SLOVENSKA AKREDITACIJA
SIST EN ISO/IEC 17025
LP-009

# Test report

| | | | |
|---|---|---|---|
| **Number** | **T251-0312/25** | Project file: | C20250741 |
| | | Date: | 2025-05-22 |
| | | Pages: | 28 |

| | |
|---|---|
| **Product:** | **Notecard** |
| **Type reference:** | **NOTE-MBGLW** |
| Ratings: | VIO - 1.8 V or 3.3 V; 150 mA<br>VMODEM - 2.5 V to 5.5 V; 750 mA<br>(powered directly from a development board and AC/DC power supply delivering 5 V d.c. to the board) |
| Trademark: | / |
| **Applicant:** | **Blues Inc.**<br>**Harbor Street 50, 01944 Manchester, USA** |
| Manufacturer: | Blues Inc.<br>Harbor Street 50, 01944 Manchester, USA |
| Place of manufacture: | / |

**Summary of testing**

| | |
|---|---|
| Testing method: | 47 CFR Part 15, Subpart B (Clause 15.107 and 15.109) last amended 2025-01-06 in conjunction with ANSI C63.4:2014<br>ICES-003, issue 7 in conjunction with ICES-Gen, Issue 2 and ANSI C63.4:2014 amended as per ANSI C63.4a:2017 |
| Testing location: | SIQ Ljubljana<br>Mašera-Spasićeva ulica 10, SI-1000 Ljubljana, Slovenia<br>FCC designation number: SI0001<br>ISED Conformity Assessment Body Identification Number: SI0001 |
| Remarks: | Date of receipt of test items: 2025-03-19<br>Number of items tested: 1<br>Date of performance of tests: 2025-03-25 – 2025-04-22<br>The test results presented in this report relate only to the items tested.<br>The test items were tested in the condition as received.<br>The product complies with the requirements of the testing methods. |

Tested by: Aljaž Bajec

Approved by: Marjan Mak





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## Contents Page

## 1. General

**Abbreviations and markings:**

| | |
|---|---|
| Port | Physical interface through which electromagnetic energy enters or leaves the EUT |
| AE associated equipment | Equipment needed to exercise and/or monitor the operation of the EUT |
| EUT | Equipment Under Test |
| Highest internal frequency (*Fx*) | Highest fundamental frequency generated or used within the EUT or highest frequency at which it operates |
| RF | Radio Frequency |

**Possible test case verdicts:**

| | |
|---|---|
| Test does not apply to the tested sample: | N/A |
| Tested sample passed the requirements: | P (Pass) |
| Tested sample failed the requirements: | F (Fail) |
| Test was not performed: | N/P (Not performed) |

Throughout this report a comma is used as the decimal separator. Numerical data taken from IEC standards are using a comma as the decimal separator.

**History sheet:**

| **Date:** | **Report No.:** | **Change:** | **Revision:** |
|---|---|---|---|
| 2025-05-22 | T251-0312/25 | Initial Test Report issued. | -- |

## 2. Measurement uncertainty

The following measurement uncertainty levels have been calculated according to the SIQ internal document EN208, as specified in CISPR 16-4-2 and EN 55016-4-2. The uncertainties represent an expanded uncertainty expressed at 95% confidence level using a coverage factor k=2.

The following measurement uncertainty has been included in test results as specified in each of the basic referenced standards as applicable.

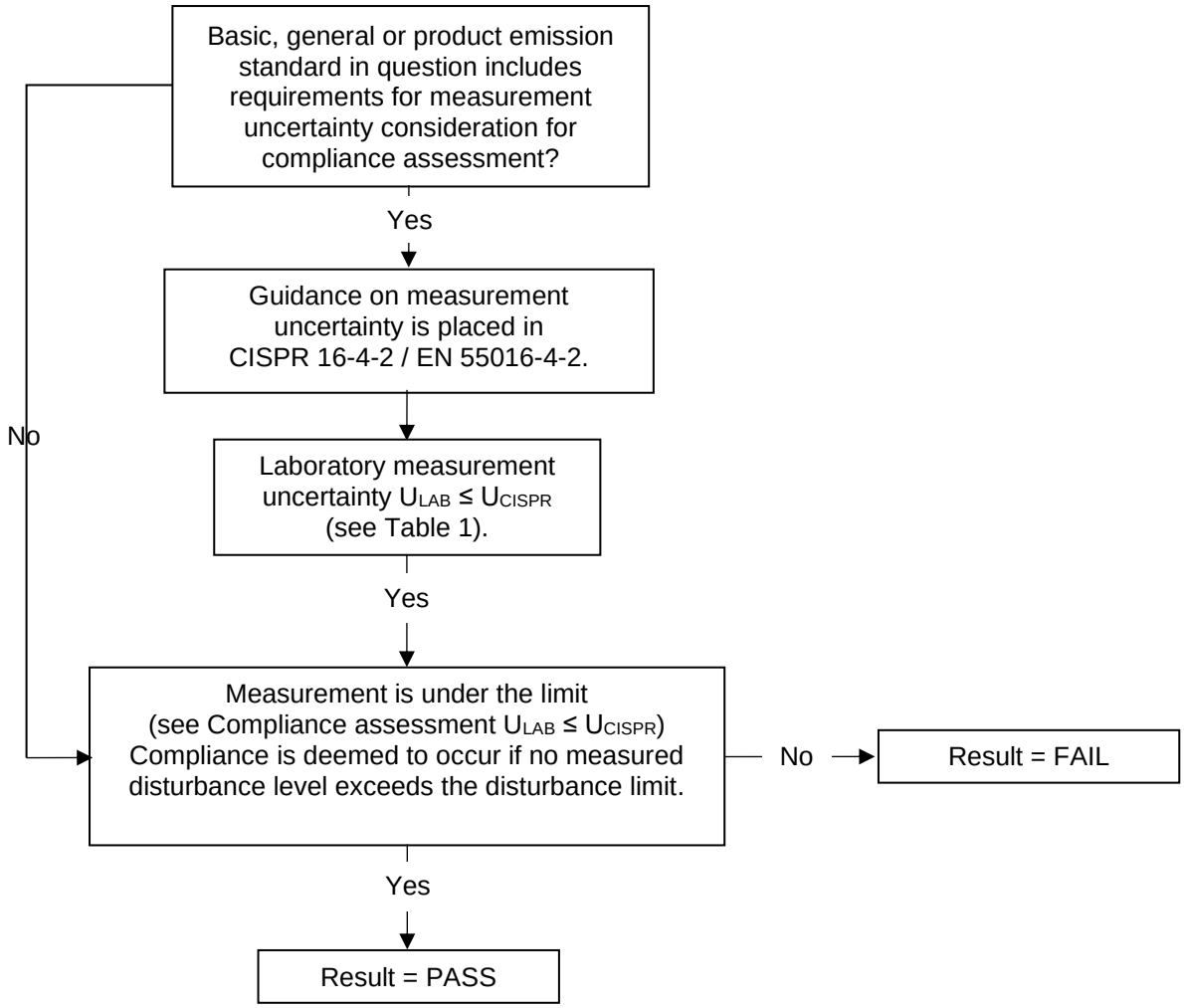
| **Measurement / test method** | **$U_{LAB}$** | **$U_{CISPR}$** |
|---|---|---|
| Conducted emission measurement (150 kHz to 30 MHz) | 2,7 dB | 3,4 dB |
| Radiated emission measurement<br>(electric field strength at an OATS or in a SAC) - (30 MHz to 1000 MHz) | 5,3 dB | 6,3 dB |
| Radiated disturbance (electric field strength in a FAR) – (1-6 GHz) | 4.4 | 5.2 |
| Radiated disturbance (electric field strength in a FAR) – (6-18 GHz) | 5.2 | 5.5 |
| Radiated disturbance (electric field strength in a FAR) – (18-26 GHz) | 5.0 | N/A |
| Radiated disturbance (electric field strength in a FAR) – (26-40 GHz) | 5.7 | N/A |

## 3. Decision rule

Application of decision rule and statement of conformity is defined in document TN023 Decision rule and measurement uncertainty.

As a general rule Pass/Fail decisions are based on simple acceptance rule and acceptance limits chosen based on simple acceptance (w = 0, AL = TL) except if a decision rule is governed by particular standard or guidance document.

**Decision rule applicable for emission:**



## 4. Product specific data

**General description of test item:**

The device is a data-pump to be built into other Devices. It features LTE and WiFi connectivity.

