802.11g   | 2437                 | 5.469    | 5.507         | 99.31          | /                     | /          | 0.010             |
| 802.11n20 | 2437                 | 5.062    | 5.101         | 99.24          | /                     | /          | 0.010             |
| 802.11n40 | 2437                 | 2.450    | 2.488         | 98.47          | /                     | /          | 0.010             |

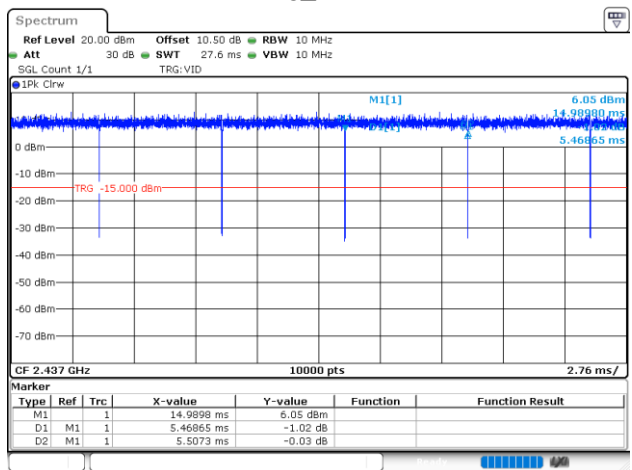
Duty Cycle = Ton/(Ton+Toff)\*100%

802.11b\_2437MHz



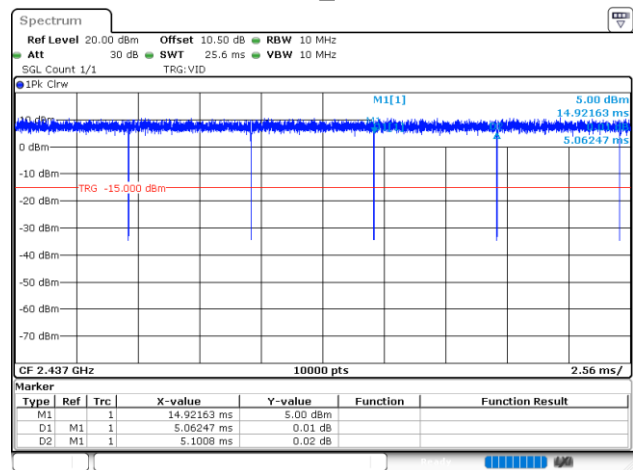
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Date: 27.OCT.2025 12:34:23

802.11g\_2437MHz



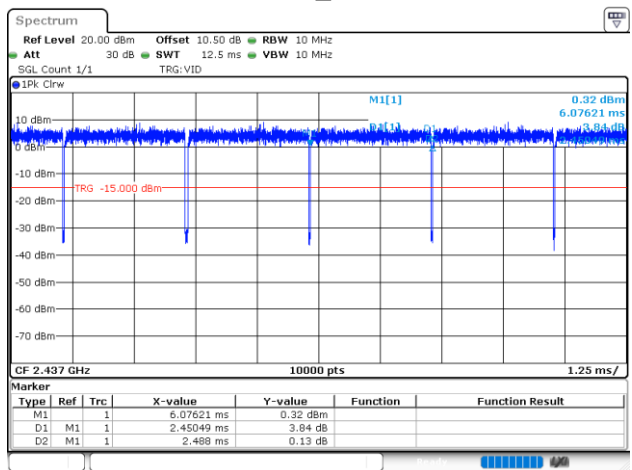
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802.11n20\_2437MHz



