

| <b>RADIO REPORT</b><br><b>FCC 47 CFR Part 15E</b><br><b>Unlicensed National Information Infrastructure Devices in the 5 GHz Bands</b> |                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Reference No</b>                                                                                                            | G0M-2405-2583-TFC407WF01-V01                                                                                                                                                                                                                                              |
| <b>Testing Laboratory</b>                                                                                                             | Eurofins Product Service GmbH                                                                                                                                                                                                                                             |
| <b>Address</b>                                                                                                                        | Storkower Str. 38c<br>15526 Reichenwalde<br>Germany                                                                                                                                                                                                                       |
| <b>Accreditation</b>                                                                                                                  |  <br>DAKKS - Registration number : D-PL-12092-01-04 (FCC)<br>FCC Filed Test Laboratory, Reg.-No.: 96970 |
| <b>Applicant</b>                                                                                                                      | u-blox AG                                                                                                                                                                                                                                                                 |
| <b>Address</b>                                                                                                                        | Zürcherstrasse 68<br>8800 Thalwil<br>Switzerland                                                                                                                                                                                                                          |
| <b>Test Specification</b>                                                                                                             | 47 CFR Part 15E                                                                                                                                                                                                                                                           |
| <b>Non-Standard Test Method</b>                                                                                                       | None                                                                                                                                                                                                                                                                      |
| <b>Equipment under Test (EUT):</b>                                                                                                    |                                                                                                                                                                                                                                                                           |
| <b>Product Description</b>                                                                                                            | M.2 card for the MAYA-W2 Wi-Fi 6, Bluetooth 5.3 and IEEE 802.15.4 module                                                                                                                                                                                                  |
| <b>Model(s)</b>                                                                                                                       | M2-MAYA-W271-00C                                                                                                                                                                                                                                                          |
| <b>Brand Name(s)</b>                                                                                                                  | None                                                                                                                                                                                                                                                                      |
| <b>Additional Models</b>                                                                                                              | None                                                                                                                                                                                                                                                                      |
| <b>Hardware Version(s)</b>                                                                                                            | 05                                                                                                                                                                                                                                                                        |
| <b>Software Version(s)</b>                                                                                                            | 01                                                                                                                                                                                                                                                                        |
| <b>FCC ID</b>                                                                                                                         | XPYMAYAW2A                                                                                                                                                                                                                                                                |
| <b>Test Result</b>                                                                                                                    | <b>PASSED</b>                                                                                                                                                                                                                                                             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|
| <b>Possible test case verdicts:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       |                                                                                       |
| Required by standard but not tested                                                                                                                                                                                                                                                                                                                                                                                                                                            | N/T                   |                                                                                       |
| Not required by standard                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N/R                   |                                                                                       |
| Not applicable to EUT                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/A                   |                                                                                       |
| Test object does meet the requirement                                                                                                                                                                                                                                                                                                                                                                                                                                          | P(PASS)               |                                                                                       |
| Test object does not meet the requirement                                                                                                                                                                                                                                                                                                                                                                                                                                      | F(FAIL)               |                                                                                       |
| <b>Testing:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                                                                       |
| Test Lab Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20 °C - 30 °C         |                                                                                       |
| Test Lab Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 25 % - 55 %           |                                                                                       |
| Date of receipt of test item                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2024-06-24            |                                                                                       |
| <b>Report:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |                                                                                       |
| Compiled by                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Md Abu Bakar Siddique |                                                                                       |
| Tested and tests supervised by<br>(+ signature)<br>(Responsible for Test)                                                                                                                                                                                                                                                                                                                                                                                                      | Md Abu Bakar Siddique |   |
| Approved by (+ signature)<br>(Senior Radio Expert)                                                                                                                                                                                                                                                                                                                                                                                                                             | Radwan Jaafar         |  |
| Date of Issue                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2024-11-07            |                                                                                       |
| Total number of pages                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 31                    |                                                                                       |
| <b>General Remarks:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                                                                                       |
| <p>The test results presented in this report relate only to the object tested.</p> <p>The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> |                       |                                                                                       |
| <b>Additional Comments:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       |                                                                                       |
| --                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       |                                                                                       |

## VERSION HISTORY

| Version History |            |                 |            |
|-----------------|------------|-----------------|------------|
| Version         | Issue Date | Remarks         | Revised By |
| 01              | 2024-11-07 | Initial Release | --         |

## ABBREVIATIONS AND ACRONYMS

| Acronyms         |                                                     |
|------------------|-----------------------------------------------------|
| Acronym          | Description                                         |
| BPSK             | Binary Phase Shift Keying                           |
| DSSS             | Direct Sequence Spread Spectrum                     |
| EUT              | Equipment Under Test                                |
| FCC              | Federal Communications Commission                   |
| HT               | High Throughput                                     |
| IEEE 802.11      | MAC and PHY Layer for WiFi                          |
| ISED             | Innovation, Science and Economic Development Canada |
| OFDM             | Orthogonal Frequency Division Multiplexing          |
| QAM              | Quadrature Amplitude Modulation                     |
| QPSK             | Quadrature Phase Shift Keying                       |
| RBW              | Resolution bandwidth                                |
| RMS              | Root mean square                                    |
| VBW              | Video bandwidth                                     |
| V <sub>NOM</sub> | Nominal supply voltage                              |

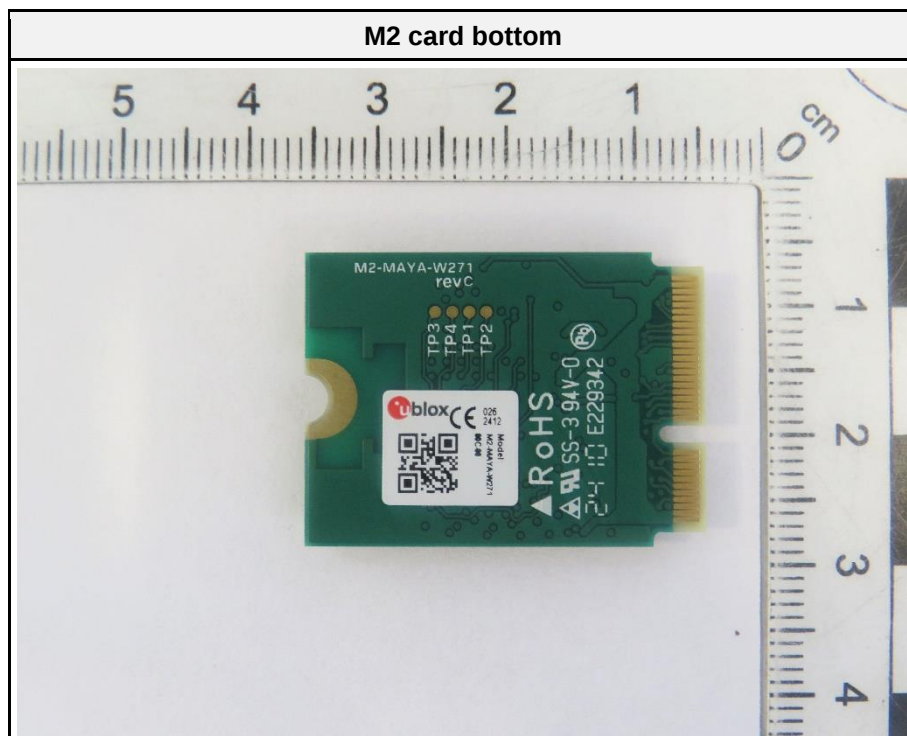
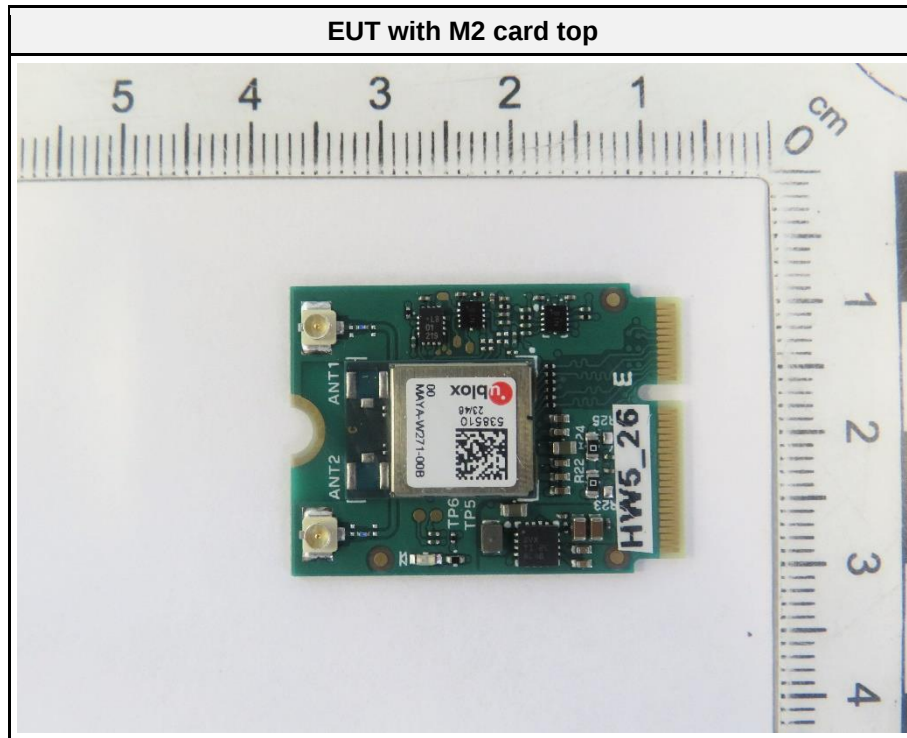
## REPORT INDEX