**Product key:**

NOTE-MBGLW contains Quectel EG916Q-GL LTE module and SiLabs WFM200S Wi-Fi module.

| | | | | |
|---|---|---|---|---|
| **Power supply type:** | Powered with AC/DC power supply and 5 V d.c. from the development board | | | |
| **Contains FCC ID:** | Quectel EG916Q-GL: XMR2024EG916QGL | | | |
| | SiLabs WFM200S: QOQWFM200 | | | |
| **Contains IC:** | Quectel EG916Q-GL: 10224A-023EG916QGL | | | |
| | SiLabs WFM200S: 5123A-WFM200 | | | |
| **ICES category equipment** | Category II | | | |
| **Hardware version:** | 2.5 | | | |
| **Firmware/software version:** | 7 | | | |
| **Mounting position:** | ☒ | Table-top equipment: | | |
| | ☐ | Floor-standing equipment: | | |
| | ☐ | Wall/ceiling mounted equipment: | | |
| | ☐ | Hand-held equipment: | | |
| | ☐ | Other: | | |
| **Highest Internal Operating Frequencies:** | Name: | | LTE module: | Frequency: |
| | Maximum clock transmission frequency that of the LTE module | | Quectel EG916Q-GL | 2690 MHz |

**Port(s):**

| Port No. | Name | Type | Cable Length / m | Cable Shielded |
|---|---|---|---|---|
| 0 | Enclosure | N/E | / | / |
| 1 | AC power supply | AC | / | / |
| Note: | AC = AC mains power port<br>DC = DC power port of the EUT<br>I/O = Signal/control port<br>WNP = wired network port<br>GND = grounding<br>N/E = Non-Electrical | | | |

**Configuration diagram:**

/

**Copy of marking plate:**

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

**Information to the user acc. to 47 CFR Part 15, Subpart B:**

| Clause | Requirement | Result - Remark | Verdict |
|---|---|---|---|
| **§ 15.105** | **Information to the user** | | |
| 15.105 (a) | For a Class A digital device or peripheral, the instructions furnished the user shall include the statement specified in 15.105 (a), placed in a prominent location in the text of the manual. | Not Class A digital device. | N/A |
| 15.105 (b) | For a Class B digital device or peripheral, the instructions furnished the user shall include the statement specified in 15.105 (b), placed in a prominent location in the text of the manual. | Class B digital device.<br><br>The product is not an end device and is only supplied with the final product it is intended to charge. | P |

The Class A statement cautions that operation of the device in a residential area is likely to cause harmful interference.

The Class B statement offers several suggestions for minimizing interference to radio or TV receivers. including reorienting the receiving antenna and moving the Class B device farther away from the receiver.

**Labelling and user manual requirements acc. to ICES-003 issue 7:**

| Clause | Requirement | Result - Remark | Verdict |
|---|---|---|---|
| **4.2** | **Labelling and user manual requirements** | | |
| | ISED compliance label specified below shall be placed on the marking plate or manual:<br>CAN ICES-003(*) / NMB-003(*)<br>* Insert either “A” or “B”, but not both, to identify the applicable Class of the device used for compliance verification. | Acc. to clause 1.2.2 external power supplies marketed together with end ITE equipment need not be labelled as specified in 4.2. The labelling requirement is normative for the ITE or digital apparatus itself, but optional for the external power supply/converter that is marketed together with that ITE or digital apparatus | P |

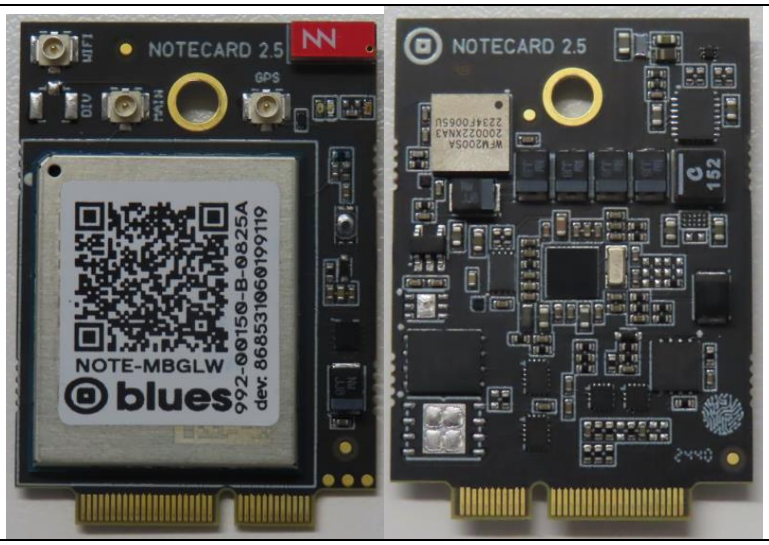
**NOTE:** The information in this section has been provided by the applicant.

## 5. Equipment under test (EUT)

| Product Type | Device | Manufacturer | Model No. | Comments |
|---|---|---|---|---|
| EUT | Notecard | Blues Inc. | NOTE-MBGLW | / |
| AE | Development board | / | NOTECARRIER – D V1.6 | / |
| AE | Power supply | Rigol | DP832 | / |

**Note:** EUT = Equipment Under Test
AE = Associated Equipment

**Pictures of EUT:**




**Pictures of associated equipment:**

See pictures of test setups

**Operating conditions:**

| Clause | Test | Connection type | Operating conditions |
|---|---|---|---|
| 9.1 | Conducted emission measurement | Single phase | 120 V; 60 Hz supplied to AC/DC power supply with 5 V d.c. to the development board |
| 9.2 | Radiated emission measurement | Single phase | 120 V; 60 Hz supplied to AC/DC power supply with 5 V d.c. to the development board |

**Operating modes:**

| No. | Operating mode |
|---|---|
| 1 | Command mode modem-test. Transmission from the LTE module is not enabled. Notecard is working as intended with LTE module turned on in standby. |
| 2 | Wi-Fi mode is achieved by pressing button on NOTECARD. |

**Tested sample:**

| Sample number | Used for measurement |
|---|---|
| S202501648 | All measurements |

## 6. Testing summary section

| STANDARDS (details on first page) | PERFORMED[1)] | CONCLUSION[1)] |
|---|---|---|
| **47 CFR Part 15, Subpart B** | YES | P |
| **ICES-003** | YES | P |
| [1)] See details in table(s) below | | |

| **Referenced standard:** | 47 CFR Part 15, Subpart B (Clause 15.107) in conjunction with ANSI C63.4:2014 | | | |
|---|---|---|---|---|
| **Test (emission)** | **Clause within standard** | **Clause within the report** | **Class** | **Conclusion** |
| Conducted emission measurement | Clause 15.107 of 47 CFR Part 15 | 9.1 | B | P |
| Radiated emission measurement | Clause 15.109 of 47 CFR Part 15 | 9.2 | B | P |

| **Referenced standard:** | ICES-003, issue 7 in conjunction with ICES-Gen, Issue 2 and ANSI C63.4:2014 amended as per ANSI C63.4a-2017 | | | |
|---|---|---|---|---|
| **Test (emission)** | **Clause within standard** | **Clause within the report** | **Class** | **Conclusion** |
| Conducted emission measurement | Clause 3.2.1 of ICES-003 | 9.1 | B | P |
| Radiated emission measurement | Clause 3.2.2 of ICES-003 | 9.2 | B | P |

**NOTE:** no non-standard test method used

## 7. Environmental conditions

The climatic conditions during the tests were within the following limits:

Ambient temperature: 15 °C to 35 °C
Relative humidity: 15 % to 75 %
Atmospheric pressure: 860 mbar to 1060 mbar

# 8. LIMITS

## 8.1 Conducted emission limits

### 8.1.1 Limits according to 47 CFR Part 15.107 and ICES-003

***CLASS B limits:***

| Frequency Range (MHz) | Limits (dBµV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 to 0.5 | 66 – 56* | 56 – 46* |
| 0.5 to 5.0 | 56 | 46 |
| 5.0 to 30.0 | 60 | 50 |

* Decreases with the logarithm of the frequency.

***CLASS A limits:***

| Frequency Range (MHz) | Limits (dBµV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 to 0.5 | 79 | 66 |
| 0.5 to 30.0 | 73 | 60 |

## 8.2 Radiated emission limits

8.2.1 Required highest measurement frequency for radiated emissions:

| Highest internal frequency ($F_X$) | Highest measurements frequency ($F_M$) |
|---|---|
| $F_X \leq$ 108 MHz | 1 GHz |
| 108 MHz < $F_X \leq$ 500 MHz | 2 GHz |
| 500 MHz < $F_X \leq$ 1 GHz | 5 GHz |
| $F_X >$ 1 GHz | 5 x $F_X$ up to a maximum of 40 GHz |

8.2.2 Limits according to 47 CFR Part 15.107

***CLASS B limits:***

| Frequency Range (MHz) | Limits (dBµV/m) 3 m distance | |
|---|---|---|
| 30 to 88 | 40 | Quasi Peak |
| 88 to 216 | 43.5 | |
| 216 to 960 | 46 | |
| 960 to 1000 | 54 | |
| above 1000 | 54 | Average |
| above 1000 | 74 | Peak |

***CLASS A limits:***

| Frequency Range (MHz) | Limits (dBµV/m) 10 m distance | |
|---|---|---|
| 30 to 88 | 39.1 | Quasi Peak |
| 88 to 216 | 43.5 | |
| 216 to 960 | 46.4 | |
| 960 to 1000 | 49.5 | |
| above 1000 | 49.5 | Average |
| above 1000 | 69.5 | Peak |

### 8.2.3 Limits according to ICES-003

**Frequency range 30 MHz – 1 GHz:**

| Frequency Range (MHz) | Class A | | Class B | |
|---|---|---|---|---|
| | 3 m distance Quasi-peak (dBµV/m) | 10 m distance Quasi-peak (dBµV/m) | 3 m distance Quasi-peak (dBµV/m) | 10 m distance Quasi-peak (dBµV/m) |
| 30 - 88 | 50.0 | 40.0 | 40.0 | 30.0 |
| 88 - 216 | 54.0 | 43.5 | 43.5 | 33.1 |
| 216 - 230 | 56.9 | 46.4 | 46.0 | 35.6 |
| 230 - 960 | 57.0 | 47.0 | 47.0 | 37.0 |
| 960 - 1000 | 60.0 | 49.5 | 54.0 | 43.5 |

**Frequency range at and above 1 GHz; 3 m distance:**

| Frequency range (GHz) | Class A | | Class B | |
|---|---|---|---|---|
| | Average dB(µV/m) | Peak dB(µV/m) | Average dB(µV/m) | Peak dB(µV/m) |
| 1 - $F_M$ | 60 | 80 | 54 | 74 |

# 9. Test results

## 9.1 Conducted emission measurement

### 9.1.1 Test procedure

- **For equipment tested as table-top:**
  The EUT is placed on a non-conductive 0.8 meters high table, 0.4 meters from the vertical conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). LISN provide 50 Ohm / 50 μH + 5 Ohm of coupling impedance for the measuring instrument.