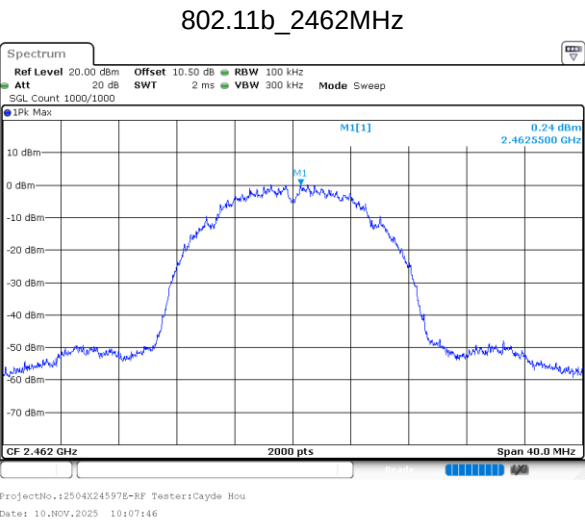
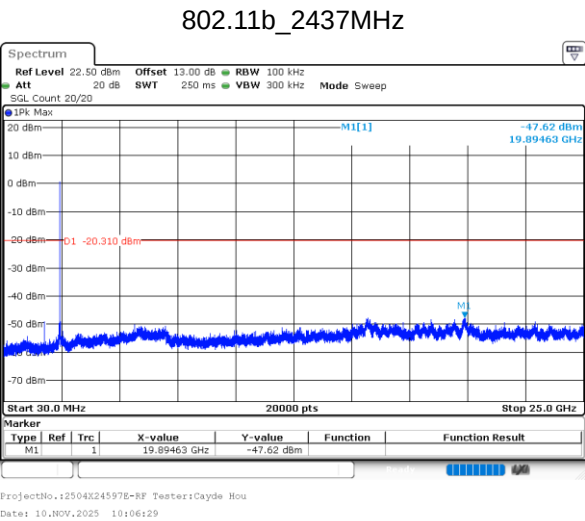
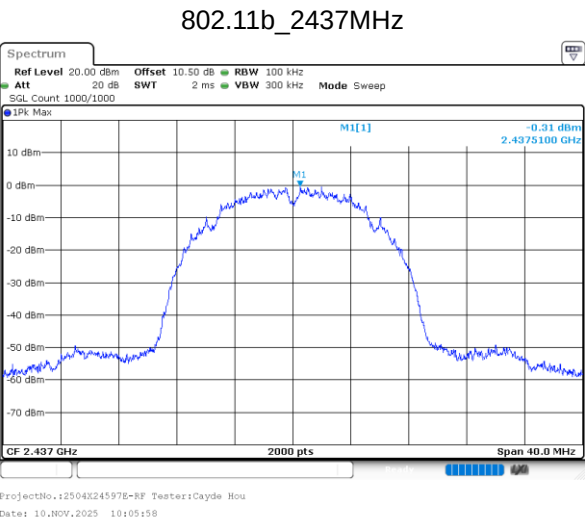
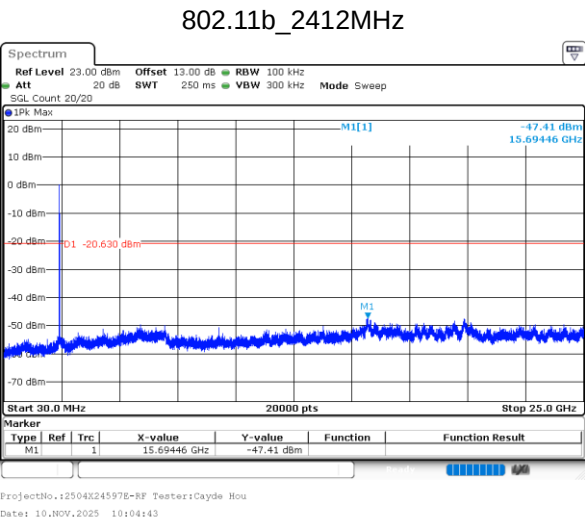
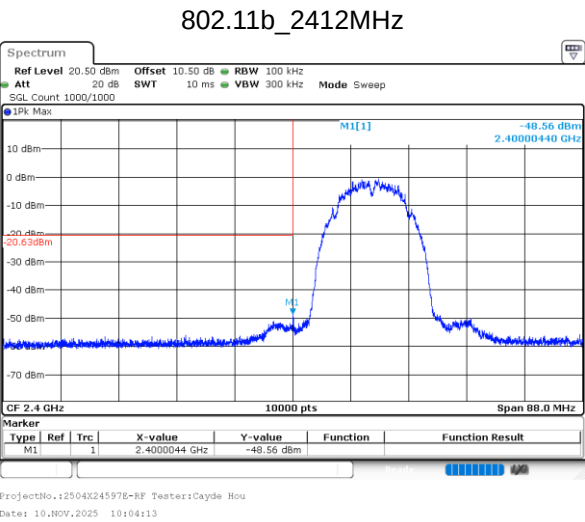
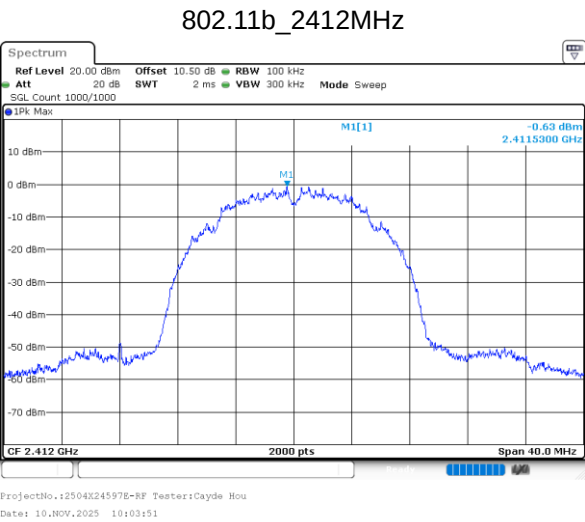
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802.11n40\_2437MHz