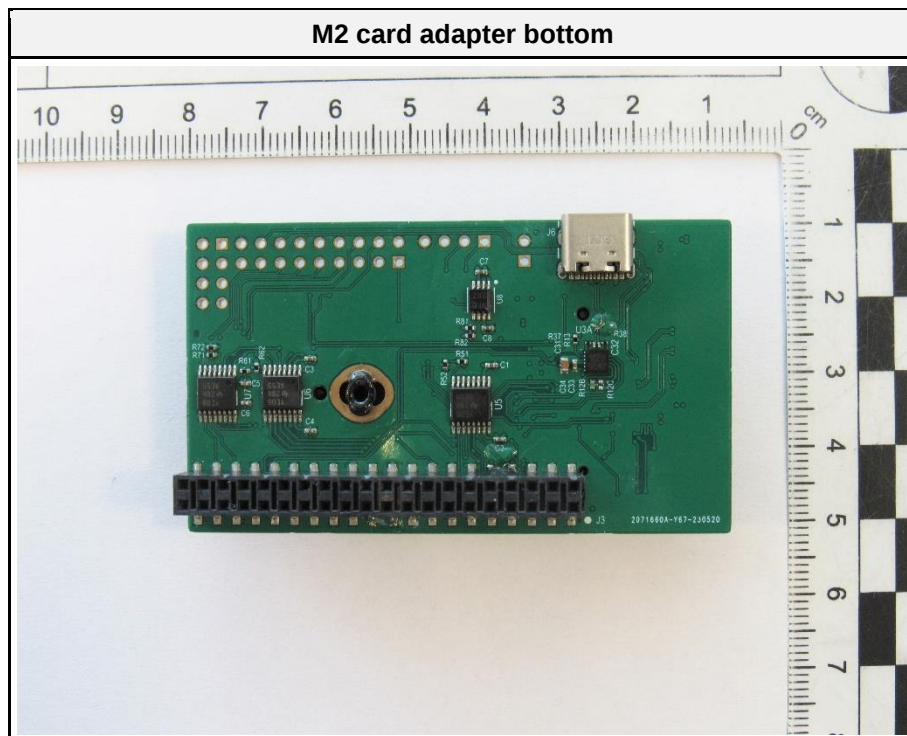
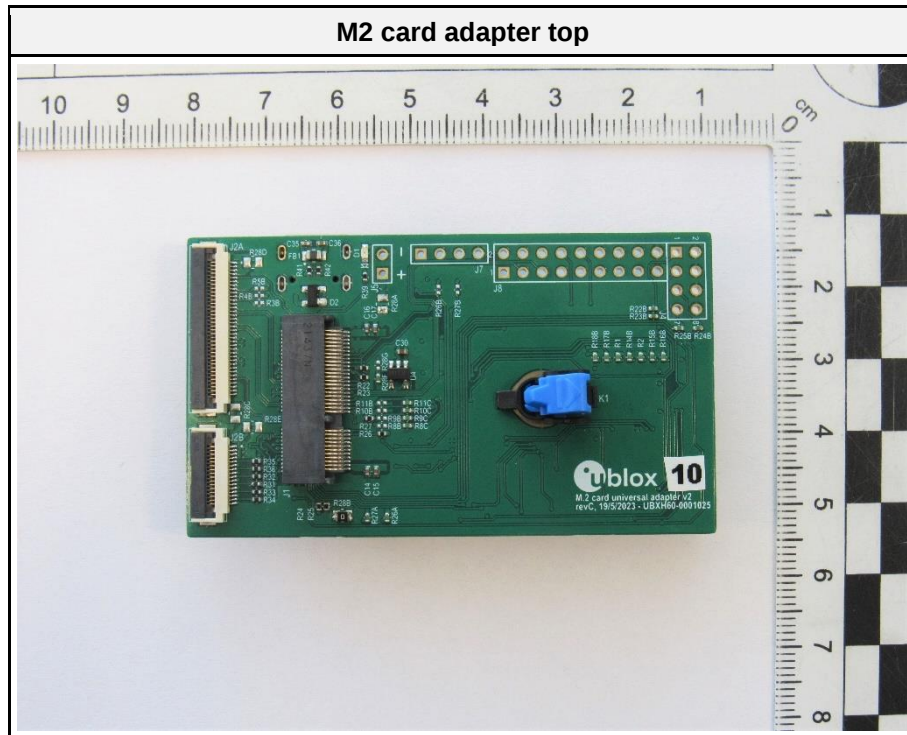
|          |                                                                    |           |
|----------|--------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Equipment (Test Item) Under Test.....</b>                       | <b>6</b>  |
| 1.1      | Photos .....                                                       | 7         |
| 1.2      | Support Equipment.....                                             | 12        |
| 1.3      | Test Modes .....                                                   | 13        |
| 1.4      | Test Frequencies.....                                              | 14        |
| 1.5      | Sample emission level calculation.....                             | 15        |
| <b>2</b> | <b>Result Summary.....</b>                                         | <b>16</b> |
| <b>3</b> | <b>Test Conditions and Results.....</b>                            | <b>17</b> |
| 3.1      | Test Conditions and Results - Transmitter radiated emissions ..... | 17        |

## 1 Equipment (Test Item) Under Test

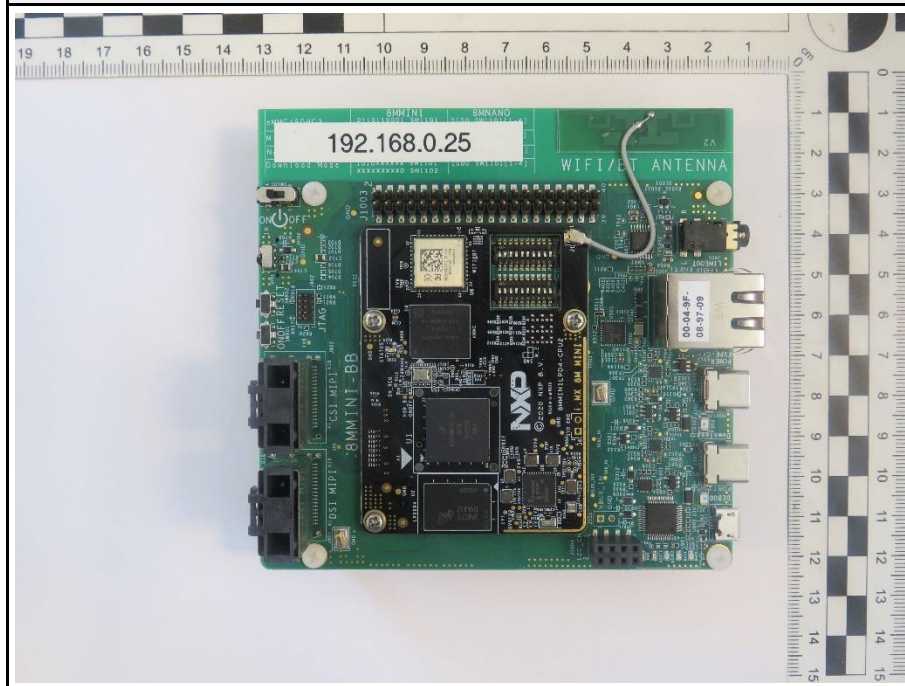
|                          |                                                                                                                      |                                            |               |                 |
|--------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------|-----------------|
| Description              | M.2 card for the MAYA-W2 Wi-Fi 6, Bluetooth 5.3 and IEEE 802.15.4 module                                             |                                            |               |                 |
| Model(s)                 | M2-MAYA-W271-00C                                                                                                     |                                            |               |                 |
| Additional Model(s)      | None                                                                                                                 |                                            |               |                 |
| Brand Name(s)            | None                                                                                                                 |                                            |               |                 |
| Sample Identification    | EUT #                                                                                                                | Sample-ID                                  | Serial Number | Date of receipt |
|                          | EUT 1                                                                                                                | 49021                                      | HW5_26        | 2024-06-24      |
| Hardware Version(s)      | 05                                                                                                                   |                                            |               |                 |
| Software Version(s)      | 01                                                                                                                   |                                            |               |                 |
| FCC ID                   | XPYMAYAW2A                                                                                                           |                                            |               |                 |
| Equipment type           | Radio Module                                                                                                         |                                            |               |                 |
| Radio type               | Transceiver                                                                                                          |                                            |               |                 |
| Assigned frequency bands | 5150 - 5250 MHz<br>5250 - 5350 MHz<br>5470 - 5725 MHz<br>5725 - 5850 MHz                                             |                                            |               |                 |
| Radio technology         | IEEE 802.11a<br>IEEE 802.11n (HT20, HT40)<br>IEEE 802.11ac (VHT20, VHT40, VHT80)<br>IEEE 802.11ax (HE20, HE40, HE80) |                                            |               |                 |
| Modulation               | BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM                                                                        |                                            |               |                 |
| Number of antenna ports  | 2 (only one port is active for WLAN)                                                                                 |                                            |               |                 |
| Radio Module             | Type                                                                                                                 | WLAN 2.4/5 GHz / Bluetooth / ZigBee module |               |                 |
|                          | Model                                                                                                                | M2-MAYA-W271-00C                           |               |                 |
|                          | Manufacturer                                                                                                         | u-blox AG                                  |               |                 |
|                          | HW Version                                                                                                           | 05                                         |               |                 |
|                          | SW Version                                                                                                           | 01                                         |               |                 |
| Antenna                  | Type                                                                                                                 | External antenna                           |               |                 |
|                          | Model                                                                                                                | 1461530050                                 |               |                 |
|                          | Manufacturer                                                                                                         | Molex                                      |               |                 |
|                          | Gain                                                                                                                 | + 4.25 dBi                                 |               |                 |
| Supply Voltage           | V <sub>NOM</sub>                                                                                                     | 3.3 VDC                                    |               |                 |
| Operating Temperature    | T <sub>NOM</sub>                                                                                                     | 20 °C                                      |               |                 |
| AC/DC-Adaptor            | None                                                                                                                 |                                            |               |                 |
| Manufacturer             | u-blox AG<br>Zürcherstrasse 68<br>8800 Thalwil<br>Switzerland                                                        |                                            |               |                 |

## 1.1 Photos

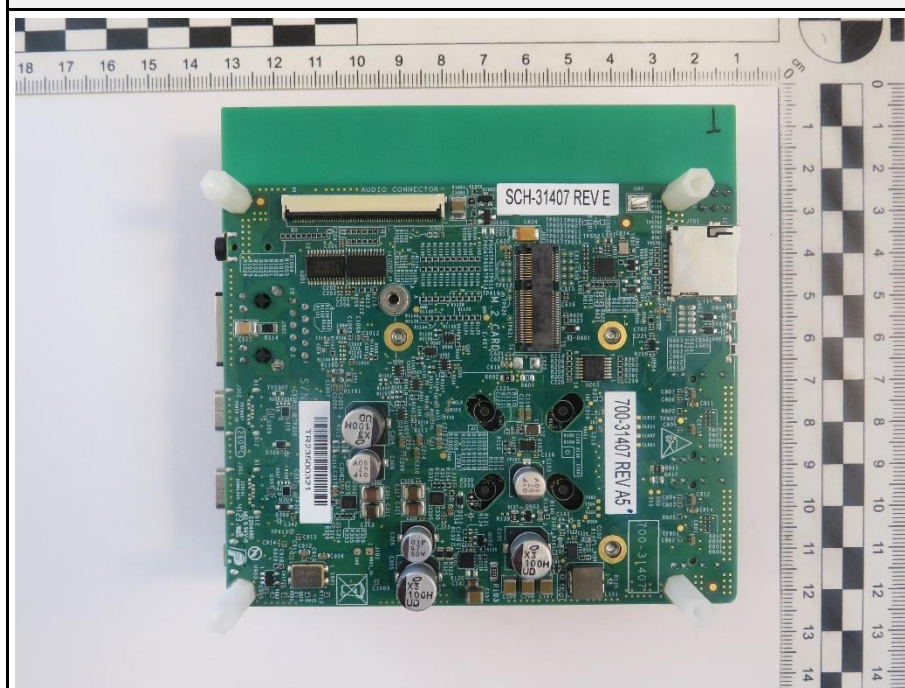


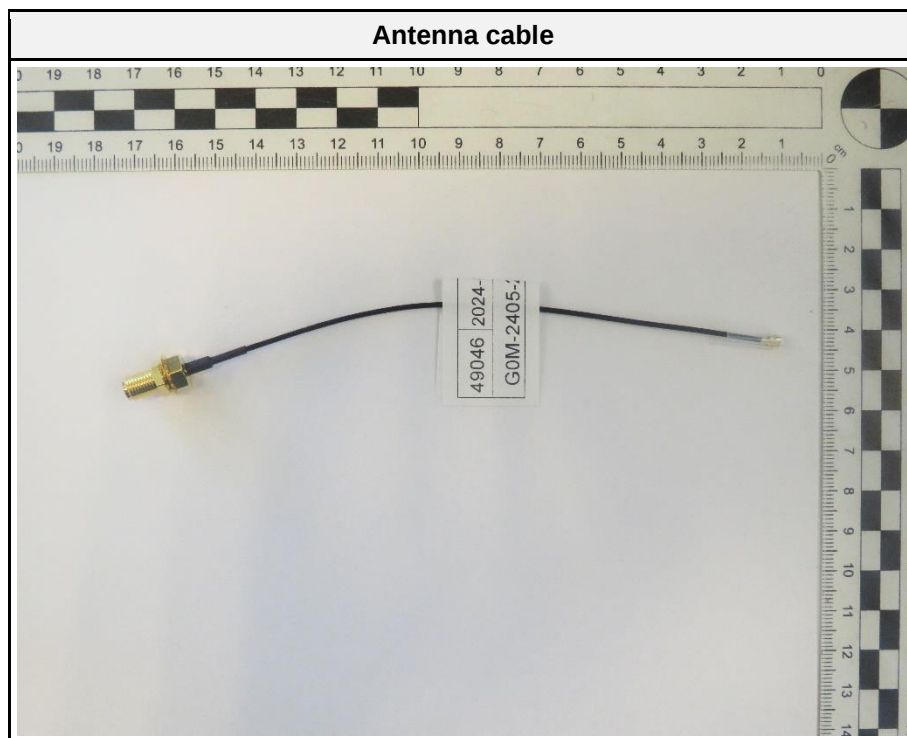
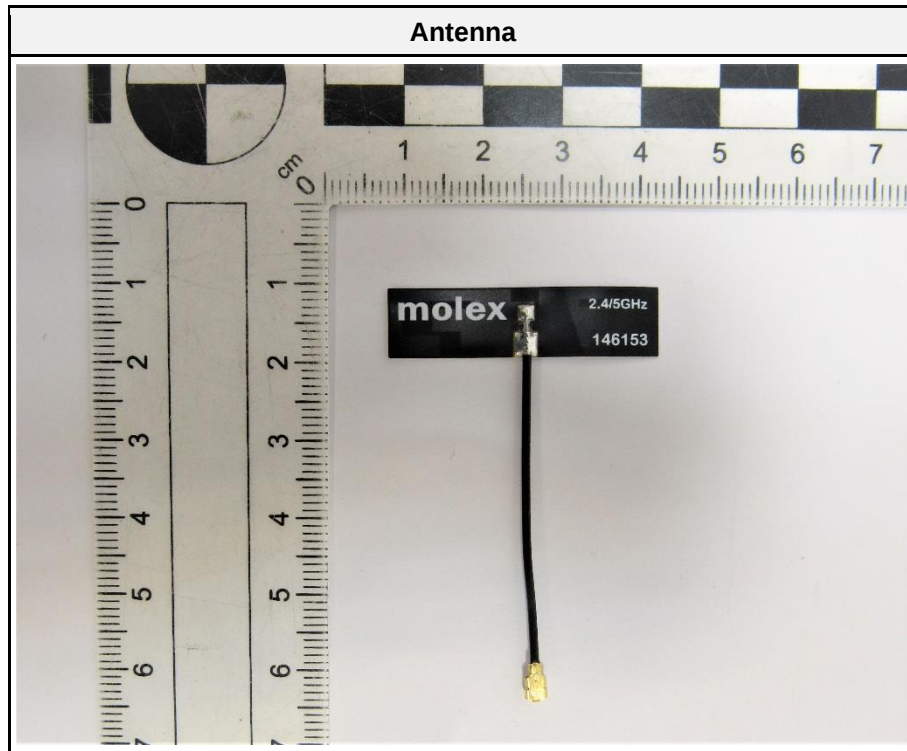