- **For equipment tested as floor-standing:**
  The EUT is placed on a non-conductive 0.1 meters high support, 0.4 meters from the vertical conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). LISN provide 50 Ohm / 50 μH + 5 Ohm of coupling impedance for the measuring instrument.

- Sufficient time for the EUT, support equipment, and test equipment was allowed, for them to warm up to their normal operating condition.

- If device is a DC powered device with no dedicated AC/DC power converter, a random converter is provided to the test set-up.

- AC power lines of EUT are checked for maximum conducted interference.

- The frequency range from 150 kHz to 30 MHz is searched using PEAK, QUASI-PEAK and AVERAGE function of the receiver.

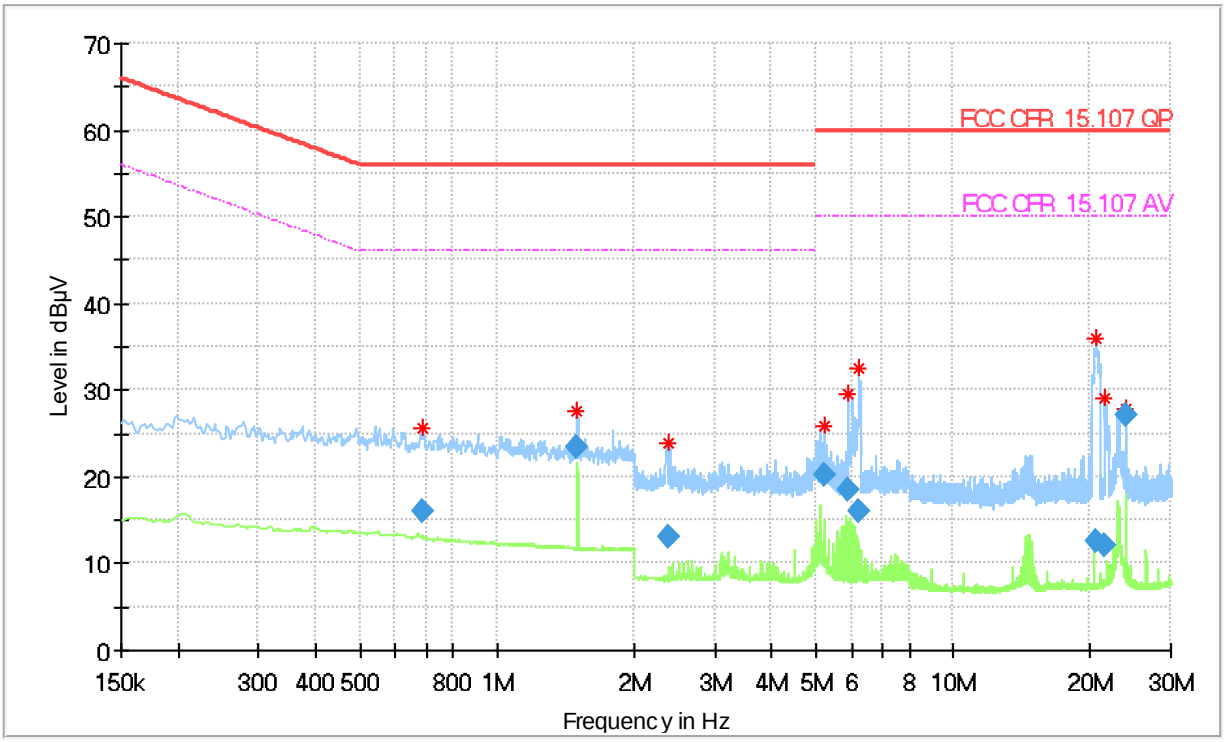
- If applicable functions are changed (data transfer speed, clock speed.…) it should be noted in the test report.

### 9.1.2 Test results according to 47 CFR Part 15.107 and ICES-003

| Operating mode(s): | 1 |
|---|---|

## EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120 V / 60 Hz, LTE
Lines L + N




Preview Result 2-AVG
Critical Freqs PK+
Final Result QPK
Preview Result 1-PK+
FCC CFR 15.107 QP
Final Result CAV
Critical Freqs AVG
FCC CFR 15.107 AV

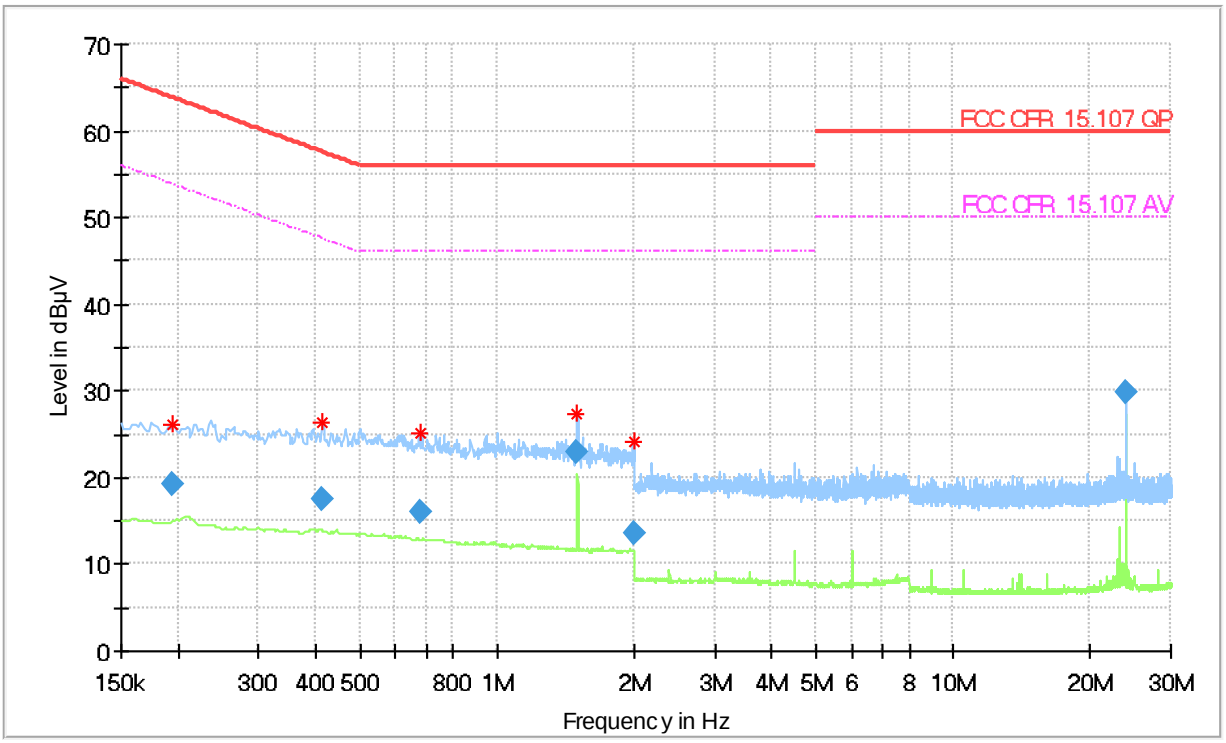
## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|
| 0.683250 | 16.10 | --- | 56.00 | 39.90 | 1000.0 | 9.000 | N | ON | 10.0 |
| 1.500000 | 23.52 | --- | 56.00 | 32.48 | 1000.0 | 9.000 | L1 | ON | 9.8 |
| 2.364000 | 13.03 | --- | 56.00 | 42.97 | 1000.0 | 9.000 | N | ON | 9.8 |
| 5.239500 | 20.30 | --- | 60.00 | 39.70 | 1000.0 | 9.000 | N | ON | 9.8 |
| 5.874000 | 18.41 | --- | 60.00 | 41.59 | 1000.0 | 9.000 | L1 | ON | 9.8 |
| 6.225000 | 16.01 | --- | 60.00 | 43.99 | 1000.0 | 9.000 | L1 | ON | 9.7 |
| 20.600250 | 12.58 | --- | 60.00 | 47.42 | 1000.0 | 9.000 | N | ON | 10.0 |
| 21.522750 | 12.18 | --- | 60.00 | 47.82 | 1000.0 | 9.000 | L1 | ON | 10.0 |
| 24.000000 | 27.04 | --- | 60.00 | 32.96 | 1000.0 | 9.000 | N | ON | 10.0 |

| Operating mode(s): | 2 |
|---|---|

# EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, Wi-Fi
Lines L + N




Preview Result 2-AVG
Critical Freqs PK+
Final Result QPK
Preview Result 1-PK+
FCC CFR 15.107 QP
Final Result CAV
Critical Freqs AVG
FCC CFR 15.107 AV

# Final_Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|
| 24.000000 | 29.82 | --- | 60.00 | 30.18 | 1000.0 | 9.000 | N | ON | 10.0 |
| 1.500000 | 22.92 | --- | 56.00 | 33.08 | 1000.0 | 9.000 | L1 | ON | 9.8 |
| 0.676500 | 15.98 | --- | 56.00 | 40.02 | 1000.0 | 9.000 | L1 | ON | 10.0 |
| 0.415500 | 17.48 | --- | 57.54 | 40.06 | 1000.0 | 9.000 | L1 | ON | 10.1 |
| 1.990500 | 13.45 | --- | 56.00 | 42.55 | 1000.0 | 9.000 | N | ON | 9.8 |
| 0.195000 | 19.15 | --- | 63.82 | 44.67 | 1000.0 | 9.000 | L1 | ON | 9.9 |