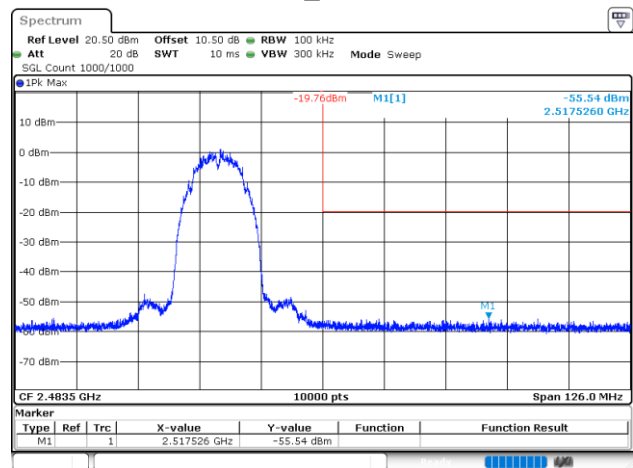


ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 27.OCT.2025 12:36:25

Conducted Spurious Emission

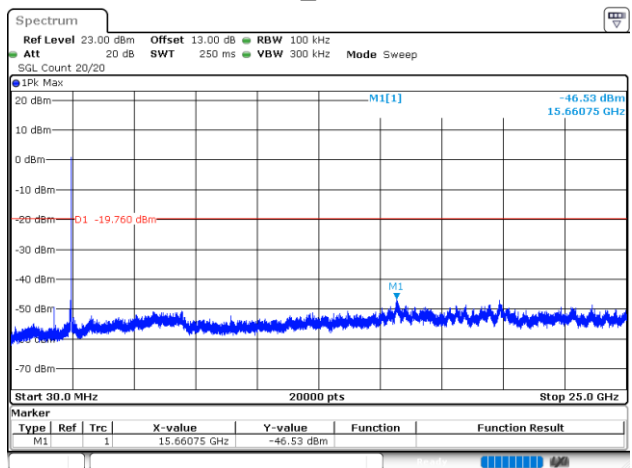


802.11b\_2462MHz



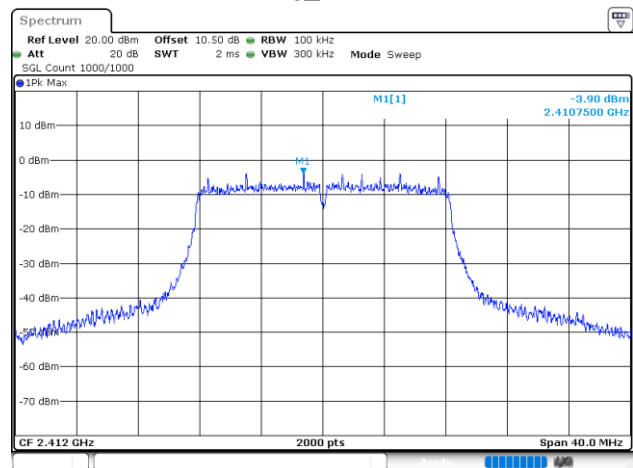
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Date: 10.NOV.2025 10:08:09

802.11b\_2462MHz



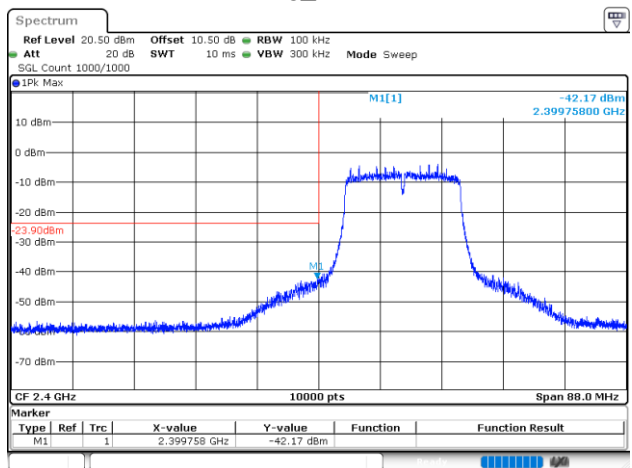
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Date: 10.NOV.2025 10:08:38