Evaluation board top

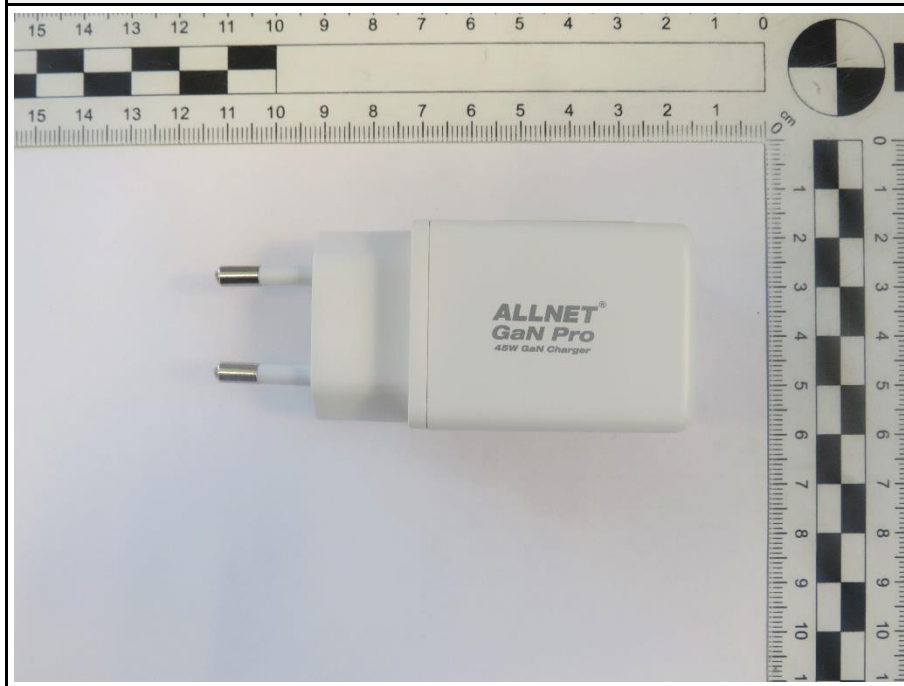


Evaluation board bottom

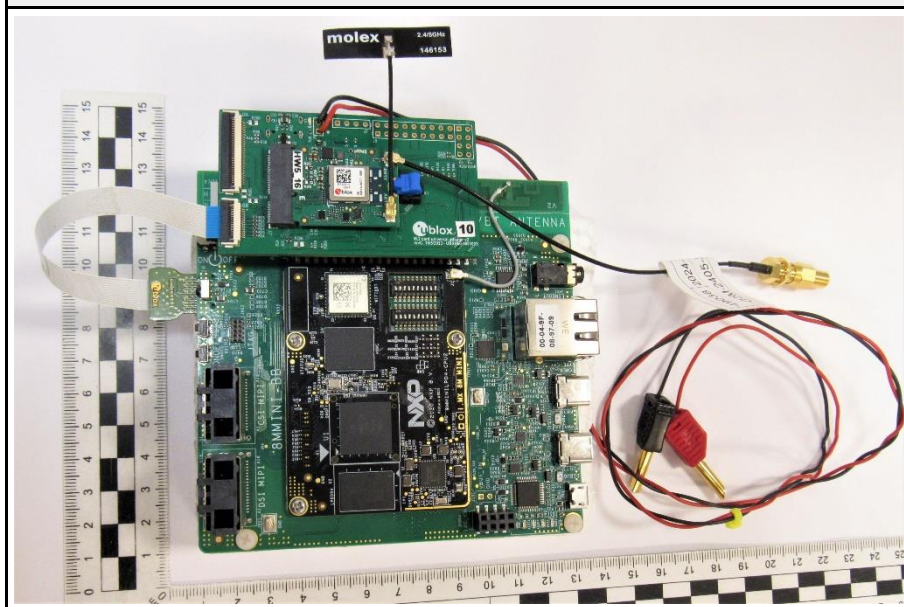




AC/DC adapter



EUT Set up



## 1.2 Support Equipment

| Product Type | Device                                                     | Manufacturer | Model          | Comment                                                                                              |
|--------------|------------------------------------------------------------|--------------|----------------|------------------------------------------------------------------------------------------------------|
| AE           | Laptop                                                     | Lenovo       | --             | For configuring test mode                                                                            |
| AE           | Evaluation Kit for the i.MX 8M Mini Applications Processor | NXP          | 8MMINILPD4-EVK | Host computer board                                                                                  |
| AE           | M2 card adapter                                            | u-blox       | v2 revC        | --                                                                                                   |
| AE           | AC/DC adapter                                              | Allnet       | 212154         | For evaluation board                                                                                 |
| CBL          | Data cable                                                 | Molex        | 15266-0171     | From M2 card adapter to Evaluation Kit for the i.MX 8M Mini Applications Processor, length is 153 mm |
| CBL          | USB-C                                                      | --           | --             | --                                                                                                   |
| SFT          | Terminal                                                   | --           | --             | Test mode activation                                                                                 |
| Description: |                                                            |              |                |                                                                                                      |
| AE           | Auxiliary Equipment                                        |              |                |                                                                                                      |
| SIM          | Simulator                                                  |              |                |                                                                                                      |
| CBL          | Connecting Cable                                           |              |                |                                                                                                      |
| SFT          | Software                                                   |              |                |                                                                                                      |
| Comment: --  |                                                            |              |                |                                                                                                      |

### 1.3 Test Modes

| Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Description    |                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------|
| HE20<br>(IEEE 802.11ax)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Mode           | Transmit                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Bandwidth      | 20 MHz                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Duty Cycle     | 99%                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | *Power setting | 19 dBm (5745 MHz, 5825 MHz, 5240 MHz)<br>15 dBm (5180 MHz)<br>16 dBm (5320 MHz)<br>12 dBm (5500 MHz)<br>13 dBm (5700 MHz) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Data rate      | MCS 0                                                                                                                     |
| <p>Comment: The above settings are found as worst-case during evaluation of the original modular test report number G0M-2302-1881-TFC407WF-W271-V03, issued on 2024-01-11 by Eurofins Product Service GmbH and test report number USRC239070001, issued on 2023-11-27 by Eurofins E&amp;E Taiwan Co., Ltd.</p> <p>*It has been identified that the power settings utilized in the modular test report requires modification to align with the updated requirements of the M2-MAYA-W271-00C. The power configurations in the initial report no longer reflect the necessary parameters for accurate compliance testing. The revised power settings in this table ensure that the test conditions are fully representative of the intended operational conditions to maintain compliance with regulatory standards.</p> |                |                                                                                                                           |

#### 1.4 Test Frequencies

| Designator | Mode | Channel | Frequency [MHz] |
|------------|------|---------|-----------------|
| F1         | Tx   | 36      | 5180            |
| F2         | Tx   | 48      | 5240            |
| F3         | Tx   | 64      | 5320            |
| F4         | Tx   | 100     | 5500            |
| F5         | Tx   | 140     | 5700            |
| F6         | Tx   | 149     | 5745            |
| F7         | Tx   | 165     | 5825            |

## 1.5 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dB $\mu$ V. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB/m)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Field strength limit:

This is the FCC Class B radiated emission limit (in units of dB $\mu$ V/m). The FCC limits are given in units of  $\mu$ V/m. The following formula is used to convert the units of  $\mu$ V/m to dB $\mu$ V/m:

$$\text{Field strength limit (dB}\mu\text{V/m)} = 20 \cdot \log (\mu\text{V/m})$$

Example only for radiated field strength:

|                  |               |   |                   |                        |          |
|------------------|---------------|---|-------------------|------------------------|----------|
| Reading + AF     | = Net Reading | : | Net reading       | - Field strength limit | = Margin |
| +21.5 dB $\mu$ V | + 26 dB/m     | : | 47.5 dB $\mu$ V/m | - 57.0 dB $\mu$ V/m    | = -9.5   |

## 2 Result Summary

| FCC 47 CFR Part 15E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                   |                                    |        |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------|--------|--------------------------------------------------|
| Product Standard Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Requirement                       | Reference Method                   | Result | Remarks                                          |
| FCC 15.407(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6 dB bandwidth                    | KDB 789033 C.2<br>ANSI C63.10 12.4 | N/T    | Note 1                                           |
| FCC 15.407(a)(2),<br>(a)(5), (h)(2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 26 dB bandwidth                   | KDB 789033 C.1<br>ANSI C63.10 12.4 | N/T    | Note 1                                           |
| FCC 15.407(a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Maximum output power              | KDB 789033 E<br>ANSI C63.10 12.3   | N/T    | Note 1                                           |
| FCC 15.407(h)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Transmit power control            | KDB 789033 E<br>ANSI C63.10 12.3   | N/T    | Note 1                                           |
| FCC 15.407(a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Power spectral density            | KDB 789033 F<br>ANSI C63.10 12.5   | N/T    | Note 1                                           |
| FCC 15.407(g)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Frequency stability               | ANSI C63.10 6.8                    | N/T    | Note 1                                           |
| FCC 15.207                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | AC power line conducted emissions | ANSI C63.10 6.2                    | N/T    | Note 1                                           |
| FCC 15.407(b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Transmitter radiated emissions    | KDB 789033 G<br>ANSI C63.10 12.7   | PASS   | --                                               |
| FCC 15.407(a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Radiation pattern                 | KDB 789033 H                       | N/R    | 5250-5350 MHz band<br>only with EIRP > 23<br>dBm |
| FCC 15.407(h)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DFS requirements                  | KDB 905462 D02                     | N/T    | Note 1 & 2                                       |
| <p>Note 1: Permissive change of a certified module.</p> <p>Note 2: For DFS results refer to the original modular test report No.: G0M-2302-1881-TFC407DF-W271-V03, issued on 2024-01-11 by Eurofins Product Service GmbH; and report No.: USRC239070002 issued on 2024-11-27 by Eurofins E&amp;E Wireless Taiwan Co., Ltd.</p> <p>Comment: The Decision Rule is applied on the basis of ETSI TR 102 273 and ETSI TR 100 028. These standards provide guidance on how to calculate and apply measurement uncertainty whilst providing maximum uncertainties allowance. In all cases due consideration will be given to ILAC-G8:09/2019. Where a result is considered conditional in respect of its proximity to the limit line, the customer would be made aware of situation so that they can make an informed decision on how to proceed.</p> |                                   |                                    |        |                                                  |

| Possible Test Case Verdicts |                                              |
|-----------------------------|----------------------------------------------|
| PASS                        | Test object does meet the requirements       |
| FAIL                        | Test object does not meet the requirements   |
| N/T                         | Required by standard but not tested          |
| N/R                         | Not required by standard for the test object |