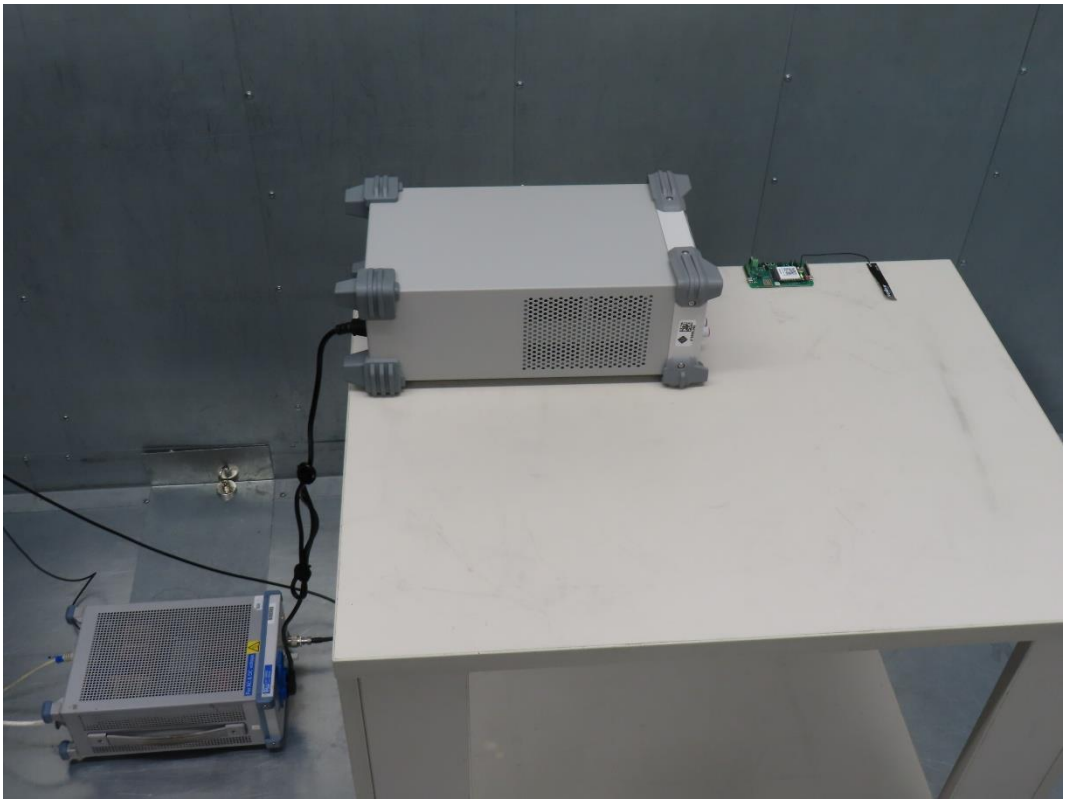


**Figure 1: Test setup for conducted emission measurement**

## 9.2 Radiated emission measurement

### 9.2.1 Test procedure

- **For equipment tested as table-top:**
  The EUT is placed on a non-conductive 0.8 meters high table with EUT being directly or via AC/DC power supply connected to the power mains.

- **For equipment tested as floor-standing:**
  The EUT is placed on a non-conductive 0.1 meters high table with EUT being directly or via AC/DC power supply connected to the power mains.

- The EUT is set 3 m away from the interference-receiving antenna, which was mounted on the top of variable-height antenna tower.

- The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

- For each suspected emission, the EUT is arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table is turned from 0 degrees to 360 degrees to find the maximum reading.

- The test-receiver system is set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

- The highest points are to be re-tested one by one using the quasi-peak method.

- In case of a Class A device in frequency range of up to 1 GHz, a calculation of highest 5 points is made from 3m to a 10 m distance. For points over 10 dB under the limit, the calculation is not performed.

- CMAD has not been applied in test setup.

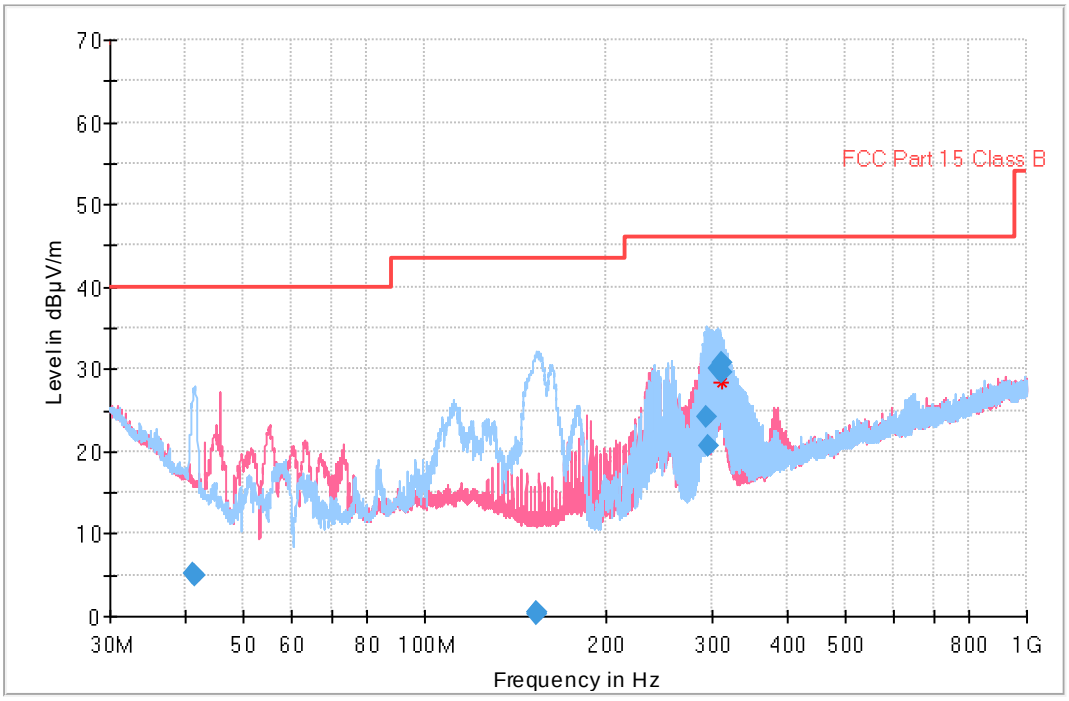
9.2.2 Test results according to 47 CFR Part 15.109