802.11g\_2412MHz



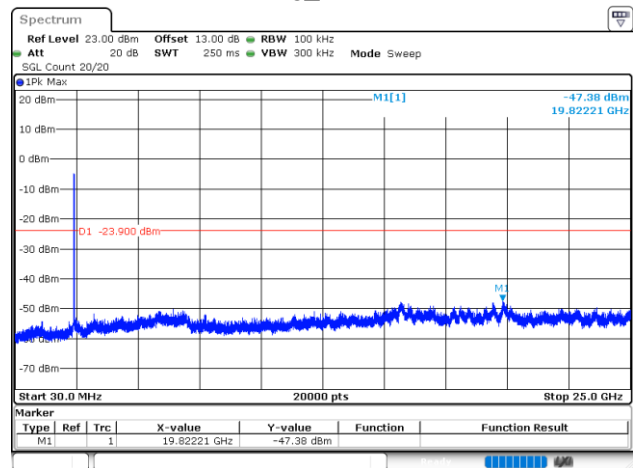
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Date: 10.NOV.2025 10:09:26

802.11g\_2412MHz



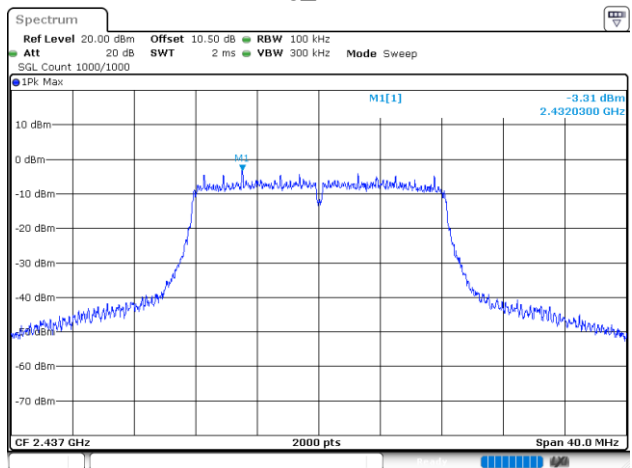
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802.11g\_2412MHz



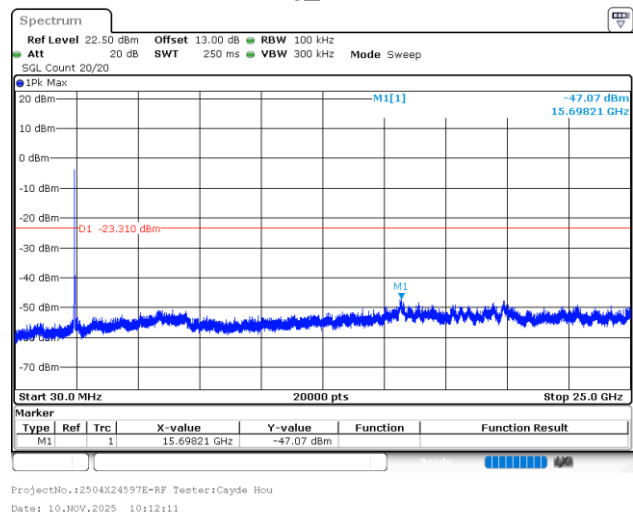
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802.11g\_2437MHz