### 3 Test Conditions and Results

#### 3.1 Test Conditions and Results - Transmitter radiated emissions

##### 3.1.1 Information

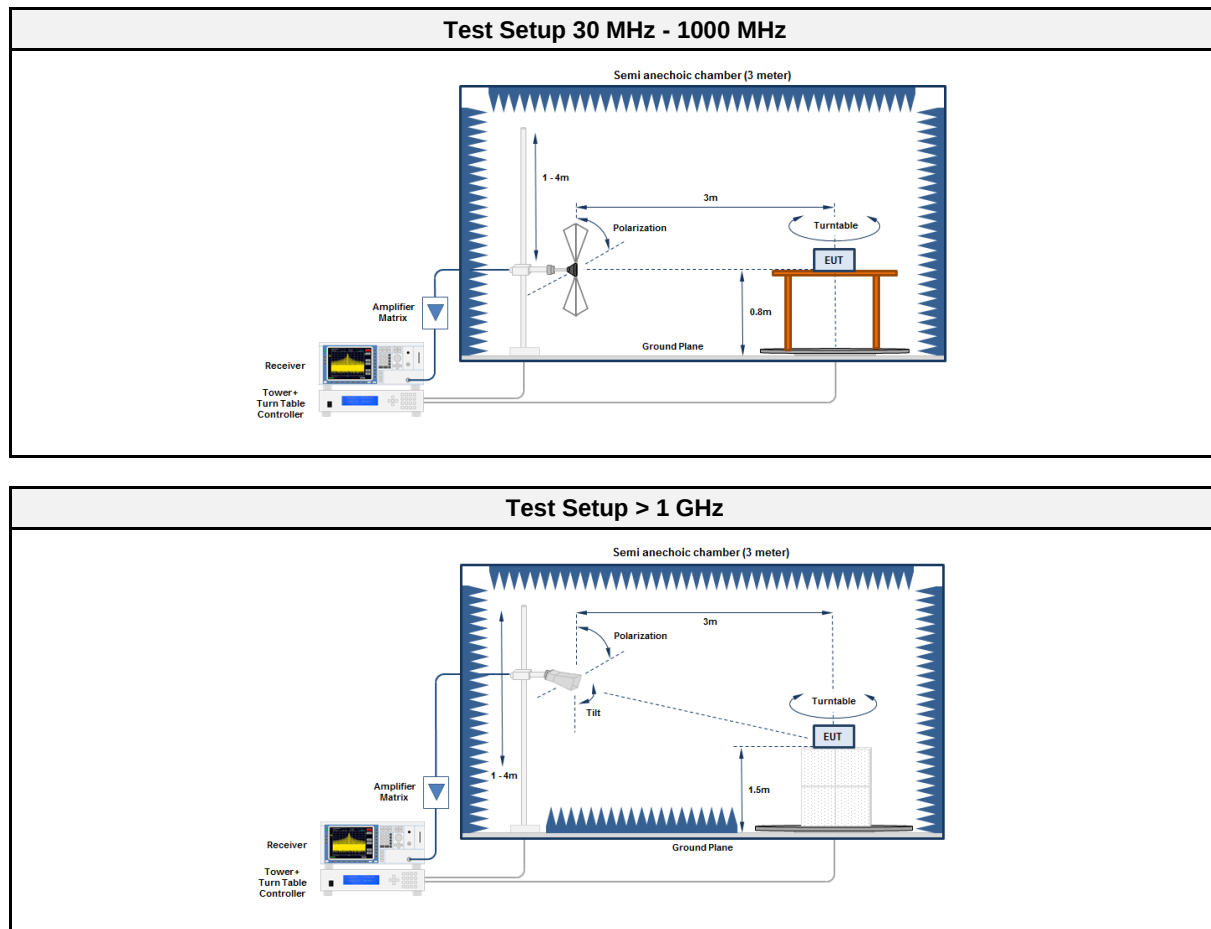
| Test Information        |                                                           |
|-------------------------|-----------------------------------------------------------|
| Reference               | FCC 15.407(b);                                            |
| Measurement Method      | KDB 789033 G<br>ANSI C63.10 6.3-6.6 6.3; ANSI C63.10 12.7 |
| Operator                | Md Abu Bakar Siddique                                     |
| Date                    | 2024-07-17 - 2024-07-18                                   |
| Measurement Uncertainty | ± 5.95 dB                                                 |

##### 3.1.2 Limits

| Limits - Restricted frequency bands and below 1 GHz |            |                       |                          |
|-----------------------------------------------------|------------|-----------------------|--------------------------|
| Frequency [MHz]                                     | Detector   | Field strength [μV/m] | Measurement distance [m] |
| 30 - 88                                             | Quasi-Peak | 100                   | 3                        |
| 88 - 216                                            | Quasi-Peak | 150                   | 3                        |
| 216 - 960                                           | Quasi-Peak | 200                   | 3                        |
| 960 - 1000                                          | Quasi-Peak | 500                   | 3                        |
| >1000                                               | Average    | 500                   | 3                        |

| Limits - Outside restricted frequency bands above 1 GHz |                                                   |                               |                          |
|---------------------------------------------------------|---------------------------------------------------|-------------------------------|--------------------------|
| Frequency band [MHz]                                    | Power limit [dBm EIRP]                            | Field strength limit [dBμV/m] | Measurement distance [m] |
| 5150 - 5250                                             | -27 dBm/MHz                                       | 68.2                          | 3                        |
| 5250 - 5350                                             | -27 dBm/MHz                                       | 68.2                          | 3                        |
| 5470 - 5725                                             | -27 dBm/MHz                                       | 68.2                          | 3                        |
| 5725 - 5850                                             | -27 dBm/MHz @ ±75 MHz from band edge              | 68.2                          | 3                        |
| 5725 - 5850                                             | 10 to -27 dBm/MHz @ ±25 to ±75 MHz from band edge | 105.2 to 68.2                 | 3                        |
| 5725 - 5850                                             | 15.6 to 10 dBm/MHz @ ±5 to ±25 MHz from band edge | 110.8 to 105.2                | 3                        |
| 5725 - 5850                                             | 27 to 15.6 dBm/MHz @ ±0 to ±5 MHz from band edge  | 122.2 to 110.8                | 3                        |

### 3.1.3 Setup



### 3.1.4 Equipment

| Test Software |                  |            |          |
|---------------|------------------|------------|----------|
| Description   | Manufacturer     | Name       | Version  |
| EMC Software  | DARE Instruments | RadiMation | 2023.2.6 |

| Test Equipment 30 MHz - 1000 MHz |                 |           |            |           |          |
|----------------------------------|-----------------|-----------|------------|-----------|----------|
| Description                      | Manufacturer    | Model     | Identifier | Cal. Date | Cal. Due |
| Anechoic Chamber                 | Frankonia       | AC1       | EF00062    | 2024-07   | 2027-07  |
| Test Receiver                    | Rohde & Schwarz | ESW44     | EF01856    | 2024-04   | 2025-04  |
| Antenna                          | Schwarzbeck     | VULB 9168 | EF01824    | 2022-10   | 2025-10  |

| Test Equipment > 1 GHz               |                    |                      |            |           |          |
|--------------------------------------|--------------------|----------------------|------------|-----------|----------|
| Description                          | Manufacturer       | Model                | Identifier | Cal. Date | Cal. Due |
| Anechoic Chamber                     | Frankonia          | AC2                  | EF01616    | 2024-07   | 2025-07  |
| Spectrum analyzer                    | Rohde & Schwarz    | FSW43                | EF00896    | 2024-07   | 2025-07  |
| Horn antenna                         | Schwarzbeck        | BBHA 9120B (1-10GHz) | EF01678    | 2024-05   | 2027-05  |
| Double Ridged Waveguide Horn Antenna | Schwarzbeck        | HWRD 650 (6,5-18GHz) | EF01679    | 2024-05   | 2027-05  |
| Antenna                              | Amplifier Research | AT4560               | EF00302    | 2023-09   | 2025-09  |

### 3.1.5 Procedure

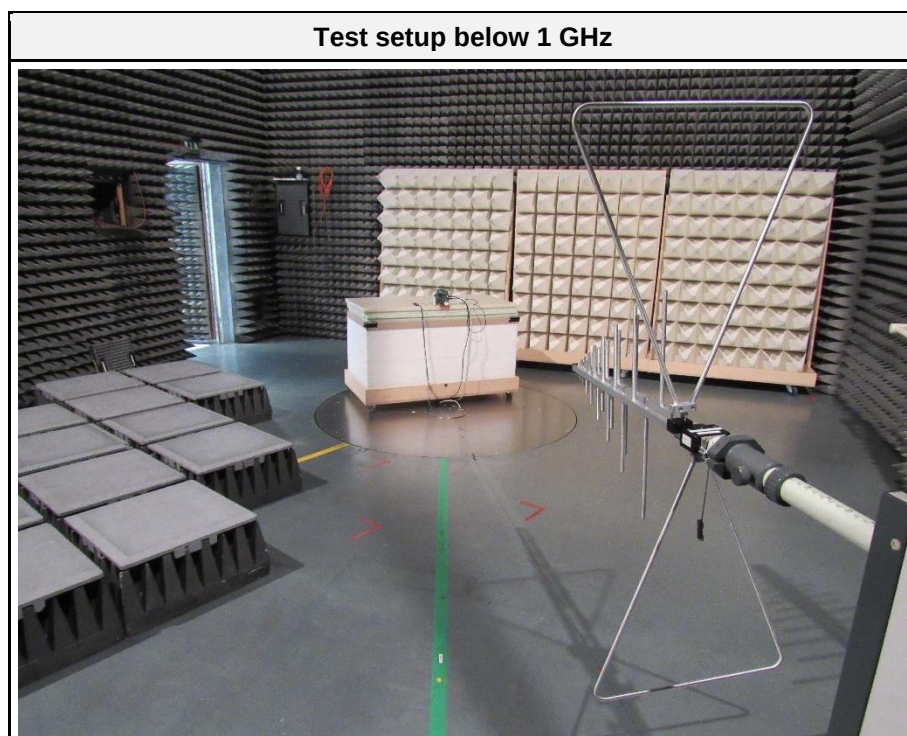
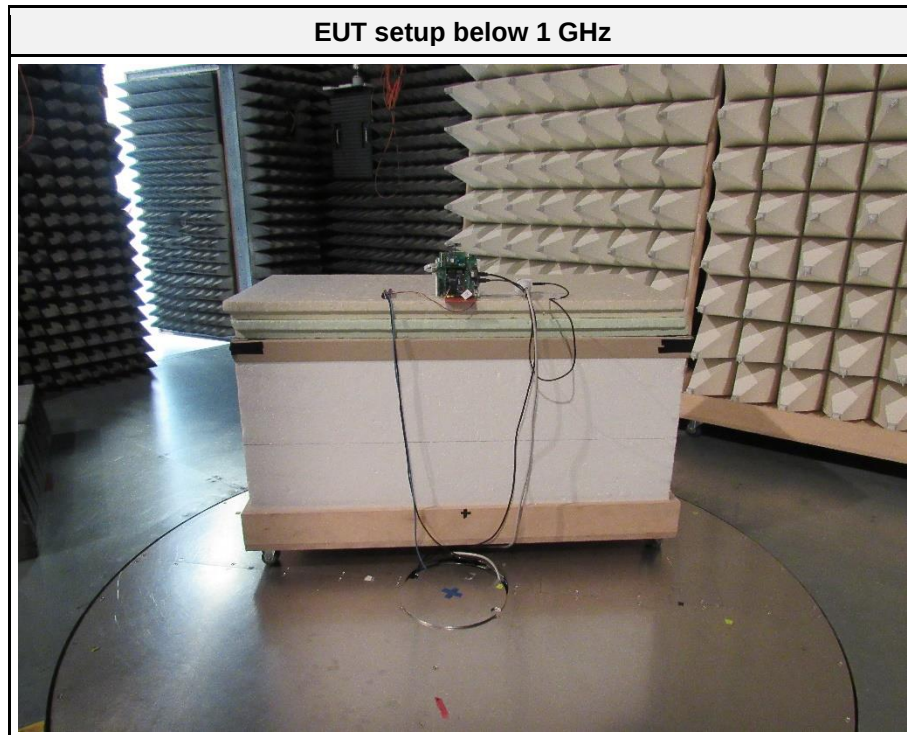
| Test Procedure 30 MHz - 1000 MHz |                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------|
| 1.                               | EUT is placed on a non-conducting support at the center of a turn table 0.8 m above the ground |
| 2.                               | EUT set to test mode                                                                           |
| 3.                               | The receiver is set to peak detection with max hold                                            |
| 4.                               | The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m        |
| 5.                               | All significant emissions are measured again using the corresponding final detector            |

| Test Procedure > 1 GHz |                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------|
| 1.                     | EUT is placed on a non-conducting support at the center of a turn table 1.5 m above the ground |
| 2.                     | EUT set to test mode                                                                           |
| 3.                     | The receiver is set to peak detection with max hold                                            |
| 4.                     | The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m        |
| 5.                     | All significant emissions are measured again using the corresponding final detector            |