| Operating mode(s): | 1 |
|---|---|

## EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, LTE

## Full Spectrum

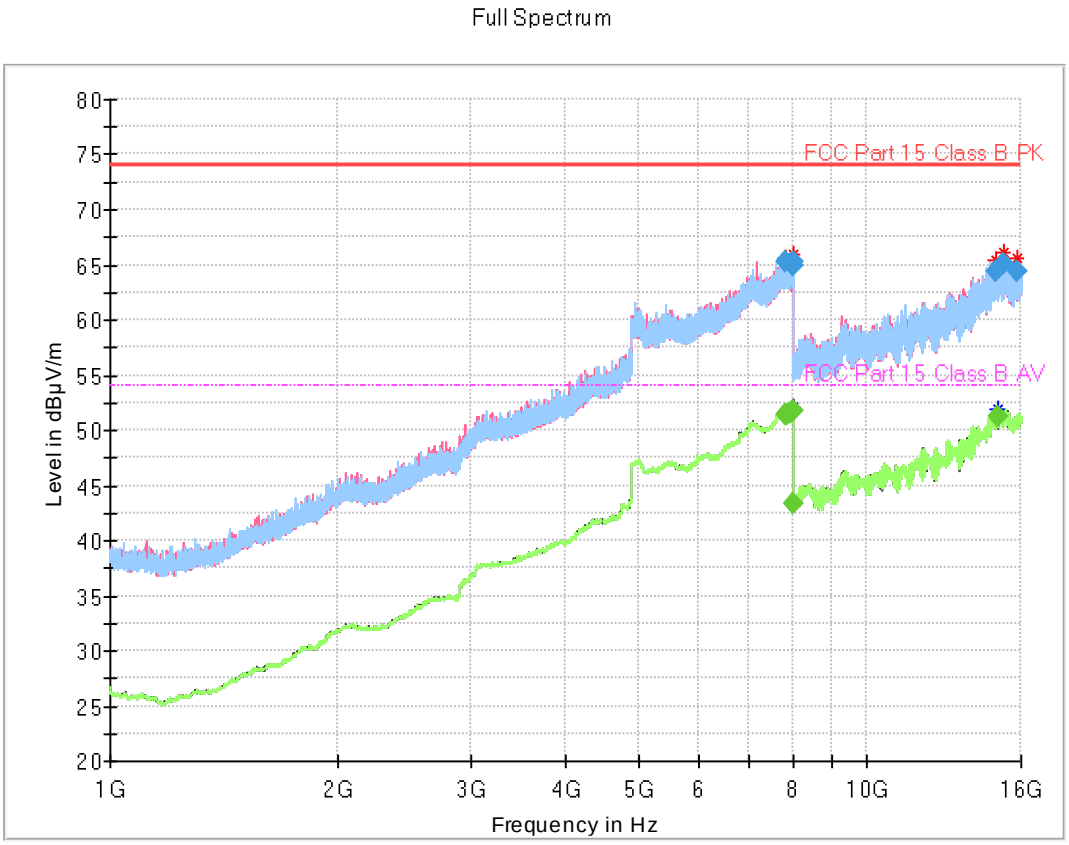



## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/ |
|---|---|---|---|---|---|---|---|---|---|
| 312.330000 | 30.66 | 46.00 | 15.34 | 3000.0 | 120.000 | 104.0 | H | 3.0 | 13.1 |
| 307.470000 | 30.14 | 46.00 | 15.86 | 3000.0 | 120.000 | 103.0 | H | 0.0 | 12.9 |
| 312.510000 | 29.58 | 46.00 | 16.42 | 3000.0 | 120.000 | 106.0 | H | 0.0 | 13.1 |
| 294.600000 | 24.10 | 46.00 | 21.90 | 3000.0 | 120.000 | 104.0 | H | 0.0 | 12.4 |
| 294.870000 | 20.60 | 46.00 | 25.40 | 3000.0 | 120.000 | 100.0 | H | 0.0 | 12.4 |
| 41.190000 | 5.27 | 40.00 | 34.73 | 3000.0 | 120.000 | 100.0 | H | 344.0 | 13.1 |
| 41.550000 | 4.92 | 40.00 | 35.08 | 3000.0 | 120.000 | 103.0 | H | 344.0 | 12.9 |
| 153.600000 | 0.44 | 43.50 | 43.06 | 3000.0 | 120.000 | 106.0 | H | 344.0 | 9.1 |
| 153.420000 | 0.42 | 43.50 | 43.08 | 3000.0 | 120.000 | 103.0 | H | 344.0 | 9.1 |
| 153.720000 | 0.33 | 43.50 | 43.17 | 3000.0 | 120.000 | 104.0 | H | 344.0 | 9.1 |

# EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, LTE




# Final_Result

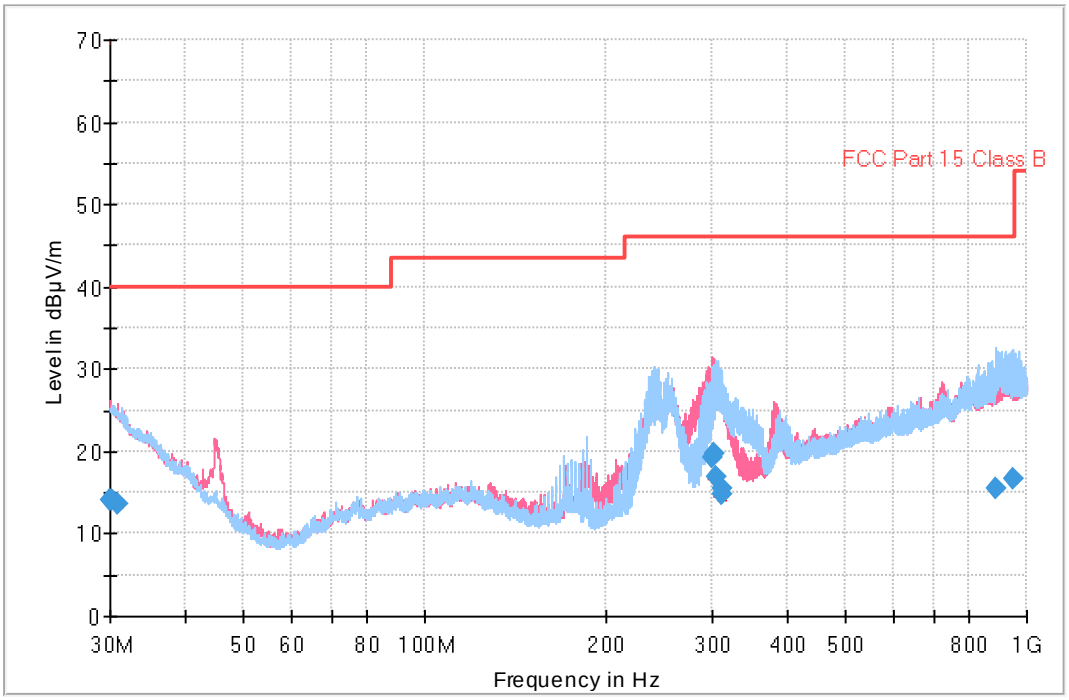
| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|---|---|---|---|---|---|---|---|---|---|
| 7999.000000 | --- | 51.76 | 54.00 | 2.24 | 5000.0 | 1000.000 | 150.0 | V | 99.0 |
| 7965.250000 | --- | 51.61 | 54.00 | 2.39 | 5000.0 | 1000.000 | 100.0 | V | 152.0 |
| 7879.000000 | --- | 51.48 | 54.00 | 2.52 | 5000.0 | 1000.000 | 150.0 | V | 0.0 |
| 7815.250000 | --- | 51.46 | 54.00 | 2.54 | 5000.0 | 1000.000 | 100.0 | V | 44.0 |
| 14900.250000 | --- | 51.23 | 54.00 | 2.77 | 5000.0 | 1000.000 | 100.0 | H | 0.0 |
| 7981.750000 | 65.20 | --- | 74.00 | 8.80 | 5000.0 | 1000.000 | 100.0 | V | 98.0 |
| 7795.000000 | 65.20 | --- | 74.00 | 8.80 | 5000.0 | 1000.000 | 150.0 | V | 207.0 |
| 15177.500000 | 65.04 | --- | 74.00 | 8.96 | 5000.0 | 1000.000 | 150.0 | H | 1.0 |
| 7999.750000 | 64.96 | --- | 74.00 | 9.04 | 5000.0 | 1000.000 | 150.0 | V | 358.0 |
| 14821.750000 | 64.44 | --- | 74.00 | 9.56 | 5000.0 | 1000.000 | 100.0 | H | 153.0 |
| 15773.250000 | 64.30 | --- | 74.00 | 9.70 | 5000.0 | 1000.000 | 150.0 | H | 1.0 |
| 8000.000000 | --- | 43.30 | 54.00 | 10.70 | 5000.0 | 1000.000 | 150.0 | V | 358.0 |

| Operating mode(s): | 2 |
|---|---|

## EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, Wi-Fi

## Full Spectrum

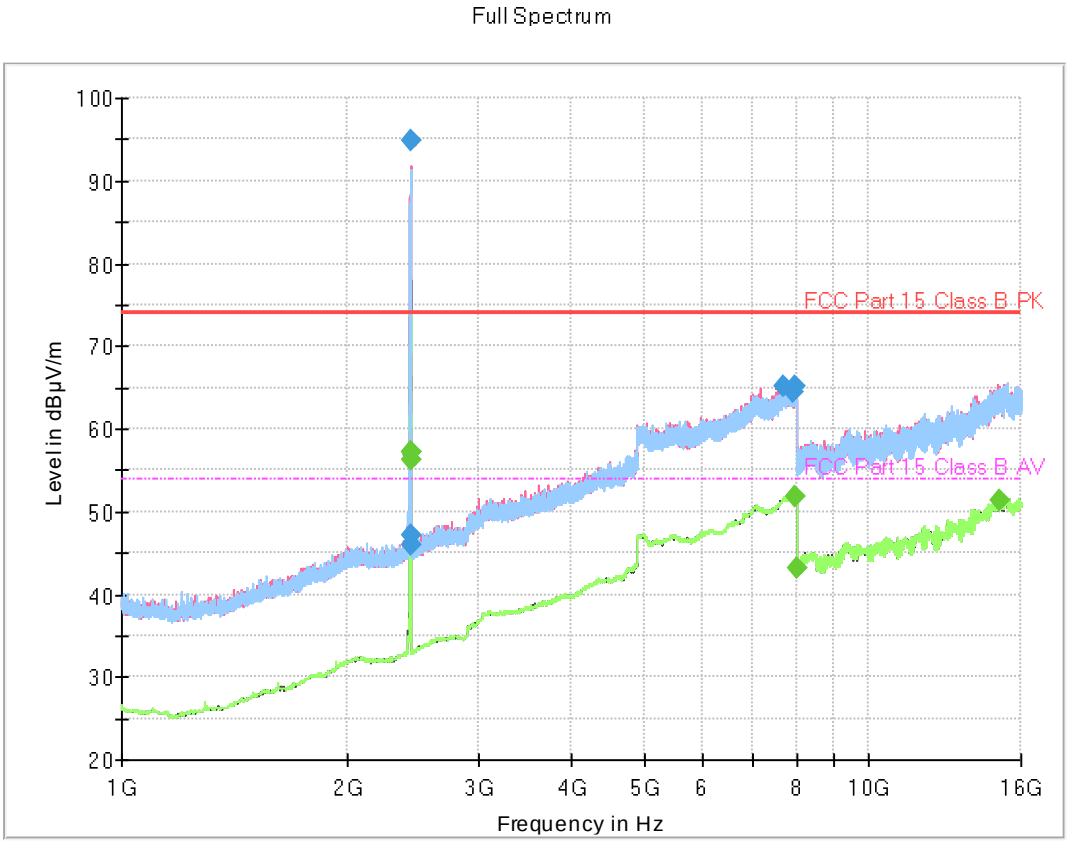



## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/ |
|---|---|---|---|---|---|---|---|---|---|
| 30.270000 | 14.09 | 40.00 | 25.91 | 3000.0 | 120.000 | 191.0 | H | 267.0 | 19.7 |
| 303.000000 | 19.62 | 46.00 | 26.38 | 3000.0 | 120.000 | 191.0 | V | 105.0 | 12.9 |
| 30.930000 | 13.58 | 40.00 | 26.42 | 3000.0 | 120.000 | 107.0 | V | 218.0 | 19.3 |
| 301.260000 | 19.21 | 46.00 | 26.79 | 3000.0 | 120.000 | 142.0 | V | 297.0 | 12.8 |
| 304.740000 | 16.85 | 46.00 | 29.15 | 3000.0 | 120.000 | 138.0 | H | 45.0 | 12.9 |
| 946.170000 | 16.75 | 46.00 | 29.25 | 3000.0 | 120.000 | 103.0 | H | 248.0 | 23.2 |
| 885.450000 | 15.56 | 46.00 | 30.44 | 3000.0 | 120.000 | 103.0 | H | 235.0 | 22.8 |
| 312.480000 | 15.48 | 46.00 | 30.52 | 3000.0 | 120.000 | 138.0 | H | 45.0 | 13.1 |
| 312.390000 | 14.78 | 46.00 | 31.22 | 3000.0 | 120.000 | 138.0 | H | 51.0 | 13.1 |
| 30.000000 | 13.99 | 69.50 | 55.51 | 3000.0 | 120.000 | 241.0 | V | 284.0 | 19.9 |

# EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, Wi-Fi




# Final_Result

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/ |
|---|---|---|---|---|---|---|---|---|---|
| 2436.250000 | 94.86 | --- | 74.00 | -20.86 | 1000.000 | 100.0 | V | 261.0 | 32.2 |
| 2437.750000 | --- | 57.26 | 54.00 | -3.26 | 1000.000 | 138.0 | V | 209.0 | 32.2 |
| 2438.250000 | --- | 57.10 | 54.00 | -3.10 | 1000.000 | 138.0 | V | 209.0 | 32.2 |
| 2439.750000 | --- | 56.28 | 54.00 | -2.28 | 1000.000 | 138.0 | V | 209.0 | 32.2 |
| 7998.500000 | --- | 51.76 | 54.00 | 2.24 | 1000.000 | 138.0 | H | 45.0 | 43.0 |
| 15001.250000 | --- | 51.42 | 54.00 | 2.58 | 1000.000 | 100.0 | V | 0.0 | 50.1 |
| 7999.000000 | 65.15 | --- | 74.00 | 8.85 | 1000.000 | 100.0 | H | 261.0 | 43.0 |
| 7701.750000 | 65.07 | --- | 74.00 | 8.93 | 1000.000 | 104.0 | V | 153.0 | 42.9 |
| 7938.500000 | 64.40 | --- | 74.00 | 9.60 | 1000.000 | 104.0 | V | 2.0 | 42.9 |
| 8000.000000 | --- | 43.14 | 54.00 | 10.86 | 1000.000 | 104.0 | V | 315.0 | 43.0 |
| 2438.500000 | 47.08 | --- | 74.00 | 26.92 | 1000.000 | 100.0 | V | 261.0 | 32.2 |
| 2438.000000 | 46.00 | --- | 74.00 | 28.00 | 1000.000 | 100.0 | V | 261.0 | 32.2 |

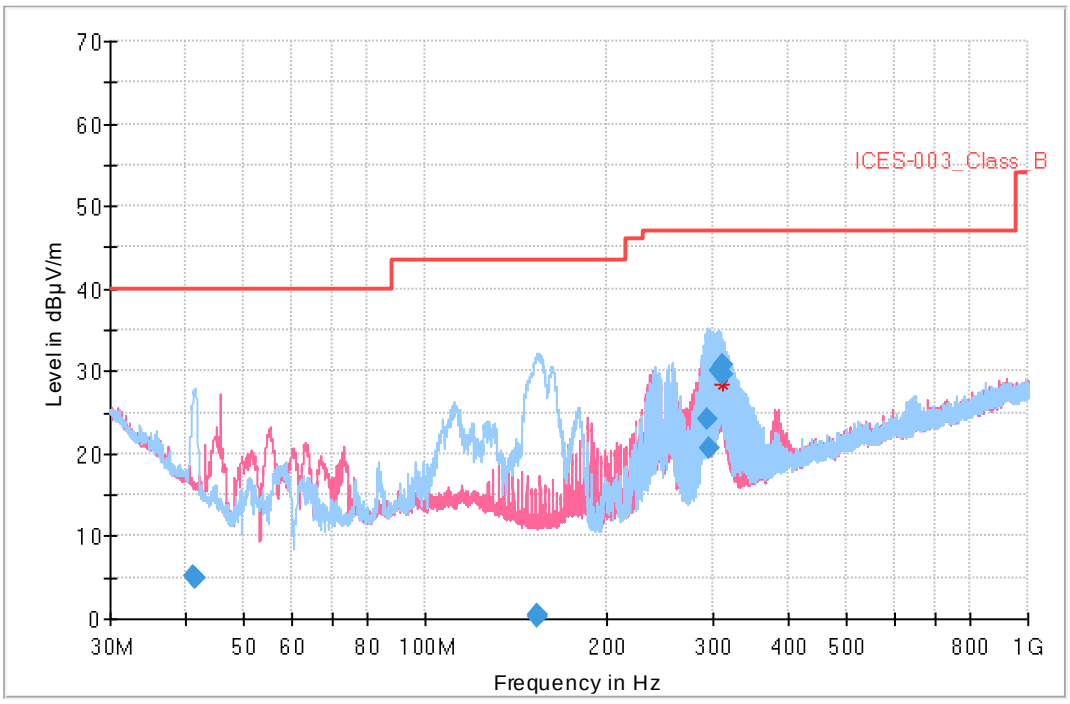
### 9.2.3 Test results according to ICES-003

| Operating mode(s): | 1 |
|---|---|

## EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, LTE

## Full Spectrum

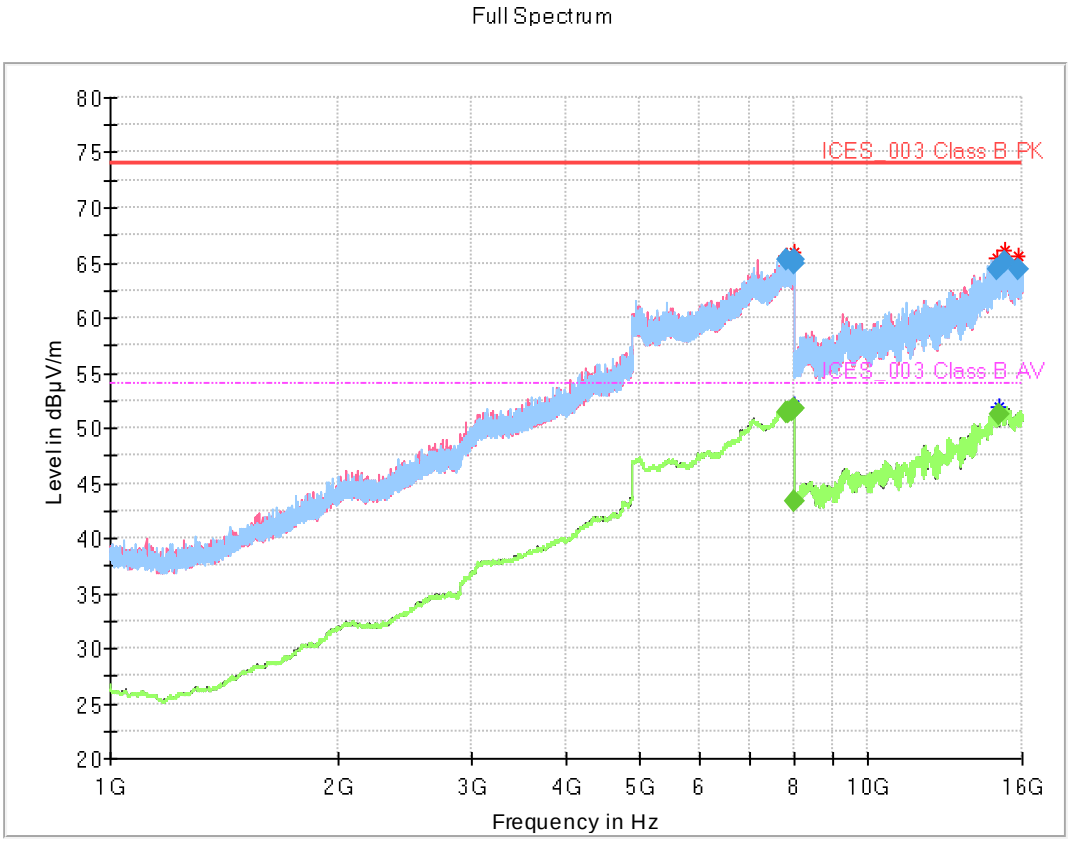



## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/ |
|---|---|---|---|---|---|---|---|---|---|
| 312.330000 | 30.66 | 47.00 | 16.34 | 3000.0 | 120.000 | 104.0 | H | 3.0 | 13.1 |
| 307.470000 | 30.14 | 47.00 | 16.86 | 3000.0 | 120.000 | 103.0 | H | 0.0 | 12.9 |
| 312.510000 | 29.58 | 47.00 | 17.42 | 3000.0 | 120.000 | 106.0 | H | 0.0 | 13.1 |
| 294.600000 | 24.10 | 47.00 | 22.90 | 3000.0 | 120.000 | 104.0 | H | 0.0 | 12.4 |
| 294.870000 | 20.60 | 47.00 | 26.40 | 3000.0 | 120.000 | 100.0 | H | 0.0 | 12.4 |
| 41.190000 | 5.27 | 40.00 | 34.73 | 3000.0 | 120.000 | 100.0 | H | 344.0 | 13.1 |
| 41.550000 | 4.92 | 40.00 | 35.08 | 3000.0 | 120.000 | 103.0 | H | 344.0 | 12.9 |
| 153.600000 | 0.44 | 43.50 | 43.06 | 3000.0 | 120.000 | 106.0 | H | 344.0 | 9.1 |
| 153.420000 | 0.42 | 43.50 | 43.08 | 3000.0 | 120.000 | 103.0 | H | 344.0 | 9.1 |
| 153.720000 | 0.33 | 43.50 | 43.17 | 3000.0 | 120.000 | 104.0 | H | 344.0 | 9.1 |

# EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, LTE




# Final_Result

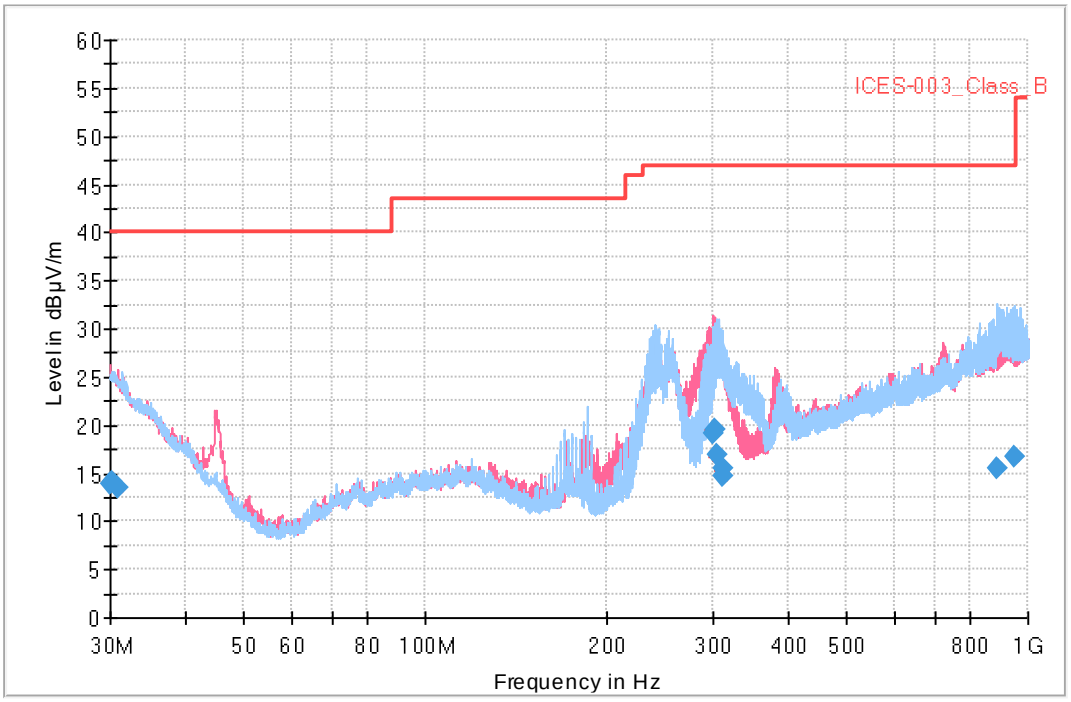
| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) |
|---|---|---|---|---|---|---|---|---|---|
| 7999.000000 | --- | 51.76 | 54.00 | 2.24 | 5000.0 | 1000.000 | 150.0 | V | 99.0 |
| 7965.250000 | --- | 51.61 | 54.00 | 2.39 | 5000.0 | 1000.000 | 100.0 | V | 152.0 |
| 7879.000000 | --- | 51.48 | 54.00 | 2.52 | 5000.0 | 1000.000 | 150.0 | V | 0.0 |
| 7815.250000 | --- | 51.46 | 54.00 | 2.54 | 5000.0 | 1000.000 | 100.0 | V | 44.0 |
| 14900.250000 | --- | 51.23 | 54.00 | 2.77 | 5000.0 | 1000.000 | 100.0 | H | 0.0 |
| 7981.750000 | 65.20 | --- | 74.00 | 8.80 | 5000.0 | 1000.000 | 100.0 | V | 98.0 |
| 7795.000000 | 65.20 | --- | 74.00 | 8.80 | 5000.0 | 1000.000 | 150.0 | V | 207.0 |
| 15177.500000 | 65.04 | --- | 74.00 | 8.96 | 5000.0 | 1000.000 | 150.0 | H | 1.0 |
| 7999.750000 | 64.96 | --- | 74.00 | 9.04 | 5000.0 | 1000.000 | 150.0 | V | 358.0 |
| 14821.750000 | 64.44 | --- | 74.00 | 9.56 | 5000.0 | 1000.000 | 100.0 | H | 153.0 |
| 15773.250000 | 64.30 | --- | 74.00 | 9.70 | 5000.0 | 1000.000 | 150.0 | H | 1.0 |
| 8000.000000 | --- | 43.30 | 54.00 | 10.70 | 5000.0 | 1000.000 | 150.0 | V | 358.0 |

| Operating mode(s): | 2 |
|---|---|

## EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, Wi-Fi

## Full Spectrum

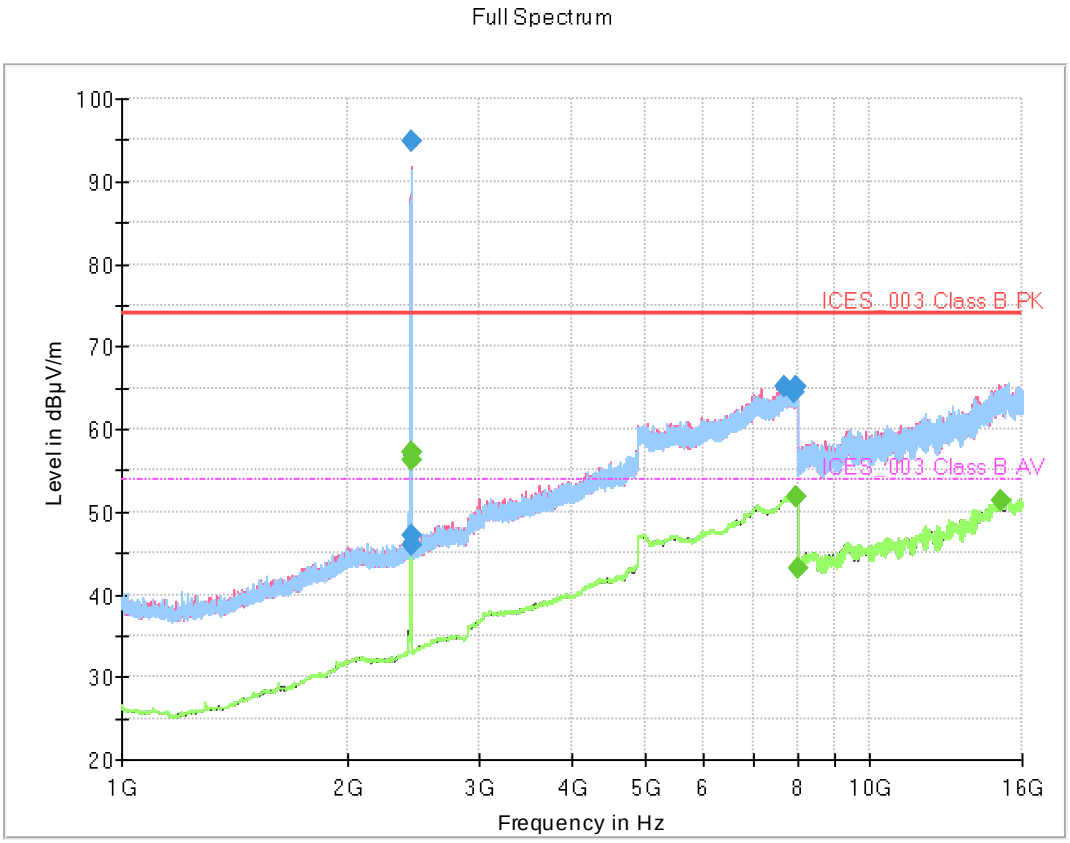



## Final_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/ |
|---|---|---|---|---|---|---|---|---|---|
| 30.270000 | 14.09 | 40.00 | 25.91 | 3000.0 | 120.000 | 191.0 | H | 267.0 | 19.7 |
| 30.000000 | 13.99 | 40.00 | 26.01 | 3000.0 | 120.000 | 241.0 | V | 284.0 | 19.9 |
| 30.930000 | 13.58 | 40.00 | 26.42 | 3000.0 | 120.000 | 107.0 | V | 218.0 | 19.3 |
| 303.000000 | 19.62 | 47.00 | 27.38 | 3000.0 | 120.000 | 191.0 | V | 105.0 | 12.9 |
| 301.260000 | 19.21 | 47.00 | 27.79 | 3000.0 | 120.000 | 142.0 | V | 297.0 | 12.8 |
| 304.740000 | 16.85 | 47.00 | 30.15 | 3000.0 | 120.000 | 138.0 | H | 45.0 | 12.9 |
| 946.170000 | 16.75 | 47.00 | 30.25 | 3000.0 | 120.000 | 103.0 | H | 248.0 | 23.2 |
| 885.450000 | 15.56 | 47.00 | 31.44 | 3000.0 | 120.000 | 103.0 | H | 235.0 | 22.8 |
| 312.480000 | 15.48 | 47.00 | 31.52 | 3000.0 | 120.000 | 138.0 | H | 45.0 | 13.1 |
| 312.390000 | 14.78 | 47.00 | 32.22 | 3000.0 | 120.000 | 138.0 | H | 51.0 | 13.1 |