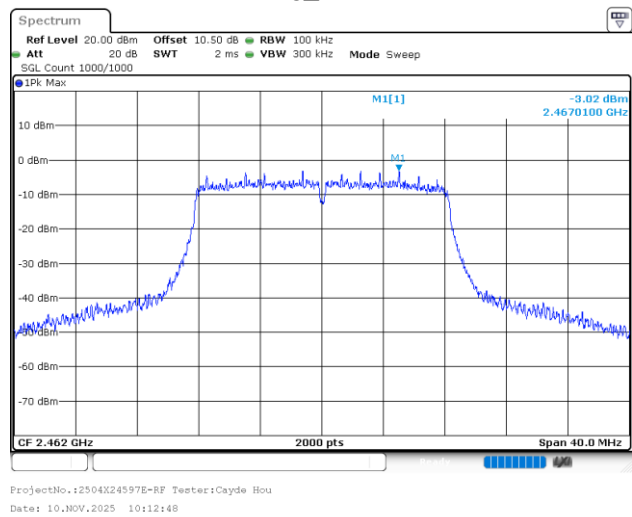


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Date: 10.NOV.2025 10:11:40

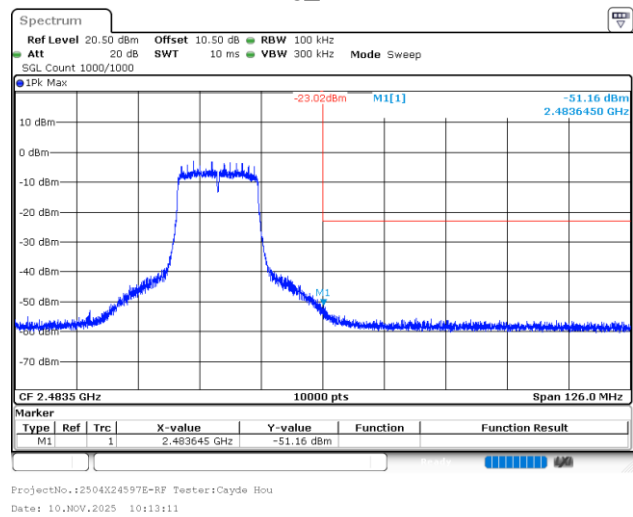
802.11g\_2437MHz



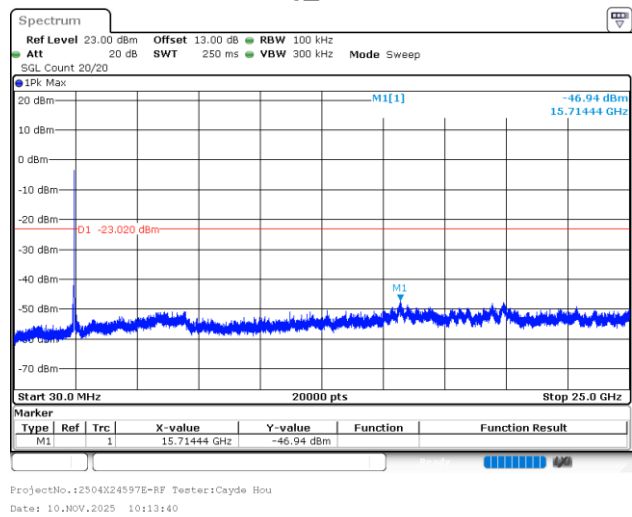
802.11g\_2462MHz



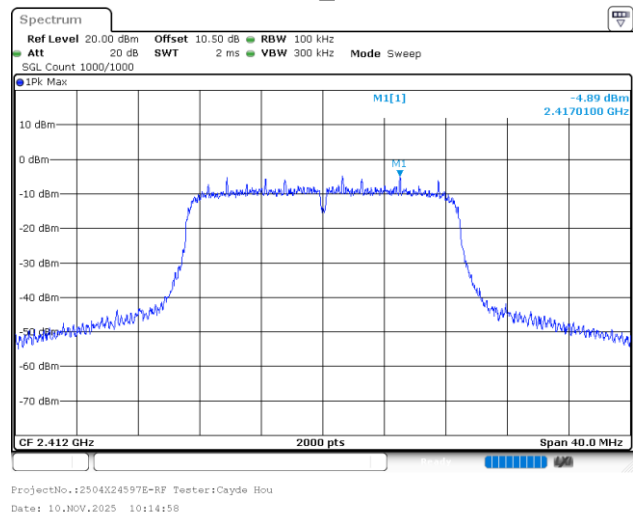
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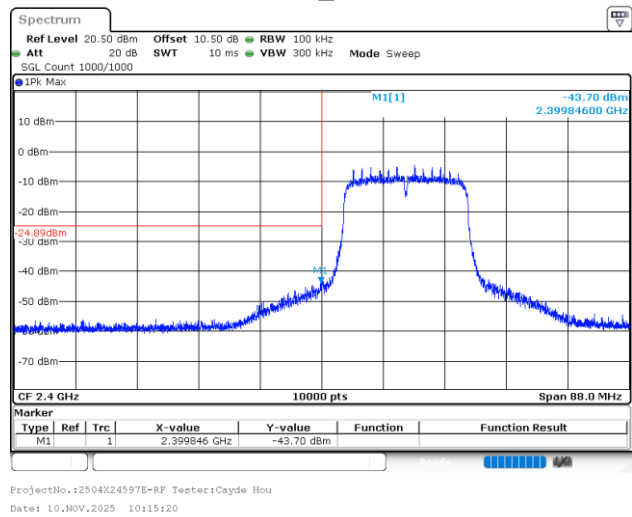
802.11g\_2462MHz



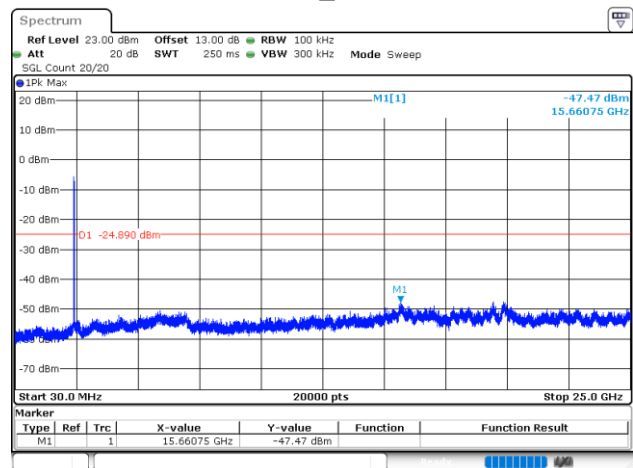
802.11n20\_2412MHz



802.11n20\_2412MHz

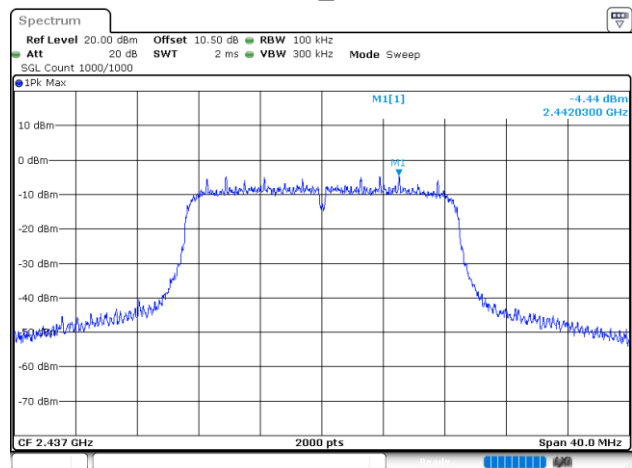


802.11n20\_2412MHz



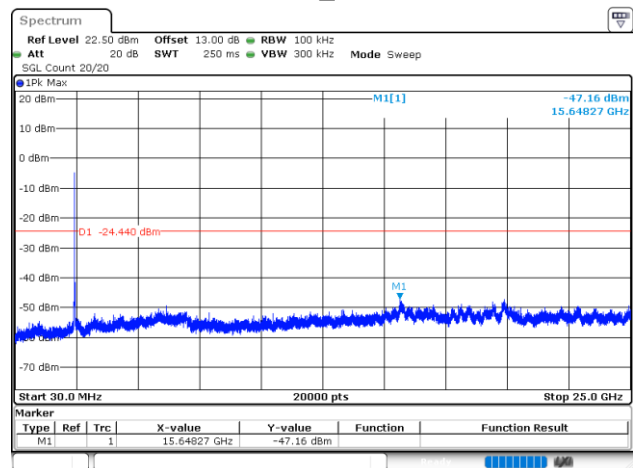
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802.11n20\_2437MHz



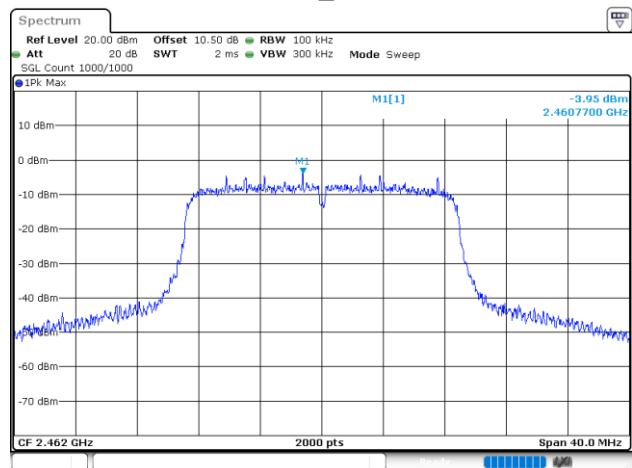
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802.11n20\_2437MHz



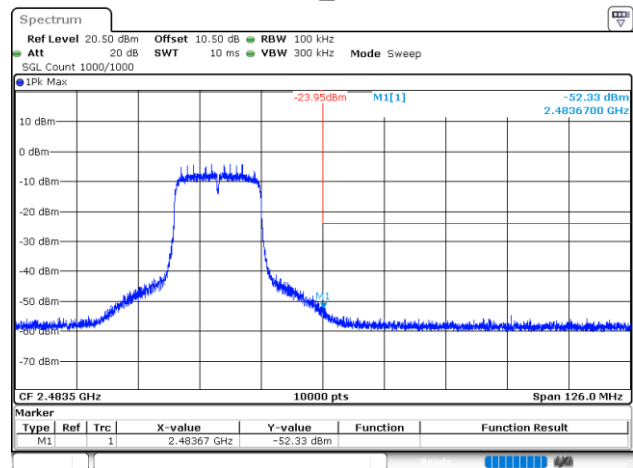
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802.11n20\_2462MHz



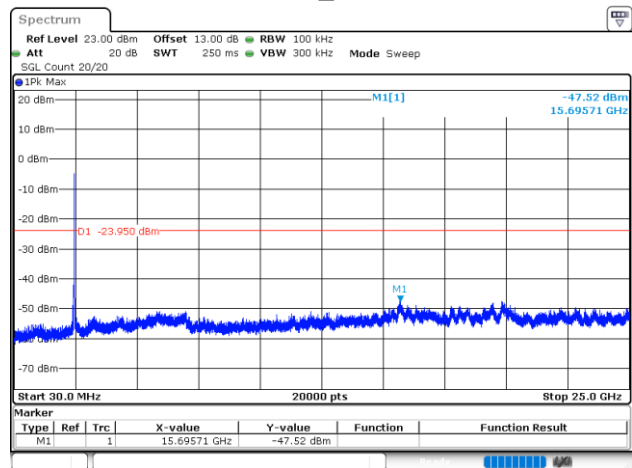
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802.11n20\_2462MHz



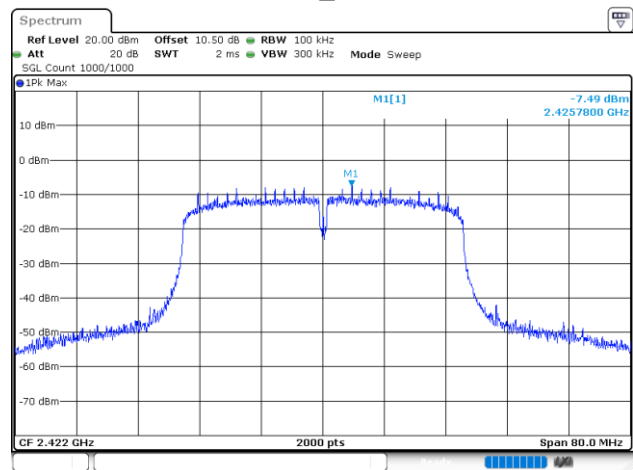
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802.11n20\_2462MHz



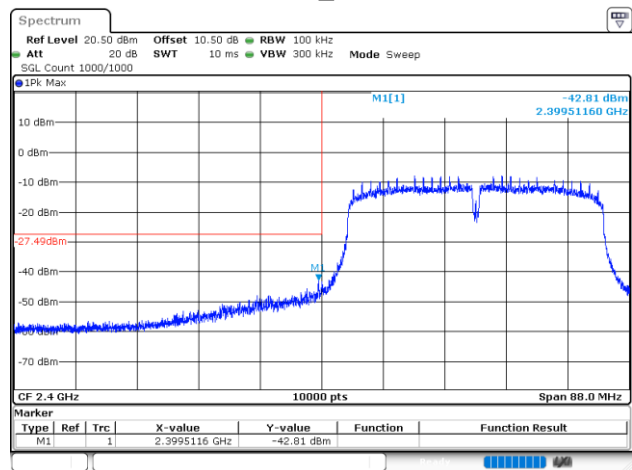
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802.11n40\_2422MHz



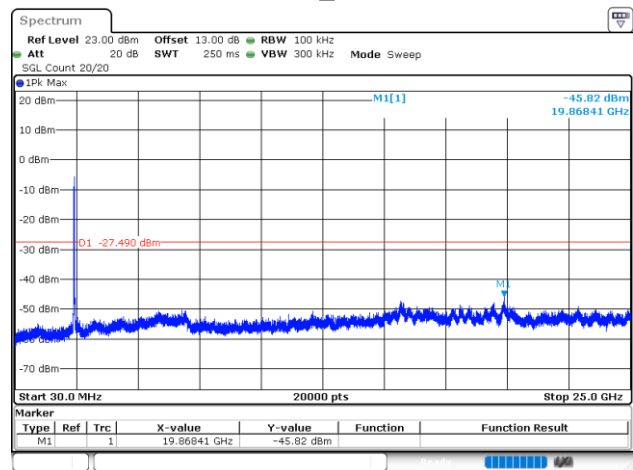
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802.11n40\_2422MHz



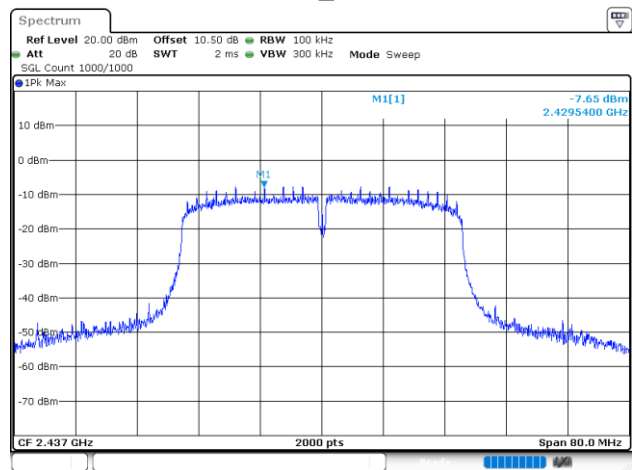
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802.11n40\_2422MHz



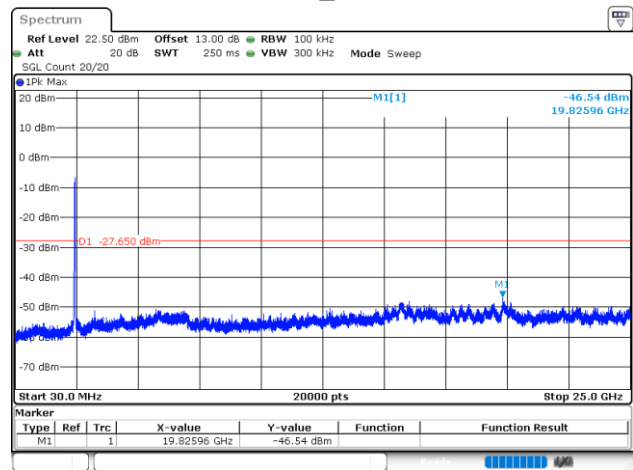
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Date: 10.NOV.2025 10:21:21

802.11n40\_2437MHz



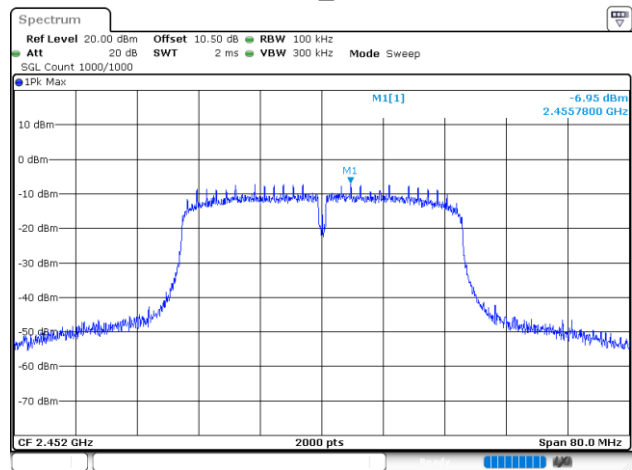
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802.11n40\_2437MHz

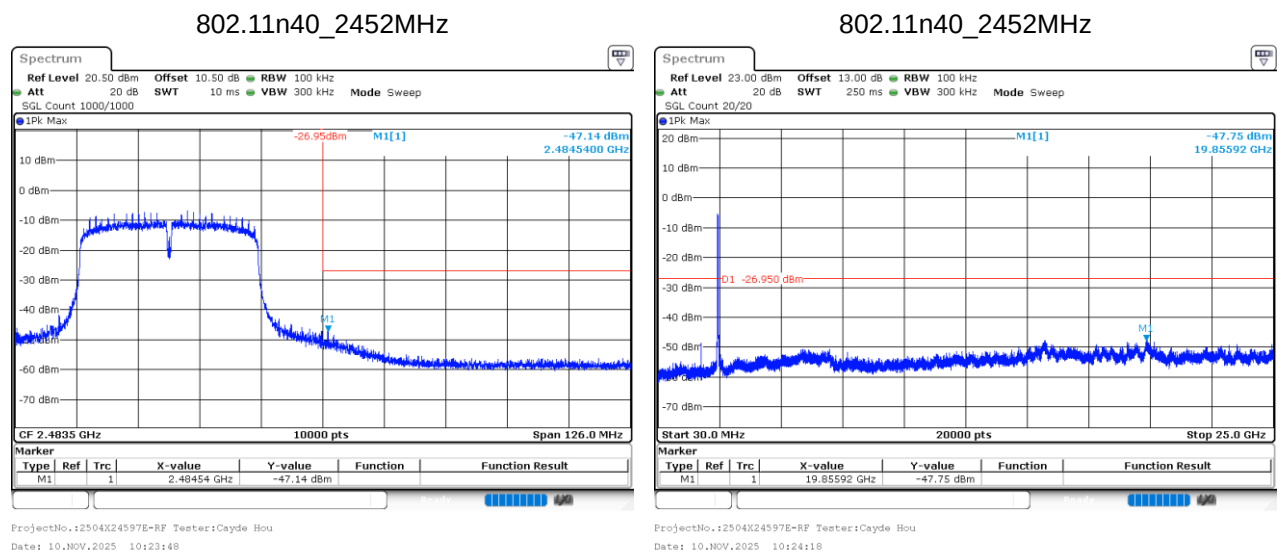


ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 10.NOV.2025 10:22:20

802.11n40\_2452MHz



ProjectNo.:2504X24597E-RF Tester:Cayde Hou  
Date: 10.NOV.2025 10:23:26



## EXHIBIT A-EUT PHOTOGRAPHS

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Please refer to the Attachment No.1 2504X24597E-RF EUT External Photos and Attachment No.2 2504X24597E-RF EUT Internal Photos.

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## EXHIBIT B-TEST SETUP PHOTOGRAPHS

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Please refer to the Attachment No.3 2504X24597E-RF Test Photos.

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