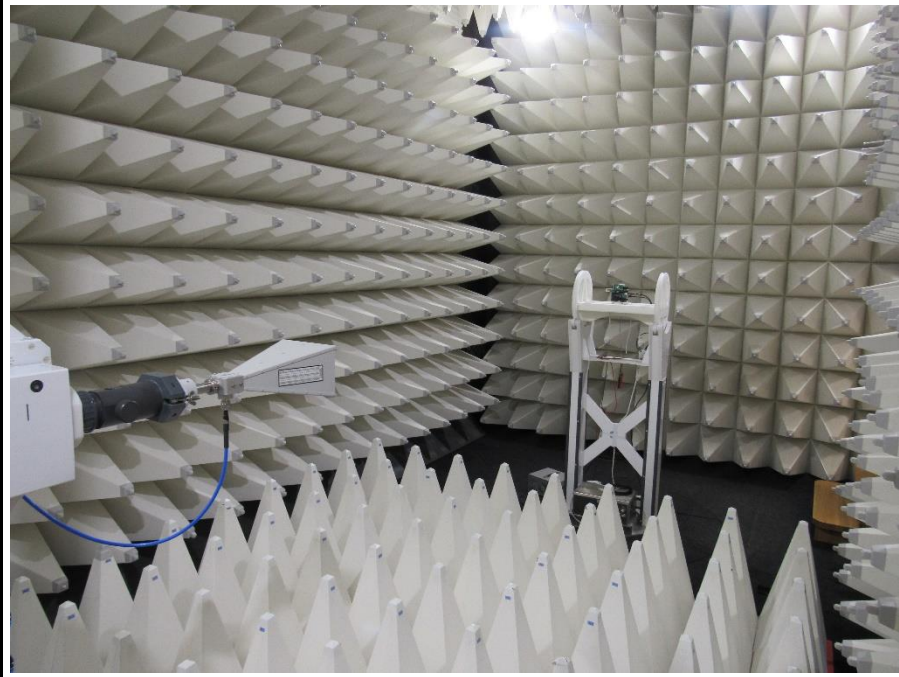
### 3.1.6 Results

| Test Results  |                |                |      |      |                |             |
|---------------|----------------|----------------|------|------|----------------|-------------|
| Channel [MHz] | Emission [MHz] | Level [dBμV/m] | Det. | Pol. | Limit [dBμV/m] | Margin [dB] |
| 5240          | 132.3538       | 30.3           | qpk  | ver  | 43.5           | -13.22      |
| 5240          | 243.3678       | 26.1           | qpk  | hor  | 46             | -19.9       |
| 5240          | 338.7974       | 37.7           | qpk  | hor  | 68.2           | -30.49      |
| 5240          | 401.8112       | 37.8           | qpk  | ver  | 46             | -8.2        |
| 5240          | 1513.9         | 45.55          | pk   | hor  | 74             | -28.45      |
| 5240          | 5094.647       | 44.42          | pk   | hor  | 74             | -29.58      |
| 5240          | 15717.396      | 60.45          | pk   | hor  | 74             | -13.55      |
| 5240          | 15717.396      | 49.67          | RMS  | hor  | 54             | -4.33       |
| 5240          | 18059.5        | 48.96          | pk   | ver  | 74             | -25.04      |
| 5180          | 5149.193       | 63.59          | pk   | hor  | 74             | -10.41      |
| 5180          | 5149.193       | 49.04          | RMS  | hor  | 54             | -4.96       |
| 5320          | 5350.947       | 62.71          | pk   | hor  | 74             | -11.29      |
| 5320          | 5350.947       | 52.28          | RMS  | hor  | 54             | -1.72       |
| 5500          | 5467.893       | 63.26          | pk   | hor  | 68.2           | -4.94       |
| 5500          | 5467.893       | 47.53          | RMS  | hor  | 68.2           | -20.67      |
| 5700          | 5725.383       | 63.8           | pk   | hor  | 68.2           | -4.4        |
| 5700          | 5725.383       | 48.77          | RMS  | hor  | 68.2           | -19.43      |
| 5745          | 5724.523       | 86.71          | pk   | hor  | 120.93         | -34.22      |
| 5745          | 5724.523       | 72.58          | RMS  | hor  | 122            | -49.42      |
| 5825          | 5850.2         | 78.3           | pk   | hor  | 121.55         | -43.25      |
| 5825          | 5850.2         | 63.12          | RMS  | hor  | 122            | -58.88      |