# EUT Information

EUT: NOTE-MBGLW
Operating mode: Uin: 120V / 60 Hz, Wi-Fi




# Final_Result

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/ |
|---|---|---|---|---|---|---|---|---|---|
| 2436.250000 | 94.86 | --- | 74.00 | -20.86 | 1000.000 | 100.0 | V | 261.0 | 32.2 |
| 2437.750000 | --- | 57.26 | 54.00 | -3.26 | 1000.000 | 138.0 | V | 209.0 | 32.2 |
| 2438.250000 | --- | 57.10 | 54.00 | -3.10 | 1000.000 | 138.0 | V | 209.0 | 32.2 |
| 2439.750000 | --- | 56.28 | 54.00 | -2.28 | 1000.000 | 138.0 | V | 209.0 | 32.2 |
| 7998.500000 | --- | 51.76 | 54.00 | 2.24 | 1000.000 | 138.0 | H | 45.0 | 43.0 |
| 15001.250000 | --- | 51.42 | 54.00 | 2.58 | 1000.000 | 100.0 | V | 0.0 | 50.1 |
| 7999.000000 | 65.15 | --- | 74.00 | 8.85 | 1000.000 | 100.0 | H | 261.0 | 43.0 |
| 7701.750000 | 65.07 | --- | 74.00 | 8.93 | 1000.000 | 104.0 | V | 153.0 | 42.9 |
| 7938.500000 | 64.40 | --- | 74.00 | 9.60 | 1000.000 | 104.0 | V | 2.0 | 42.9 |
| 8000.000000 | --- | 43.14 | 54.00 | 10.86 | 1000.000 | 104.0 | V | 315.0 | 43.0 |
| 2438.500000 | 47.08 | --- | 74.00 | 26.92 | 1000.000 | 100.0 | V | 261.0 | 32.2 |
| 2438.000000 | 46.00 | --- | 74.00 | 28.00 | 1000.000 | 100.0 | V | 261.0 | 32.2 |

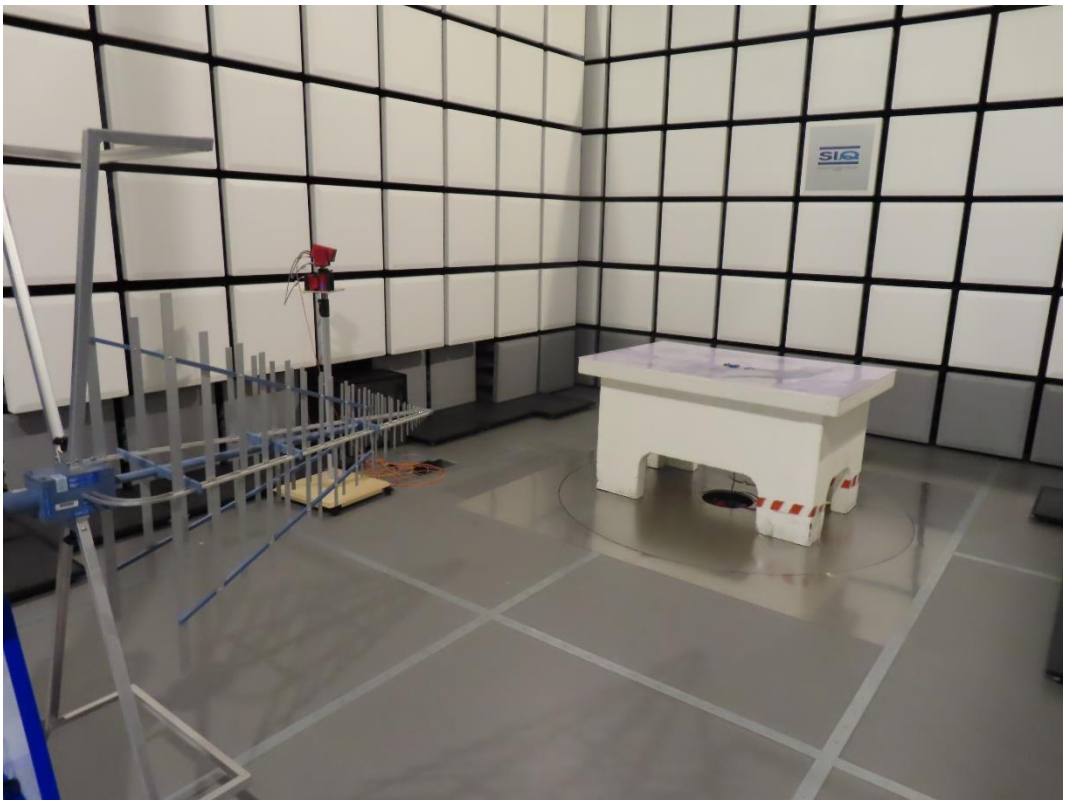


**Figure 2: Test setup for radiated emission measurement – up to 1 GHz**

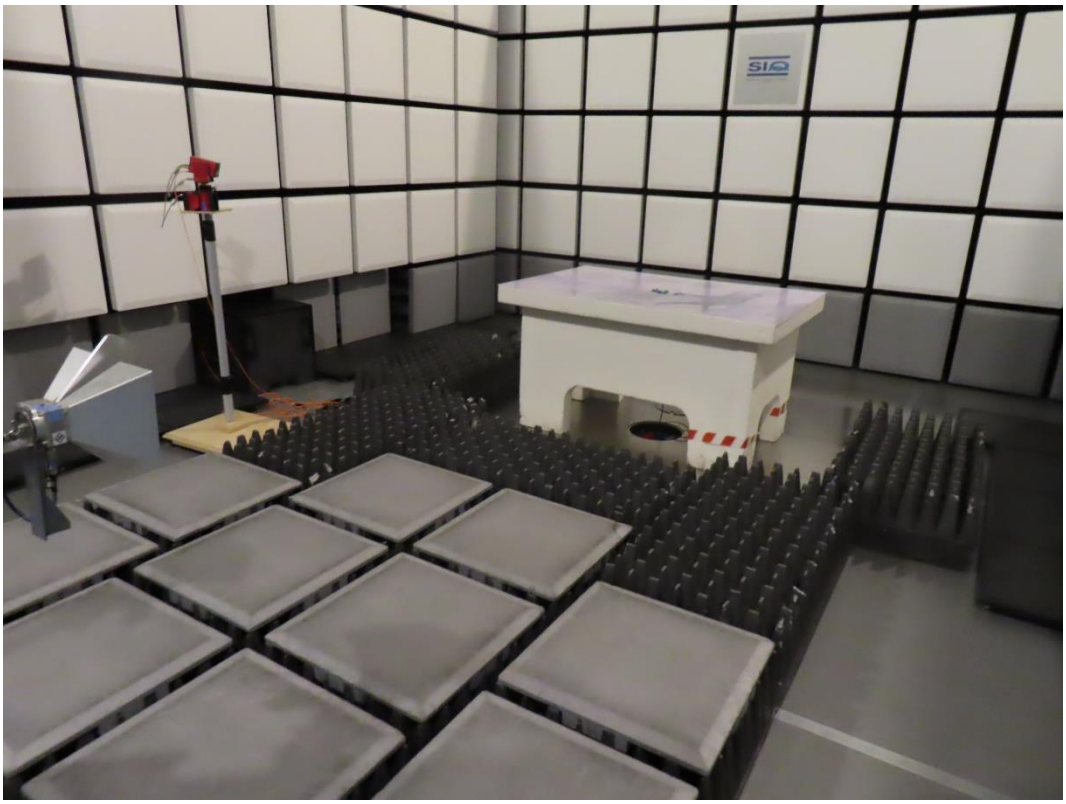


**Figure 3: Test setup for radiated emission measurement – over 1 GHz**

# 10. Used test equipment

### 9.1 Conducted emission measurement

| Equipment | Manufacturer | Type | Equipment Number | Calibration date | Due date |
|---|---|---|---|---|---|
| EMI test receiver | Rohde-Schwarz | ESW44 | EM0291 | 2024-09 | 2026-03 |
| Artificial main network | Rohde-Schwarz | ENV216 | EM0009 | 2022-06 | 2025-06 |

### 9.2 Radiated emission measurement

| Equipment | Manufacturer | Type | Equipment Number | Calibration date | Due date |
|---|---|---|---|---|---|
| EMI test receiver | Rohde-Schwarz | ESW44 | EM0291 | 2024-11 | 2026-05 |
| Semi Anechoic Chamber SAC 1 | Comtest Engineering | SAC 3m | EM0145 | 2025-03 | 2028-03 |
| Ultra Broadband Antenna | Rohde-Schwarz | HL562E | EM0140 | 2023-07 | 2025-07 |
| Horn Antenna | Rohde-Schwarz | HF907 | EM0141 | 2023-06 | 2025-06 |
| Horn Antenna | EMCO | 3116 | EM0179 | 2024-11 | 2027-11 |
| Turn table (2 m diameter) | Maturo | TT 2.0 SI | / | N/A | N/A |
| Bore-sight antenna mast | Maturo | BAM-4.0-P | / | N/A | N/A |
| Multi-channel positioning equipment | Maturo | Maturo NCD | / | N/A | N/A |

**----------END OF TEST REPORT----------**