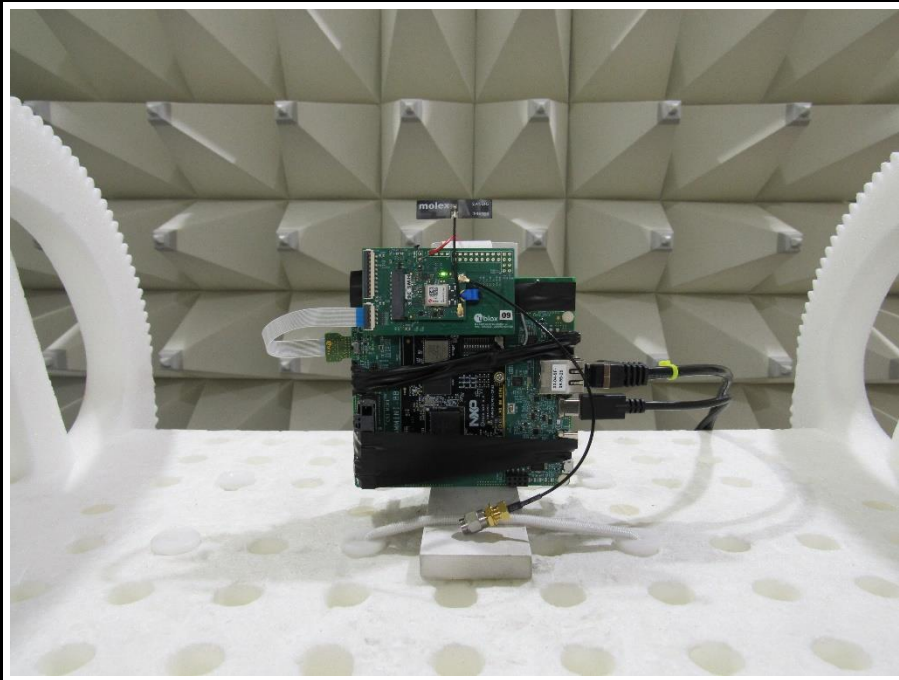
### 3.1.7 Setup Photos



**Test setup above 1 GHz**



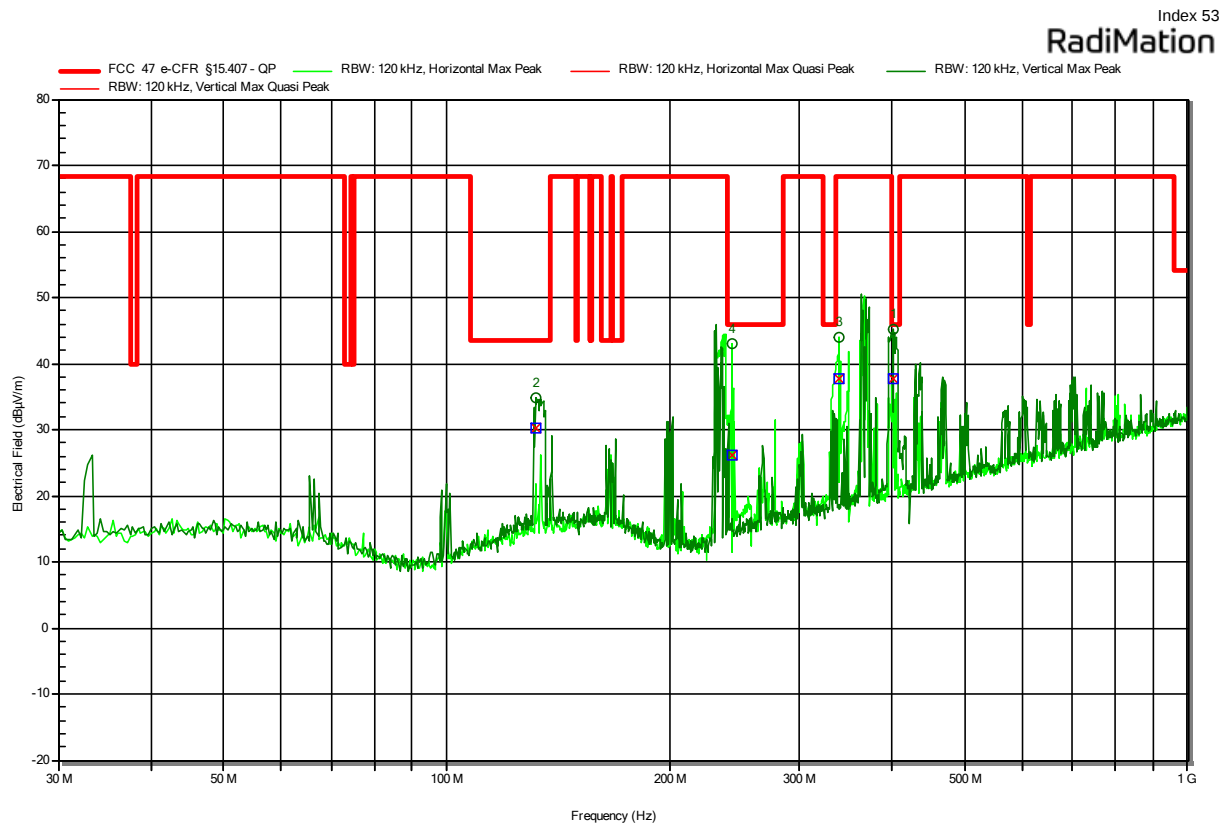
**EUT setup above 1 GHz**



## ANNEX A Transmitter spurious emissions

### Radiated Spurious Emissions according to 47 CFR Part 15.407

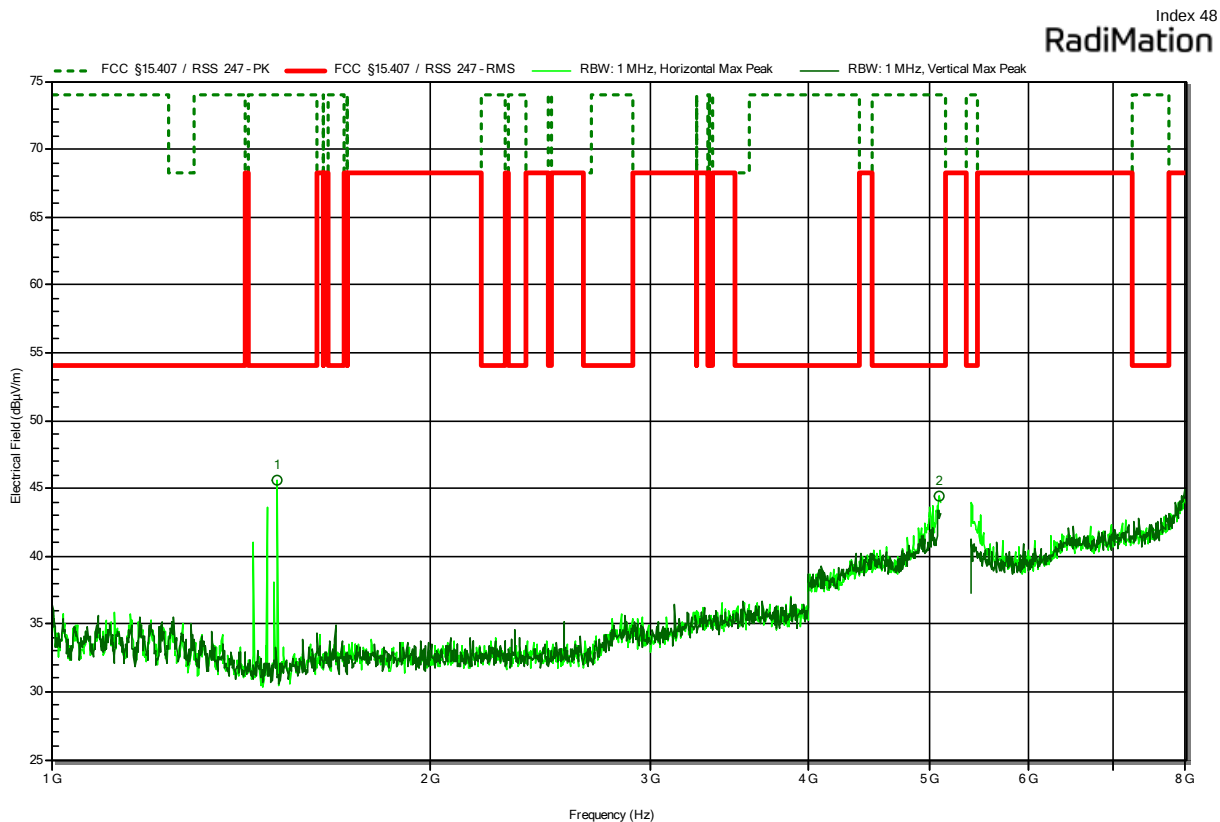
Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 6, Bluetooth 5.3 and IEEE 802.15.4 module  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49021  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Siddique  
 Measurement software: RadiMation, version 2023.2.6  
 Test Conditions: Tnom: 22 °Celsius, Vnom: 3.3 VDC  
 Antenna: Schwarzbeck VULB 9168  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax\_HE20\_5240 MHz\_Tx  
 Test Date: 2024-09-18



| Peak Number | Frequency (MHz) | Quasi-Peak (dBµV/m) | Quasi-Peak Limit (dBµV/m) | Quasi-Peak Difference (dB) | Quasi-Peak Status | Polarization |
|-------------|-----------------|---------------------|---------------------------|----------------------------|-------------------|--------------|
| 1           | 401.8112        | 37.8                | 46                        | -8.2                       | Pass              | Vertical     |
| 2           | 132.3538        | 30.3                | 43.5                      | -13.22                     | Pass              | Vertical     |
| 3           | 338.7974        | 37.7                | 68.2                      | -30.49                     | Pass              | Horizontal   |
| 4           | 243.3678        | 26.1                | 46                        | -19.9                      | Pass              | Horizontal   |

## Radiated Spurious Emissions according to 47 CFR Part 15.407

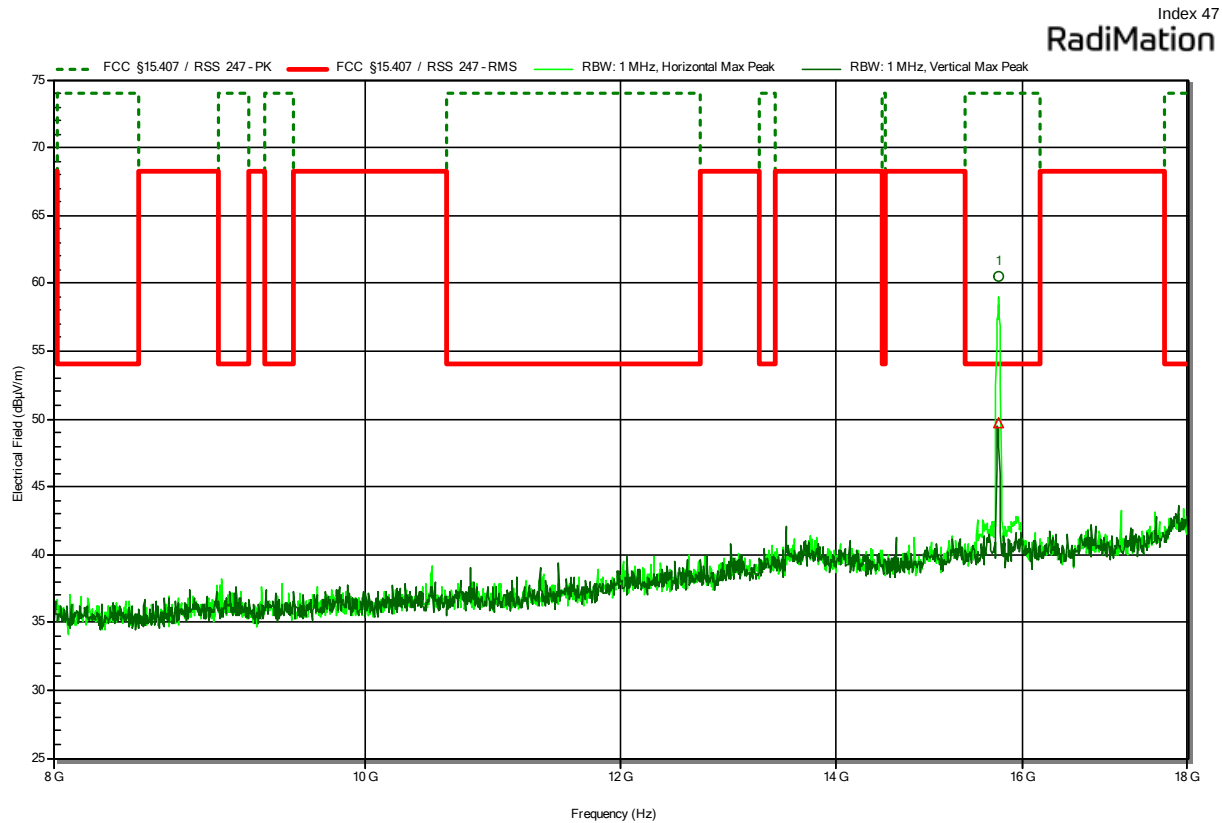
Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 6, Bluetooth 5.3 and IEEE 802.15.4 module  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49021  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Siddique  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 22 °Celsius, Vnom: 3.3 VDC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax\_HE20\_5240 MHz\_Tx  
 Test Date: 2024-09-17



| Peak Number | Frequency (MHz) | Peak (dBµV/m) | Peak (dBµV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 1513.9          | 45.55         | 74            |       | -28.45               | Pass        | Horizontal   |
| 2           | 5094.647        | 44.42         | 74            |       | -29.58               | Pass        | Horizontal   |

## Radiated Spurious Emissions according to 47 CFR Part 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 6, Bluetooth 5.3 and IEEE 802.15.4 module  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49021  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Siddique  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 22 °Celsius, Vnom: 3.3 VDC  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax\_HE20\_5240 MHz\_Tx  
 Test Date: 2024-09-17



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 15717.396       | 60.45         | 74            |       | -13.55               | Pass        | Horizontal   |

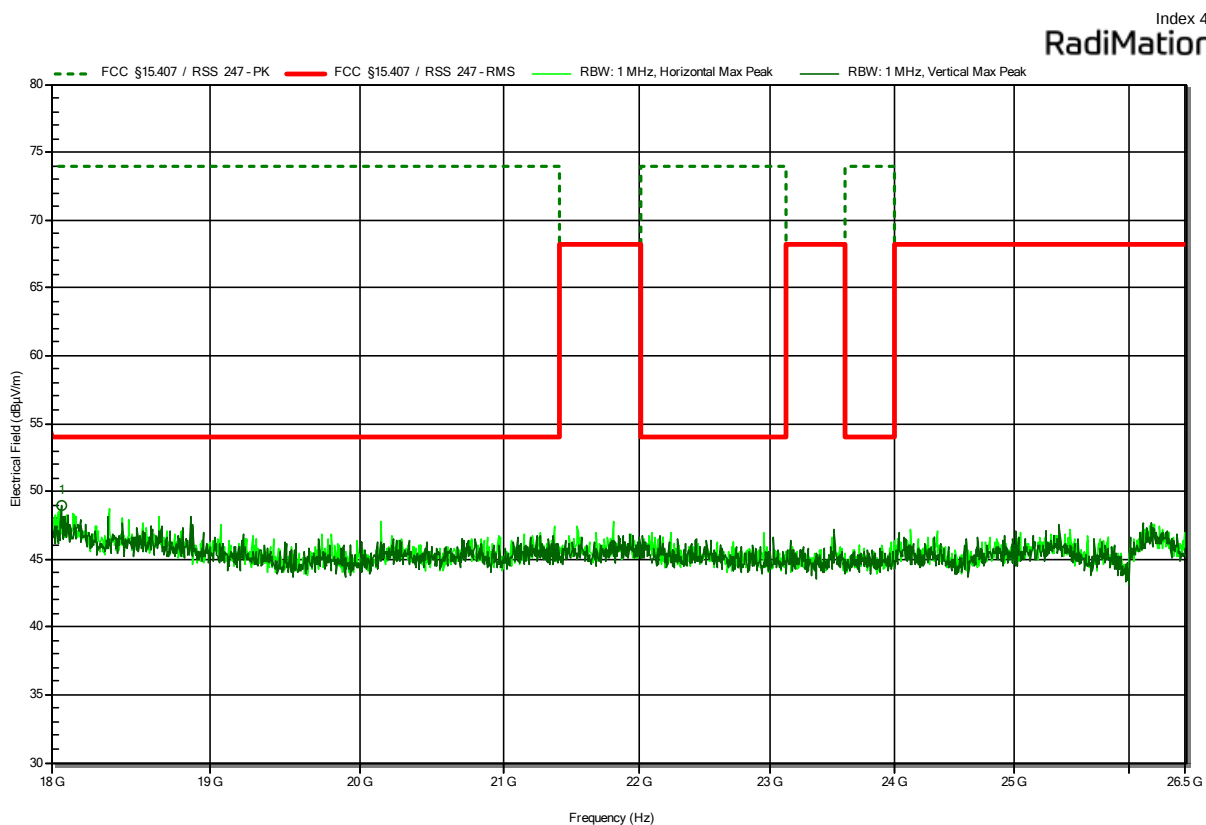
| Peak Number | Frequency (MHz) | RMS (dBμV/m) | RMS (dBμV/m) | Limit | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|-------|---------------------|------------|--------------|
| 1           | 15717.396       | 49.67        | 54           |       | -4.33               | Pass       | Horizontal   |

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated Spurious Emissions according to 47 CFR Part 15.407

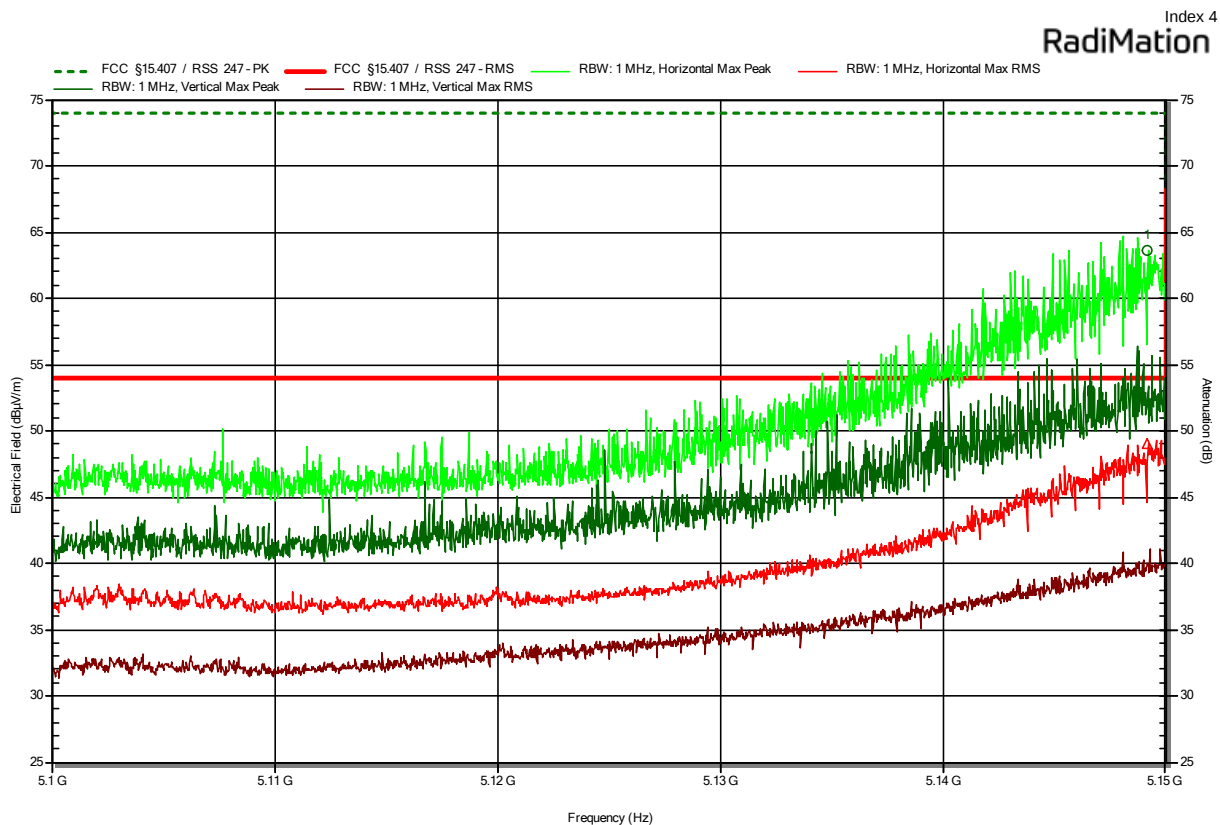
Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 6, Bluetooth 5.3 and IEEE 802.15.4 module  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49021  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Siddique  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 22 °Celsius, Vnom: 3.3 VDC  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax\_HE20\_5240 MHz\_Tx  
 Test Date: 2024-09-17



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 18059.5         | 48.96         | 74            |       | -25.04               | Pass        | Vertical     |

## Radiated Spurious Emissions according to FCC 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 5 GHz  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49604  
 Test Site: Eurofins Product Service GmbH  
 Operator: Godson Offorji  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 V DC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax, HE20, MCS0, 5180 MHz, CH 36, P=15 dBm  
 Test Date: 2024-10-30  
 Note: Pass\_lower band area



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 5149.193        | 63.59         | 74            |       | -10.41               | Pass        | Horizontal   |

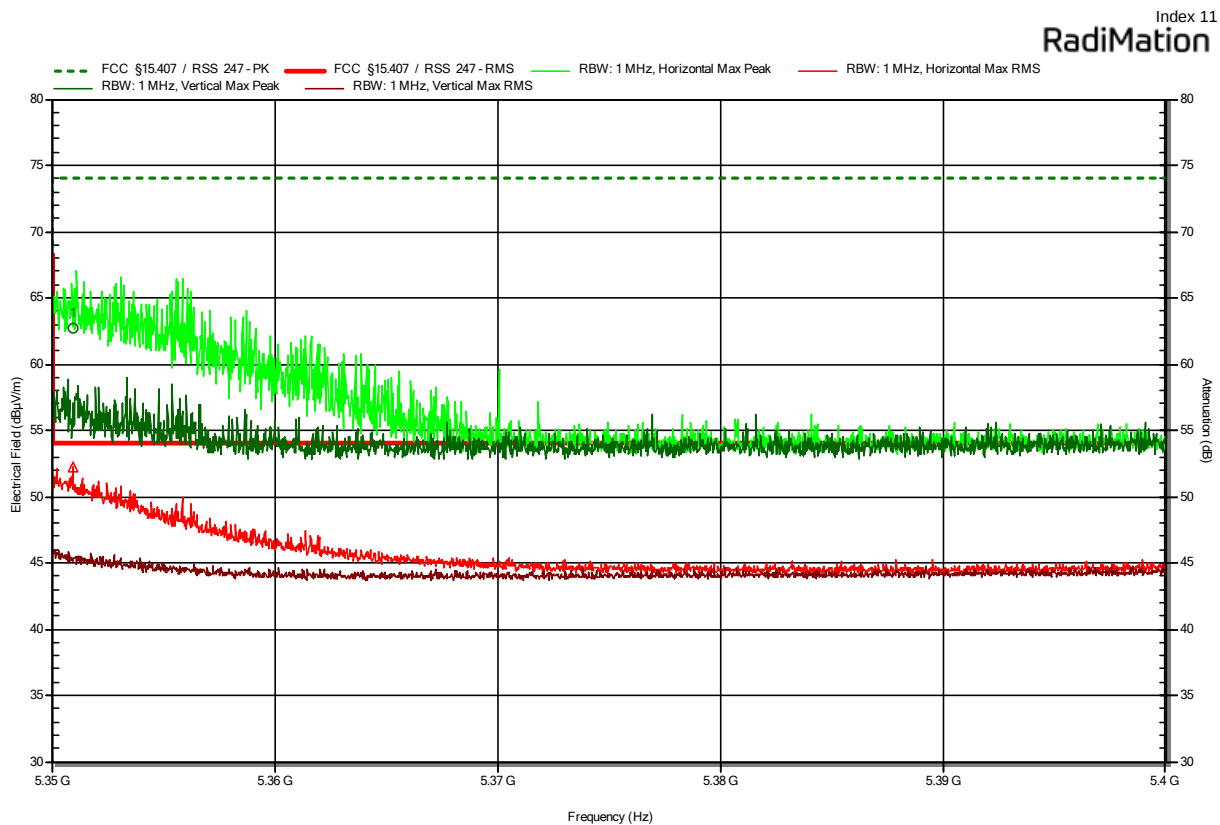
| Peak Number | Frequency (MHz) | RMS (dBμV/m) | RMS (dBμV/m) | Limit | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|-------|---------------------|------------|--------------|
| 1           | 5149.193        | 49.04        | 54           |       | -4.96               | Pass       | Horizontal   |

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated Spurious Emissions according to FCC 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 5 GHz  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49604  
 Test Site: Eurofins Product Service GmbH  
 Operator: Godson Offorji  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 V DC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax, HE20, MCS0, 5320 MHz, CH 64, P=16 dBm  
 Test Date: 2024-10-30  
 Note: Pass\_upper band area



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 5350.947        | 62.71         | 74            |       | -11.29               | Pass        | Horizontal   |

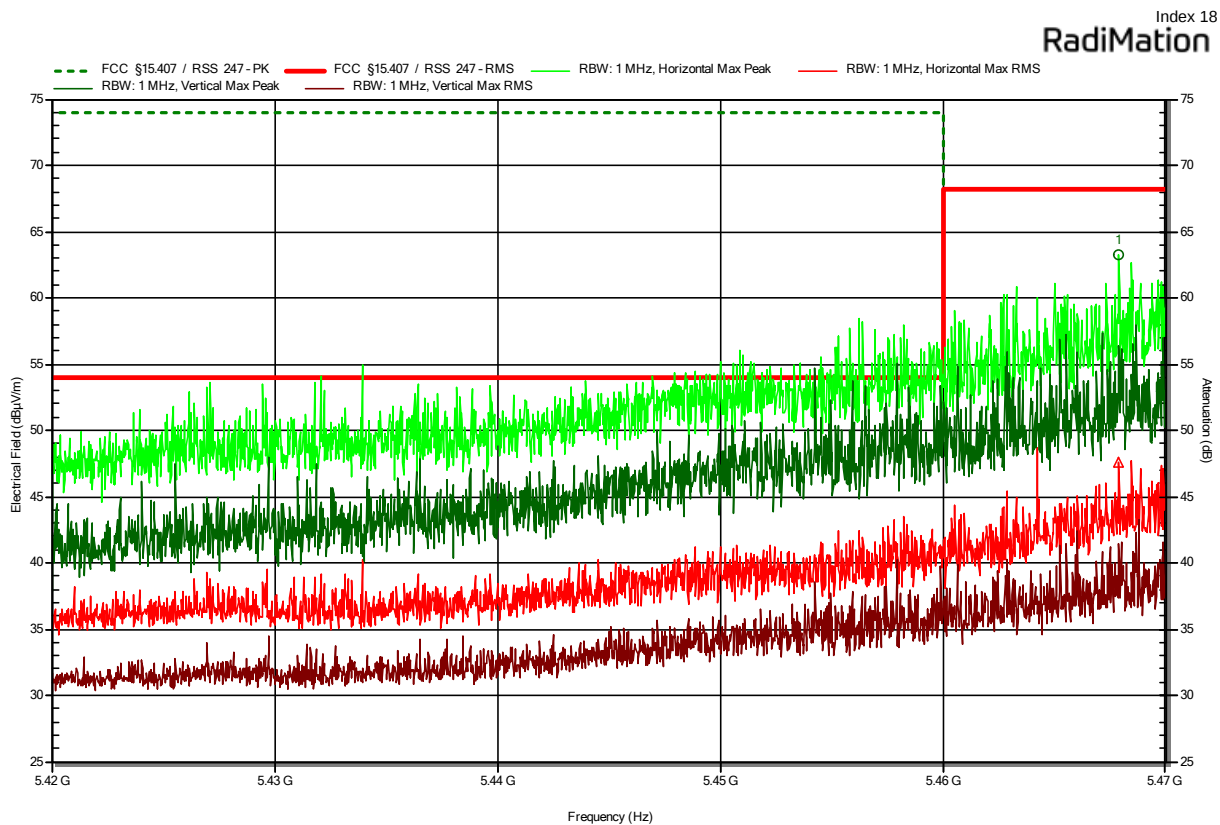
| Peak Number | Frequency (MHz) | RMS (dBμV/m) | RMS (dBμV/m) | Limit | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|-------|---------------------|------------|--------------|
| 1           | 5350.947        | 52.28        | 54           |       | -1.72               | Pass       | Horizontal   |

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated Spurious Emissions according to FCC 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 5 GHz  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49604  
 Test Site: Eurofins Product Service GmbH  
 Operator: Ehsan Sohrabi  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 V DC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax, HE20, MCS0, 5500 MHz, CH 100, P=12 dBm  
 Test Date: 2024-11-01  
 Note: lower band area



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 5467.893        | 63.26         | 68.2          |       | -4.94                | Pass        | Horizontal   |

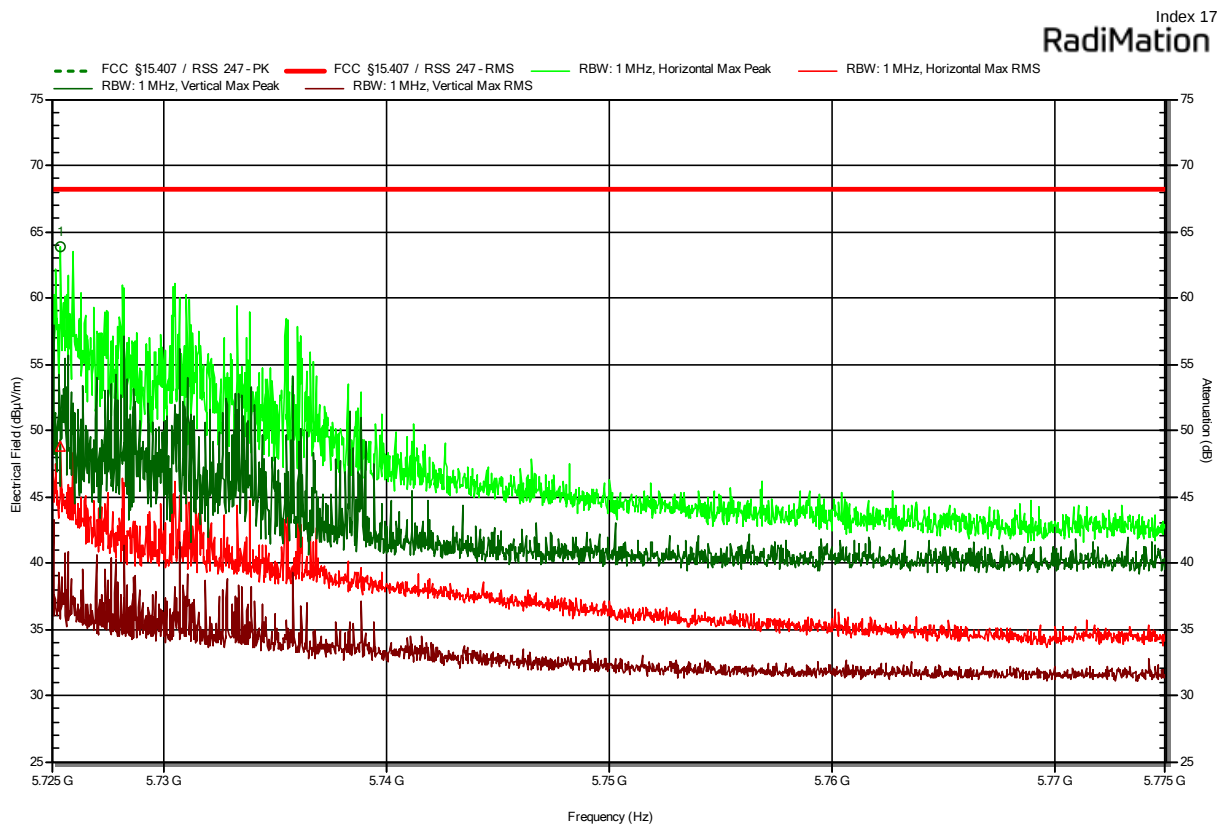
| Peak Number | Frequency (MHz) | RMS (dBμV/m) | RMS (dBμV/m) | Limit | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|-------|---------------------|------------|--------------|
| 1           | 5467.893        | 47.53        | 68.2         |       | -20.67              | Pass       | Horizontal   |

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated Spurious Emissions according to FCC 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 5 GHz  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49604  
 Test Site: Eurofins Product Service GmbH  
 Operator: Ehsan Sohrabi  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 V DC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax, HE20, MCS0, 5700 MHz, CH 140, P=13 dBm  
 Test Date: 2024-11-01  
 Note: upper band area



| Peak Number | Frequency (MHz) | Peak (dBµV/m) | Peak (dBµV/m) | Limit (dB) | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|------------|----------------------|-------------|--------------|
| 1           | 5725.383        | 63.8          | 68.2          | -4.4       |                      | Pass        | Horizontal   |

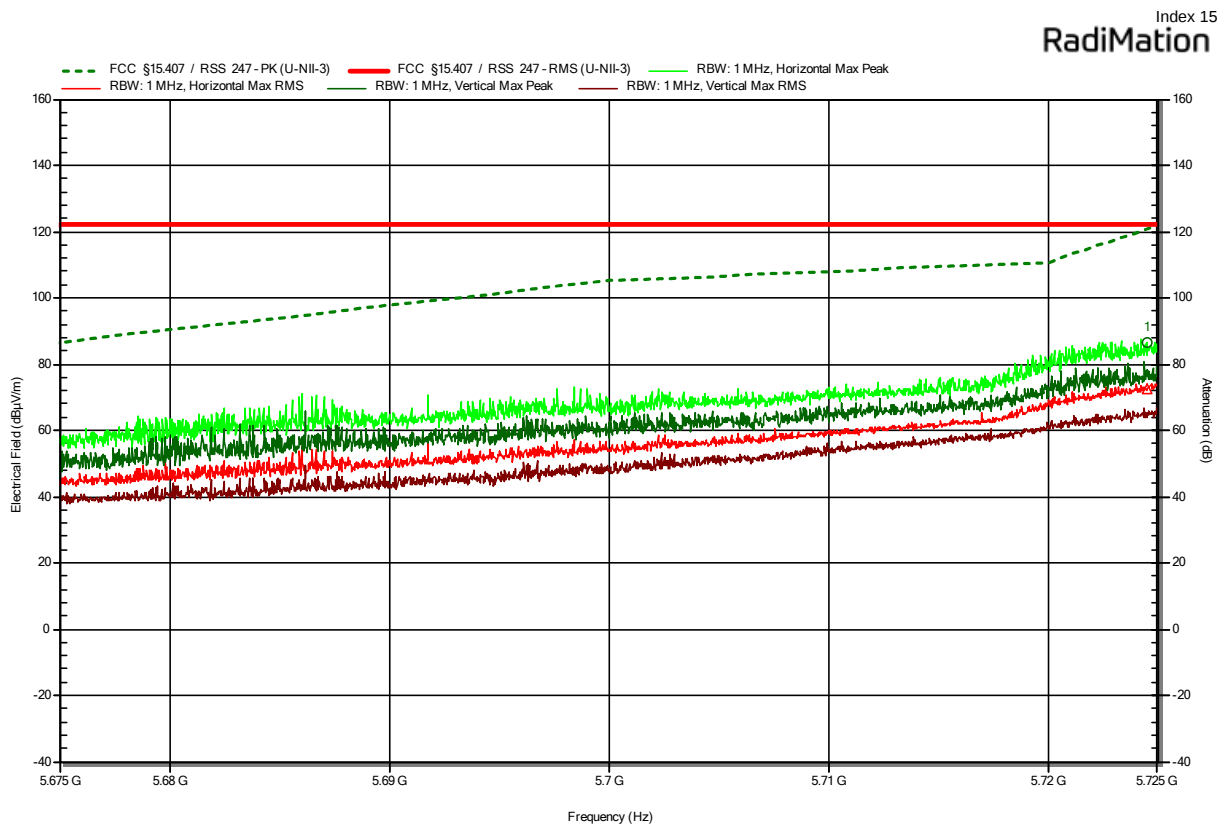
| Peak Number | Frequency (MHz) | RMS (dBµV/m) | RMS (dBµV/m) | Limit (dB) | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|------------|---------------------|------------|--------------|
| 1           | 5725.383        | 48.77        | 68.2         | -19.43     |                     | Pass       | Horizontal   |

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated Spurious Emissions according to FCC 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 5 GHz  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49604  
 Test Site: Eurofins Product Service GmbH  
 Operator: Ehsan Sohrabi  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 V DC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax, HE20, MCS0, 5745 MHz, CH 149, P=19 dBm  
 Test Date: 2024-11-01  
 Note: lower band area



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 5724.523        | 86.71         | 120.93        |       | -34.22               | Pass        | Horizontal   |

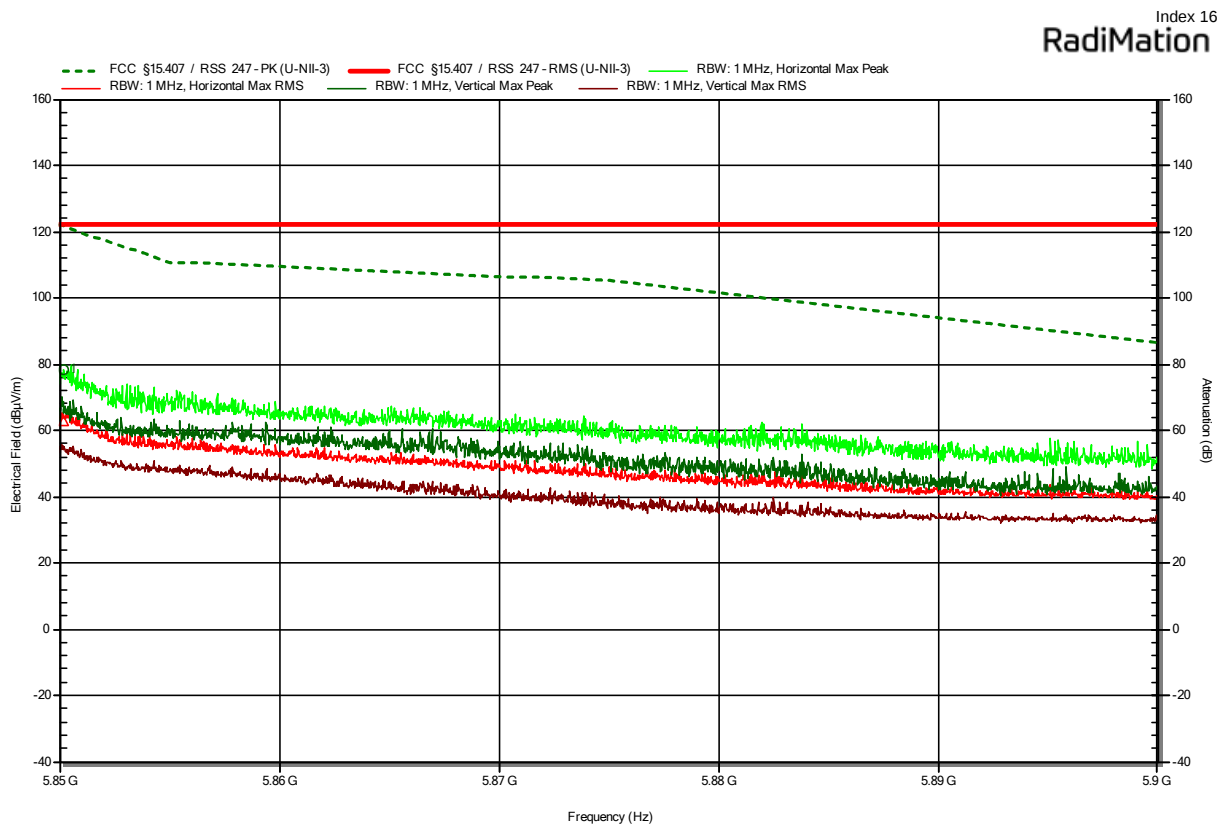
| Peak Number | Frequency (MHz) | RMS (dBμV/m) | RMS (dBμV/m) | Limit | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|-------|---------------------|------------|--------------|
| 1           | 5724.523        | 72.58        | 122          |       | -49.42              | Pass       | Horizontal   |

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

## Radiated Spurious Emissions according to FCC 15.407

Project Number: G0M-2405-2583  
 Applicant: u-blox AG  
 Model Description: M.2 card for the MAYA-W2 Wi-Fi 5 GHz  
 Model: M2-MAYA-W271-00C  
 Test Sample ID: 49604  
 Test Site: Eurofins Product Service GmbH  
 Operator: Ehsan Sohrabi  
 Measurement software: RadiMation, version 2024.1.3  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 V DC  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; 802.11ax, HE20, MCS0, 5825 MHz, CH 165, P=19 dBm  
 Test Date: 2024-11-01  
 Note: upper band area



| Peak Number | Frequency (MHz) | Peak (dBμV/m) | Peak (dBμV/m) | Limit | Peak Difference (dB) | Peak Status | Polarization |
|-------------|-----------------|---------------|---------------|-------|----------------------|-------------|--------------|
| 1           | 5850.2          | 78.3          | 121.55        |       | -43.25               | Pass        | Horizontal   |

| Peak Number | Frequency (MHz) | RMS (dBμV/m) | RMS (dBμV/m) | Limit | RMS Difference (dB) | RMS Status | Polarization |
|-------------|-----------------|--------------|--------------|-------|---------------------|------------|--------------|
| 1           | 5850.2          | 63.12        | 122          |       | -58.88              | Pass       | Horizontal   |

== = END OF TEST REPORT == =

Test Report No.: G0M-2405-2583-TFC407WF01-V01

Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany