



# Test report

REP149445-4R2TRFWL

Date of issue: June 17, 2026

Applicant:

Sensormatic USA, LLC

Product description:

UHF RFID Reader (IDX5-N)

Model:

UHIDX2201

Product marketing name(s):

N/A

FCC ID:

BVCIDX5000

ISED certification number:

3506A-IDX5000

Specifications:

- ◆ **FCC 47 CFR Part 15, Subpart C – §15.247**  
Operation within the bands 902 – 928 MHz, 2400 – 2483.5 MHz, 5727 – 5850 MHz
- ◆ **Industry Canada RSS-247, Issue 4**  
Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands

#### Lab and test locations

|                    |                                                                   |
|--------------------|-------------------------------------------------------------------|
| Company name       | Nemko USA Inc.                                                    |
| Address            | 2210 Faraday Ave, Suite 150                                       |
| City               | Carlsbad                                                          |
| State              | California                                                        |
| Postal code        | 92008                                                             |
| Country            | USA                                                               |
| Telephone          | +1 760 444 3500                                                   |
| Website            | www.nemko.com                                                     |
| FCC Site Number    | Test Firm Registration Number: 392943; Designation Number: US5058 |
| ISED Test Site     | 2040B-3                                                           |
| Tested by          | Martha Espinoza, Wireless Test Engineer                           |
| Reviewed by        | James Cunningham, EMC/WL Manager                                  |
| Review date        | June 17, 2026                                                     |
| Reviewer signature |                                                                   |

#### Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

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## Section 1 Report summary

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### 1.1 Test specifications

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|                                         |                                                                                                                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC 47 CFR Part 15, Subpart C – §15.247 | Operation within the bands 902 – 928 MHz, 2400 – 2483.5 MHz, 5727 – 5850 MHz                                                                                                  |
| RSS-247, Issue 4                        | Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands |

### 1.2 Exclusions

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None.

### 1.3 Statement of compliance

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Testing was performed against all relevant requirements of the test standard(s).

Results obtained indicate that the product under test complies in full with the tested requirements.

The test results relate only to the item(s) tested.

See “Section 2 Summary of test results” for full details.

### 1.4 Test report revision history

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**Table 1.4-1: Test report revision history**

| Revision #         | Issue Date     | Details of changes made to test report                                       |
|--------------------|----------------|------------------------------------------------------------------------------|
| REP149445-4TRFWL   | March 10, 2026 | Original report issued                                                       |
| REP149445-4R1TRFWL | June 12, 2026  | Updated following TCB feedback and incorporation of multiple antenna options |
| REP149445-4R2TRFWL | June 17 2026   | Corrected applicant and manufacturer name                                    |

## Section 2 Summary of test results

### 2.1 Sample information

|                        |           |
|------------------------|-----------|
| Receipt date           | 19-Jan-26 |
| Nemko sample ID number | REP149445 |

### 2.2 Testing period

|                 |           |
|-----------------|-----------|
| Test start date | 19-Jan-26 |
| Test end date   | 12-Jun-26 |

### 2.3 Test results

**Table 2.3-1: FCC 47 CFR Part 15, Subpart B & C, general requirements**

| Part       | Test description          | Verdict           |
|------------|---------------------------|-------------------|
| §15.207(a) | Conducted limits          | Pass <sup>1</sup> |
| §15.31(e)  | Variation of power source | Pass              |
| §15.203    | Antenna requirement       | Pass              |
| §15.215(c) | 20 dB bandwidth           | Pass              |

Notes: <sup>1</sup> EUT is directly or indirectly powered via AC mains

**Table 2.3-2: FCC 47 CFR Part 15, Subpart C, §15.247 requirements**

| Part               | Test description                                                                                                           | Verdict        |
|--------------------|----------------------------------------------------------------------------------------------------------------------------|----------------|
| §15.247(a)(1)(i)   | Frequency hopping systems operating in the 902–928 MHz band                                                                | Pass           |
| §15.247(a)(1)(ii)  | Frequency hopping systems operating in the 5725–5850 MHz band                                                              | Not applicable |
| §15.247(a)(1)(iii) | Frequency hopping systems operating in the 2400–2483.5 MHz band                                                            | Not applicable |
| §15.247(a)(2)      | Minimum 6 dB bandwidth for systems using digital modulation techniques                                                     | Not applicable |
| §15.247(b)(1)      | Maximum peak output power of frequency hopping systems operating in the 2400–2483.5 MHz band and 5725–5850 MHz band        | Not applicable |
| §15.247(b)(2)      | Maximum peak output power of Frequency hopping systems operating in the 902–928 MHz band                                   | Pass           |
| §15.247(b)(3)      | Maximum peak output power of systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands | Not applicable |
| §15.247(b)(4)      | Transmitting antennas of directional gain greater than 6 dBi                                                               | Not applicable |
| §15.247(c)(1)      | Fixed point-to-point operation with directional antenna gains greater than 6 dBi                                           | Not applicable |
| §15.247(c)(2)      | Transmitters operating in the 2400–2483.5 MHz band that emit multiple directional beams                                    | Not applicable |
| §15.247(d)         | Spurious emissions                                                                                                         | Pass           |
| §15.247(e)         | Power spectral density for digitally modulated devices                                                                     | Not applicable |
| §15.247(f)         | Time of occupancy for hybrid systems                                                                                       | Not applicable |

**Table 2.3-3: ISSED RSS-247 requirements**

| Part    | Test description                                                                                                    | Verdict |
|---------|---------------------------------------------------------------------------------------------------------------------|---------|
| 6.2.2.1 | Frequency Hopping Systems operating in the band 902-928 MHz - Bandwidth of a frequency hopping channel              | Pass    |
| 6.2.2.1 | Frequency Hopping Systems operating in the band 902-928 MHz - Minimum channel spacing for frequency hopping systems | Pass    |
| 6.2.2.1 | Frequency hopping systems operating in the 902–928 MHz band – dwell time                                            | Pass    |
| 6.2.2.2 | Maximum conducted output power                                                                                      | Pass    |
| 6.6     | Out-of-band emissions                                                                                               | Pass    |

**Table 2.3-4: ISSED RSS-GEN requirements**

| Part | Test description                                                         | Verdict                     |
|------|--------------------------------------------------------------------------|-----------------------------|
| 6.7  | Occupied bandwidth (99%)                                                 | Pass                        |
| 7.3  | Receiver radiated emission limits                                        | Not applicable <sup>1</sup> |
| 7.4  | Receiver conducted emission limits                                       | Not applicable <sup>1</sup> |
| 8.8  | Power Line Conducted Emissions Limits for Licence-Exempt Radio Apparatus | Pass                        |

Notes: <sup>1</sup> Only applicable to scanner receivers or stand-alone receivers operating in the band 30-960 MHz

## Section 3 Equipment under test (EUT) details

### 3.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

### 3.2 Applicant

|                 |                          |
|-----------------|--------------------------|
| Company name    | Sensormatic USA, LLC     |
| Address         | 6600 Congress Ave        |
| City            | Boca Raton               |
| State           | Florida                  |
| Postal/Zip code | 33487                    |
| Country         | United States of America |

### 3.3 Manufacturer

|                 |                          |
|-----------------|--------------------------|
| Company name    | Sensormatic USA, LLC     |
| Address         | 6600 Congress Ave        |
| City            | Boca Raton               |
| State           | Florida                  |
| Postal/Zip code | 33487                    |
| Country         | United States of America |

### 3.4 EUT information

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name                    | UHF RFID Reader (IDX5-N)                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Model                           | UHIDX2201                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Variant(s)                      | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Serial number                   | 123A2541001255                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Part number                     | 0101-0862-01                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Power requirements              | PoE                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Description/theory of operation | The IDX5 is a four-port UHF RFID reader from Sensormatic, designed for high-performance asset tracking and inventory management. It supports Gen2-compliant tags and is compatible with various RFID solutions, including TrueVUE and Shrink Management as a Service (SMaaS). The reader features advanced noise cancellation and supports Internet-of-Things (IoT) connectivity, enhancing operational insights and management capabilities. |
| Operational frequencies         | 902-982 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Software details                | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 3.5 Transmitter Information

|                         |                                                                                                                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency band          | <input checked="" type="checkbox"/> 902 – 928 MHz<br><input type="checkbox"/> 2400 – 2483.5MHz<br><input type="checkbox"/> 5725 – 5850 MHz                                               |
| Transmitter type        | <input checked="" type="checkbox"/> Frequency hopping spread spectrum (FHSS)<br><input type="checkbox"/> Digital transmission system (DTS)<br><input type="checkbox"/> Hybrid FHSS / DTS |
| Minimum frequency (MHz) | 902.75 MHz                                                                                                                                                                               |
| Maximum frequency (MHz) | 927.25 MHz                                                                                                                                                                               |
| Type(s) of modulation   | N/A                                                                                                                                                                                      |
| Data(s) rate            | Mode 103                                                                                                                                                                                 |
| Tested frequencies      | 902.75 MHz; 915.25 MHz; 927.25 MHz                                                                                                                                                       |

### 3.6 Antenna information

The client declares the following antennae are supported:

| Part number          | Gain (dBi) | Cable loss (dB) | Max allowed setting (dBm) | Level at input of antenna (dBm) | dBm EIRP |
|----------------------|------------|-----------------|---------------------------|---------------------------------|----------|
| IDA-1000             | 4.5        | 0 <sup>1</sup>  | 30                        | 30                              | 34.5     |
| IDA-3100             | 6          | 0 <sup>1</sup>  | 30                        | 30                              | 36       |
| IDA-3300             | 7.21       | 0 <sup>1</sup>  | 28.7                      | 28.7                            | 35.91    |
| IKDM-10XX            | -8         | 3.5             | 33                        | 29.5                            | 18       |
| IDSM-1000/ IDSM-1100 | 6          | 0 <sup>1</sup>  | 30                        | 30                              | 36       |
| Advantenna-CP11™     | 0.2        | 1.5             | 31.5                      | 30                              | 28.7     |
| Advantenna-p11™      | 3.6        | 1.5             | 31.5                      | 30                              | 32.1     |
| ADVANTENNA-P12       | 3.5        | 1.5             | 31.5                      | 30                              | 32       |
| Advantenna-SP11™     | 4.8        | 1.5             | 31.5                      | 30                              | 33.3     |
| NSSWave-N5           | 4.5        | 1.5             | 31.5                      | 30                              | 33       |
| UHIDX1901            | 6          | 0 <sup>1</sup>  | 30                        | 30                              | 36       |

Maximum peak output power measurements have been performed considering the highest and lowest gain antenna. All other tests were performed considering the antenna with the highest declared gain.

### 3.7 EUT setup details

**Table 3.7-1: EUT sub assemblies**

| Description | Brand name | Model/Part number | Serial number | Rev.  |
|-------------|------------|-------------------|---------------|-------|
| N/A         | N/A        | N/A               | N/A           | ----- |

**Table 3.7-2: EUT interface ports**

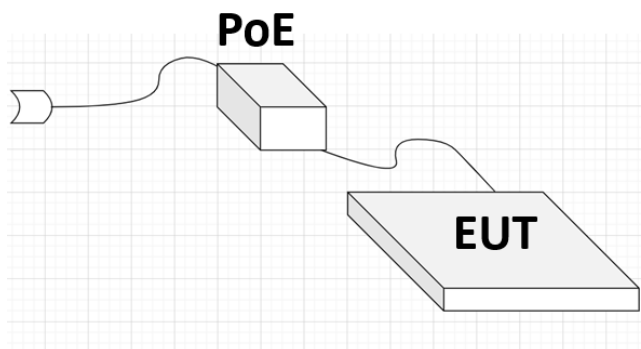
| Description   | Qty. |
|---------------|------|
| Ethernet port | 2    |
| USB A Port    | 2    |
| USB B Port    | 1    |
| VGI Port      | 1    |

**Table 3.7-3: Support equipment**

| Description    | Brand name            | Model/Part number | Serial number | Rev.  |
|----------------|-----------------------|-------------------|---------------|-------|
| PoE AC Adapter | Powertron Electronics | PA1050-480T1A062  | N/A           | ----- |

**Table 3.7-4: Inter-connection cables**

| Cable description | From      | To  | Length (m) |
|-------------------|-----------|-----|------------|
| Ethernet cable    | PoE       | EUT | 0.5        |
| AC Cable          | AC Outlet | PoE | 0.5        |



**Figure 3.7-1: Test setup diagram**

## Section 4 Engineering considerations

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### 4.1 Modifications incorporated in the EUT

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None.

### 4.2 Technical judgement

---

None.

### 4.3 Deviations from laboratory test procedures

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None.



## Section 5 Test conditions

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### 5.1 Atmospheric conditions

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|                   |            |
|-------------------|------------|
| Temperature       | 15–30 °C   |
| Relative humidity | 20–75 %    |
| Air pressure      | 86–106 kPa |

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

### 5.2 Power supply range

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The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages  $\pm 5$  %, for which the equipment was designed.

## Section 6 Measurement uncertainty

### 6.1 Uncertainty of measurement

Nemko USA Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 "Uncertainty in EMC measurements." Measurement uncertainty was calculated using the methods described in CISPR 16-4-2 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics, and limit modelling – Measurement instrumentation uncertainty. The expression of Uncertainty in EMC testing. Measurement uncertainty calculations assume a coverage factor of K=2 with 95% certainty.

**Table 6.1-1: Measurement uncertainty calculations**

| Measurement                                                          |                   | $U_{\text{cispr}}$ dB | $U_{\text{lab}}$ dB |
|----------------------------------------------------------------------|-------------------|-----------------------|---------------------|
| Conducted disturbance at AC mains and other port power using a V-AMN | 9 kHz to 150 kHz  | 3.8                   | 2.9                 |
|                                                                      | 150 kHz to 30 MHz | 3.4                   | 2.3                 |
| Conducted disturbance at telecommunication port using AAN            | 150 kHz to 30 MHz | 5.0                   | 4.3                 |
| Conducted disturbance at telecommunication port using CVP            | 150 kHz to 30 MHz | 3.9                   | 2.9                 |
| Conducted disturbance at telecommunication port using CP             | 150 kHz to 30 MHz | 2.9                   | 1.4                 |
| Conducted disturbance at telecommunication port using CP and CVP     | 150 kHz to 30 MHz | 4.0                   | 3.1                 |
| Radiated disturbance (electric field strength in a SAC)              | 30 MHz to 1 GHz   | 6.3                   | 5.5                 |
| Radiated disturbance (electric field strength in a FAR)              | 1 GHz to 6 GHz    | 5.2                   | 4.7                 |
| Radiated disturbance (electric field strength in a FAR)              | 6 GHz to 18 GHz   | 5.5                   | 5.0                 |

- Notes:
- Compliance assessment:
    - If  $U_{\text{lab}}$  is less than or equal to  $U_{\text{cispr}}$  then:
      - compliance is deemed to occur is no measured disturbance level exceeds the disturbance limit;
      - non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit
    - If  $U_{\text{lab}}$  is greater than  $U_{\text{cispr}}$  then:
      - compliance is deemed to occur is no measured disturbance level, increased by  $(U_{\text{lab}} - U_{\text{cispr}})$ , exceeds the disturbance limit;
      - non-compliance is deemed to occur if any measured disturbance level, increased by  $(U_{\text{lab}} - U_{\text{cispr}})$ , exceeds the disturbance limit

V-AMN: V type artificial mains network  
 AAN: Asymmetric artificial network  
 CP: Current probe  
 CVP: Capacitive voltage probe  
 SAC: Semi-anechoic chamber  
 FAR: Fully anechoic room

## Section 7 Test equipment

### 7.1 Test equipment list

**Table 7.1-1: Test Equipment List**

| Equipment                    | Manufacturer   | Model no.     | Asset no. | Cal cycle | Next cal.     |
|------------------------------|----------------|---------------|-----------|-----------|---------------|
| Signal & Spectrum Analyzer   | R&S            | FSW43         | E1302     | 1 year    | 19-March-2026 |
| EMI Test Receiver            | R&S            | ESU 40        | E1121     | 1 year    | 07-Jan-2027   |
| Antenna, Bilog               | Schaffner      | CBL 6111D     | 1763      | 2 years   | 16-July-2026  |
| DRG Horn                     | ETS-Lindgren   | 3117-PA       | E1160     | 2 years   | 17-May-2026   |
| System Controller            | Sunol Sciences | SC104V        | E1191     | NCR       | NCR           |
| EMI Test Receiver            | R&S            | ESCI 7        | E1026     | 2 years   | 18-April-2026 |
| Two Line V-Network           | R&S            | ENV216        | E1020     | 1 year    | 06-June-2026  |
| RF cable #1 (3m chamber)     | Suhner         | N/A           | N/A       | 1 year    | 29-May-2027   |
| RF cable #2 (3m chamber)     | Suhner         | N/A           | N/A       | 1 year    | 29-May-2027   |
| RF cable #1 (ground plane)   | N/A            | N/A           | N/A       | 1 years   | 30 -May-2027  |
| RF cable #1 (wireless bench) | W.L. Gore      | FKD01D02036.0 | N/A       | VBU       | VBU           |
| 30 dB attenuator             | Pasternack     | C407-30       | N/A       | VBI       | VBI           |

Notes: NCR: no calibration required  
VBU: verify before use

### 7.2 Test software list

**Table 7.2-1: Test Software**

| Manufacturer    | Details                                   |
|-----------------|-------------------------------------------|
| Rohde & Schwarz | EMC 32 V10.60.10 (AC conducted emissions) |
| Rohde & Schwarz | EMC 32 V10.60.15 (radiated emissions)     |

## Section 8 Testing data

### 8.1 Conducted limits / power line conducted emissions limits for licence-exempt radio apparatus

#### 8.1.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.207(a)
- ISSED: RSS-GEN §8.8
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 §6.2

**Table 8.1-1: Conducted emissions limit**

| Frequency of emission,<br>MHz | Quasi-peak | Conducted limit, dBµV | Average   |
|-------------------------------|------------|-----------------------|-----------|
| 0.15–0.5                      | 66 to 56*  |                       | 56 to 46* |
| 0.5–5                         | 56         |                       | 46        |
| 5–30                          | 60         |                       | 50        |

Note: \* Decreases with the logarithm of the frequency.

#### 8.1.2 Test summary

|               |                                                                                                                                                                    |                   |           |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                                                                                               |                   |           |
| Test date     | January 23, 2026                                                                                                                                                   | Temperature       | 20°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                                                                                                            | Air pressure      | 1001 mbar |
| Test location | <input type="checkbox"/> 10m semi anechoic chamber<br><input type="checkbox"/> 3m semi anechoic chamber<br><input checked="" type="checkbox"/> Other: Ground Plane | Relative humidity | 55 %      |

#### 8.1.3 Notes

Testing was performed with the transmitter operating on a fixed channel (lowest, middle, and highest channels; hopping disabled) at maximum output power.

The spectral plots within this section have been corrected with all relevant transducer factors.

For EUT's supporting multiple modulation schemes and/or data rates, testing is performed with the modulation and data rate that produces the highest transmitter output power.

#### 8.1.4 Setup details

|                                      |                                                                                                                                                                                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Port under test                      | AC mains input of support equipment PoE AC adaptor                                                                                                                                                                                               |
| EUT power input during test          | 120V; 60 Hz (PoE)                                                                                                                                                                                                                                |
| EUT setup configuration              | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other:                                                                                                                      |
| Measurement details                  | A preview measurement was generated with the receiver in continuous scan mode. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement. |
| Modulation scheme / data rate tested | Mode 103                                                                                                                                                                                                                                         |

#### Receiver settings:

|                      |                                                                                                                                                                                                     |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resolution bandwidth | 9 kHz                                                                                                                                                                                               |
| Video bandwidth      | 30 kHz                                                                                                                                                                                              |
| Detector mode        | <ul style="list-style-type: none"> <li>– Peak (Preview measurement)</li> <li>– Quasi-peak and CAverage (Final measurement)</li> </ul>                                                               |
| Trace mode           | Max Hold                                                                                                                                                                                            |
| Measurement time     | <ul style="list-style-type: none"> <li>– 100 ms (Peak and Average preview measurement)</li> <li>– 5000 ms (Quasi-peak final measurement)</li> <li>– 5000 ms (CAverage final measurement)</li> </ul> |

# Section 8

## Test name

## Specification(s)

Testing data

Conducted limits / power line conducted emissions limits for licence-exempt radio apparatus

FCC 15.247 & RSS-247



## 8.1.5 Test data

### Full Spectrum

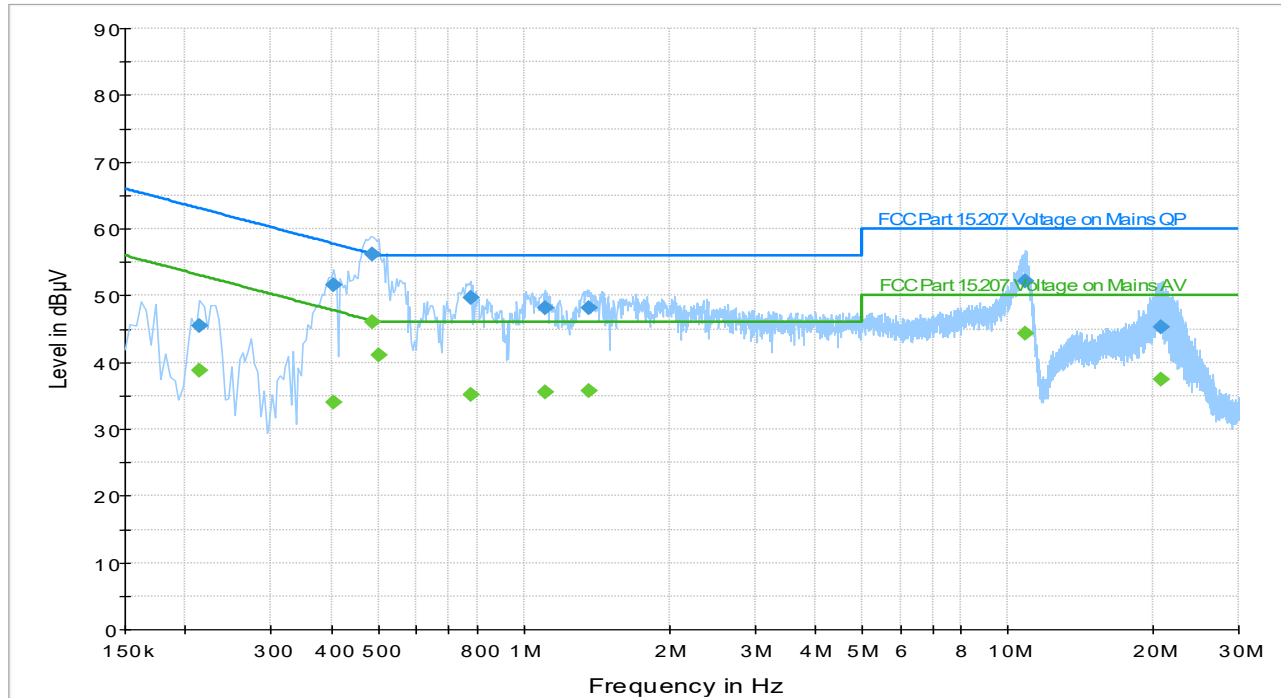


Figure 8.1-1: Conducted emissions at mains port spectral plot (150 kHz - 30 MHz). Low channel: 902.75 MHz.

Table 8.1-2: Conducted emissions at mains port results. Low channel: 902.75 MHz.

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.214000        | ---              | 38.84           | 53.05        | 14.21       | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.214000        | 45.51            | ---             | 63.05        | 17.54       | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.406000        | 51.53            | ---             | 57.73        | 6.20        | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 0.406000        | ---              | 34.11           | 47.73        | 13.62       | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 0.486000        | ---              | 46.13           | 46.24        | 0.11        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.486000        | 56.22            | ---             | 56.24        | 0.02        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.502000        | ---              | 41.05           | 46.00        | 4.95        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.778000        | 49.68            | ---             | 56.00        | 6.32        | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 0.778000        | ---              | 35.22           | 46.00        | 10.78       | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 1.106000        | 48.21            | ---             | 56.00        | 7.79        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 1.106000        | ---              | 35.50           | 46.00        | 10.50       | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 1.362000        | ---              | 35.80           | 46.00        | 10.20       | 5000.0          | 9.000           | L1   | ON     | 19.7       |
| 1.362000        | 48.20            | ---             | 56.00        | 7.80        | 5000.0          | 9.000           | L1   | ON     | 19.7       |
| 10.890000       | 52.14            | ---             | 60.00        | 7.86        | 5000.0          | 9.000           | L1   | ON     | 20.0       |
| 10.890000       | ---              | 44.36           | 50.00        | 5.64        | 5000.0          | 9.000           | L1   | ON     | 20.0       |
| 20.722000       | 45.20            | ---             | 60.00        | 14.80       | 5000.0          | 9.000           | L1   | ON     | 20.3       |
| 20.722000       | ---              | 37.49           | 50.00        | 12.51       | 5000.0          | 9.000           | L1   | ON     | 20.3       |

Notes:

<sup>1</sup> Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).

<sup>2</sup> Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

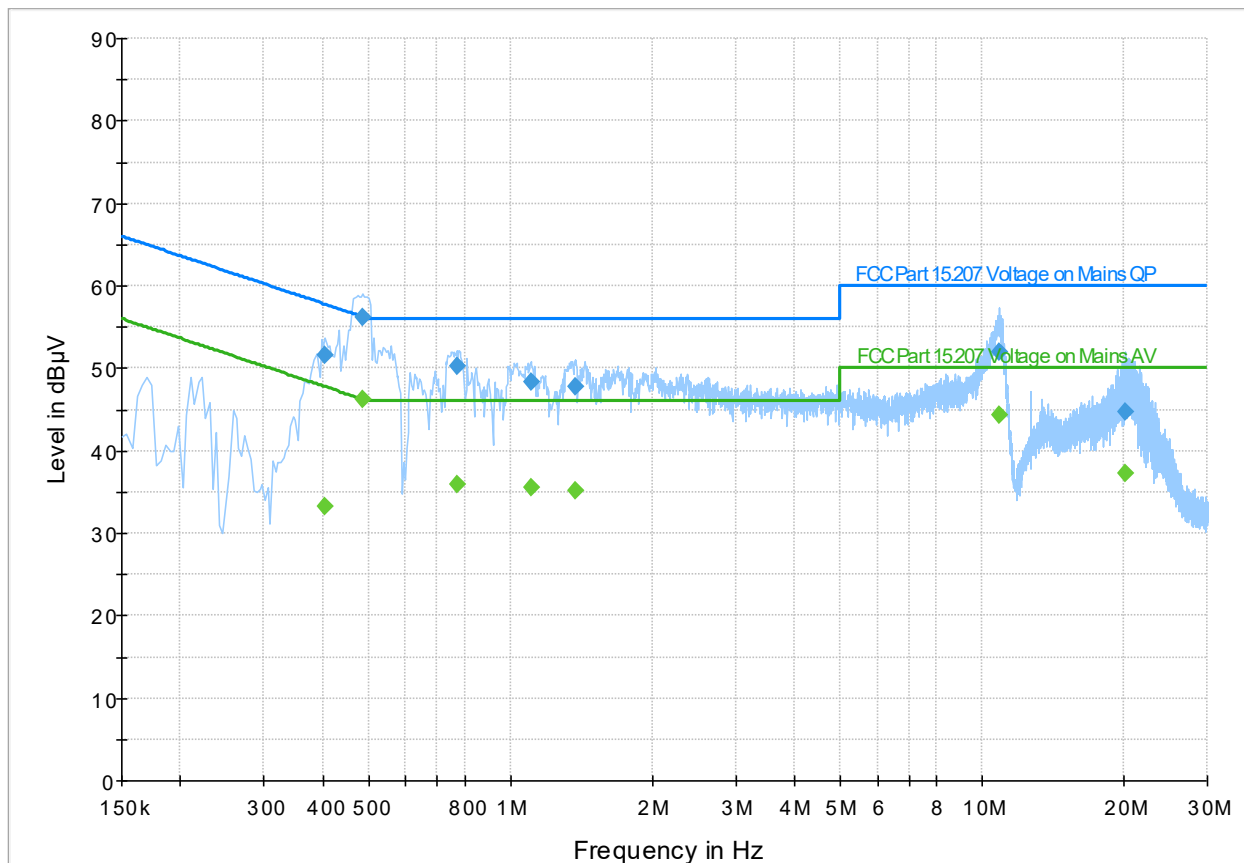


Figure 8.1-2: Conducted emissions at mains port spectral plot (150 kHz - 30 MHz). Middle channel: 915.25 MHz.

Table 8.1-3: Conducted emissions at mains port results. Middle channel: 915.25 MHz.

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.406000        | ---              | 33.33           | 47.73        | 14.40       | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.406000        | 51.58            | ---             | 57.73        | 6.15        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.486000        | ---              | 46.16           | 46.24        | 0.07        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.486000        | 56.16            | ---             | 56.24        | 0.08        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.770000        | ---              | 35.89           | 46.00        | 10.11       | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.770000        | 50.27            | ---             | 56.00        | 5.73        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 1.106000        | 48.33            | ---             | 56.00        | 7.67        | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 1.106000        | ---              | 35.58           | 46.00        | 10.42       | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 1.378000        | 47.80            | ---             | 56.00        | 8.20        | 5000.0          | 9.000           | L1   | ON     | 19.7       |
| 1.378000        | ---              | 35.18           | 46.00        | 10.82       | 5000.0          | 9.000           | L1   | ON     | 19.7       |
| 10.858000       | 51.95            | ---             | 60.00        | 8.05        | 5000.0          | 9.000           | L1   | ON     | 20.0       |
| 10.858000       | ---              | 44.39           | 50.00        | 5.61        | 5000.0          | 9.000           | L1   | ON     | 20.0       |
| 20.174000       | 44.69            | ---             | 60.00        | 15.31       | 5000.0          | 9.000           | L1   | ON     | 20.4       |
| 20.174000       | ---              | 37.19           | 50.00        | 12.81       | 5000.0          | 9.000           | L1   | ON     | 20.4       |

Notes:

<sup>1</sup> Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).

<sup>2</sup> Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

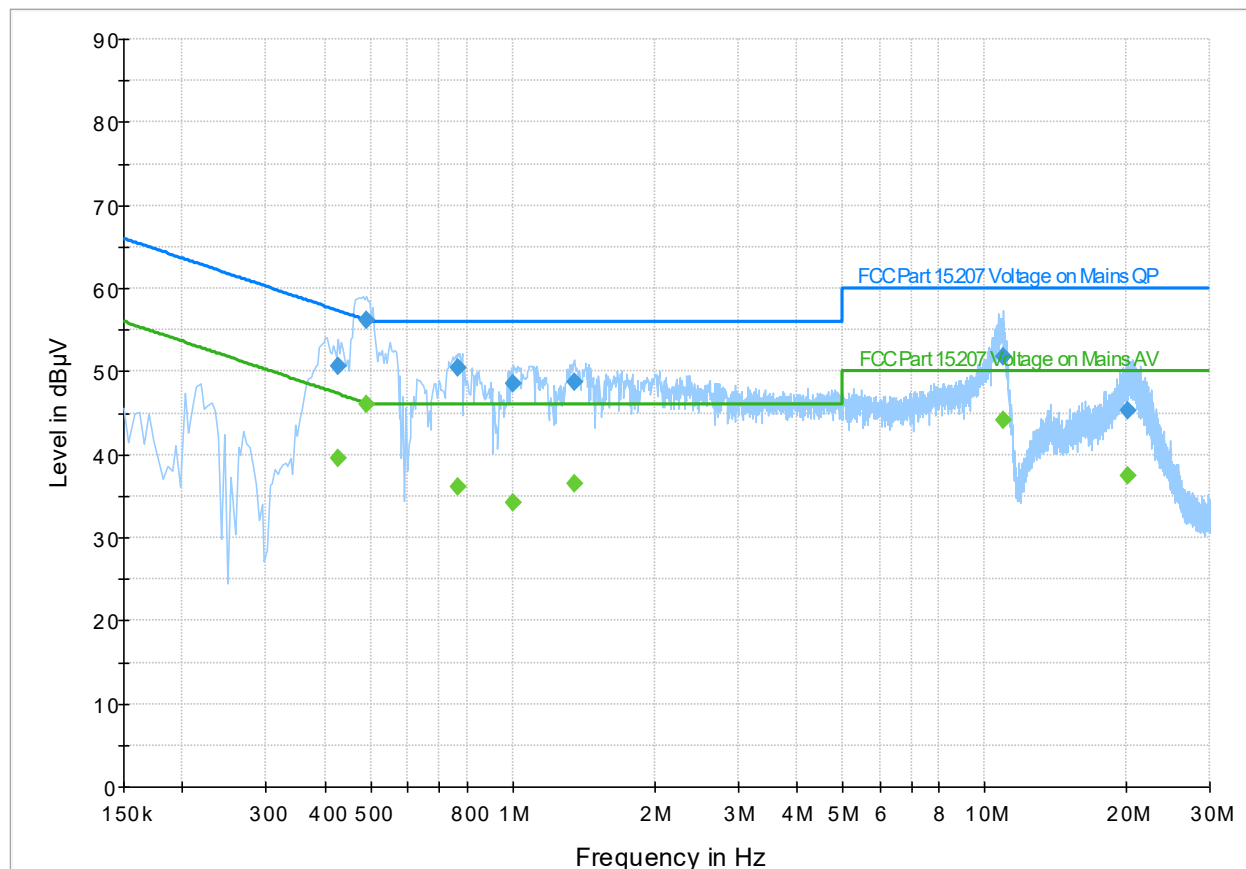


Figure 8.1-3: Conducted emissions at mains port spectral plot (150 kHz - 30 MHz). High channel: 927.25 MHz.

Table 8.1-4: Conducted emissions at mains port results. High channel: 927.25 MHz.

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Filter | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|--------|------------|
| 0.426000        | 50.65            | ---             | 57.33        | 6.68        | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 0.426000        | ---              | 39.50           | 47.33        | 7.83        | 5000.0          | 9.000           | N    | ON     | 19.6       |
| 0.490000        | 56.15            | ---             | 56.17        | 0.02        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.490000        | ---              | 46.13           | 46.17        | 0.04        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.766000        | ---              | 36.02           | 46.00        | 9.98        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 0.766000        | 50.41            | ---             | 56.00        | 5.59        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 1.006000        | 48.54            | ---             | 56.00        | 7.46        | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 1.006000        | ---              | 34.19           | 46.00        | 11.81       | 5000.0          | 9.000           | L1   | ON     | 19.6       |
| 1.350000        | 48.65            | ---             | 56.00        | 7.35        | 5000.0          | 9.000           | L1   | ON     | 19.7       |
| 1.350000        | ---              | 36.44           | 46.00        | 9.56        | 5000.0          | 9.000           | L1   | ON     | 19.7       |
| 10.922000       | ---              | 44.09           | 50.00        | 5.91        | 5000.0          | 9.000           | N    | ON     | 20.0       |
| 10.922000       | 51.76            | ---             | 60.00        | 8.24        | 5000.0          | 9.000           | N    | ON     | 20.0       |
| 20.182000       | ---              | 37.36           | 50.00        | 12.64       | 5000.0          | 9.000           | N    | ON     | 20.2       |
| 20.182000       | 45.27            | ---             | 60.00        | 14.73       | 5000.0          | 9.000           | N    | ON     | 20.2       |

Notes: <sup>1</sup> Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).

<sup>2</sup> Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

## 8.2 Variation of power source

### 8.2.1 References and limits

- FCC 47 CFR Part 15, Subpart A: §15.31(e)
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 §5.13

§15.31(e):

For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

### 8.2.2 Test summary

|               |                                                         |                   |           |
|---------------|---------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                    |                   |           |
| Test date     | January 23, 2026                                        | Temperature       | 20°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                 | Air pressure      | 1001 mbar |
| Test location | <input type="checkbox"/> 10m semi anechoic chamber      | Relative humidity | 55 %      |
|               | <input type="checkbox"/> 3m semi anechoic chamber       |                   |           |
|               | <input checked="" type="checkbox"/> Other: Ground Plane |                   |           |

### 8.2.3 Notes

Testing was performed with the transmitter operating on a fixed channel (middle) at maximum output power.

### 8.2.4 Setup details

|                             |                                                                      |
|-----------------------------|----------------------------------------------------------------------|
| EUT power input during test | AC mains input of support equipment PoE AC adaptor 120V; 60 Hz (PoE) |
|-----------------------------|----------------------------------------------------------------------|

### 8.2.5 Test data

|                                     |                                                                                                                                                                                                                                     |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>            | EUT is battery operated. Therefore, all tests performed with a new fully charged battery                                                                                                                                            |
| <input checked="" type="checkbox"/> | EUT power supply voltage varied across supported range. No variation in transmitter output power observed therefore all tests performed at nominal power supply voltage.                                                            |
| <input type="checkbox"/>            | EUT power supply voltage varied across supported range. Transmitter output power variation was observed. All tests performed with the EUT operated at the worst case operating voltage with respect to transmitter output power: V. |



## 8.3 Antenna requirement

### 8.3.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.203

§15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

### 8.3.2 Test summary

|               |                                                                                       |                   |           |
|---------------|---------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                  |                   |           |
| Test date     | January 19, 2026                                                                      | Temperature       | 20°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1003 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 57 %      |

### 8.3.3 Notes

None

### 8.3.4 Test data

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Antenna part number:   | See Section 3.6                                                          |
| Technical description: | See Section 3.6                                                          |
| Peak gain (dBi):       | See Section 3.6                                                          |
| Source of gain data:   | <input type="checkbox"/> Declared by client                              |
|                        | <input checked="" type="checkbox"/> Antenna data sheet or specification. |
|                        | <input type="checkbox"/> Antenna gain test report. Document name:        |

## 8.4 20 dB bandwidth (902 – 928 MHz band)

### 8.4.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(a)(1)(i)
- RSS-247 6.2.2.1(a)
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024: §6.9.2

### 8.4.2 Test summary

|               |                                                                                       |                   |           |
|---------------|---------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                  |                   |           |
| Test date     | January 19, 2026                                                                      | Temperature       | 20°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1003 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 57 %      |

### 8.4.3 Notes

Testing was performed with the transmitter operating on a fixed channel (lowest, middle, and highest; frequency hopping disabled) at maximum output power.

### 8.4.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

Receiver/spectrum analyzer settings:

|                      |                                    |
|----------------------|------------------------------------|
| Resolution bandwidth | 5 Hz                               |
| Video bandwidth      | 20 Hz                              |
| Detector mode        | Peak                               |
| Trace mode           | Max Hold                           |
| Measurement time     | Long enough for trace to stabilize |

### 8.4.5 Test data

Table 8.4-1: 20 dB bandwidth (902 – 928 MHz band) test data

| Test frequency (MHz) | Modulation | Bandwidth (kHz) | Limit (kHz) | Verdict |
|----------------------|------------|-----------------|-------------|---------|
| 902.75               | M 103      | 0.19031         | ≤ 500       | PASS    |
| 915.25               | M 103      | 0.12687         | ≤ 500       | PASS    |
| 927.25               | M 103      | 0.13437         | ≤ 500       | PASS    |

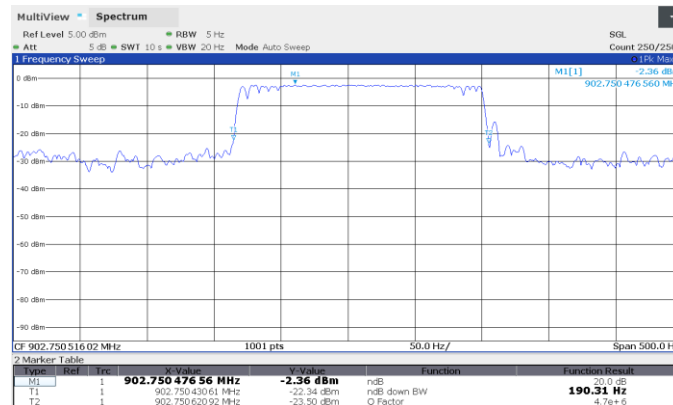


Figure 8.4-1: 20 dB bandwidth (902 – 928 MHz band), Low channel: 902.75 MHz.

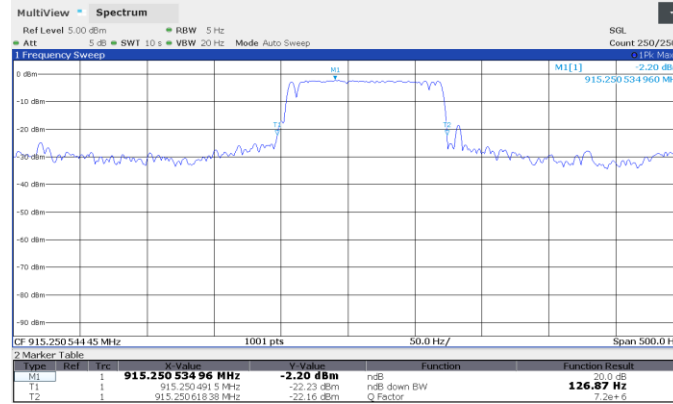


Figure 8.4-2: 20 dB bandwidth (902 – 928 MHz band), Middle channel: 915.25 MHz.

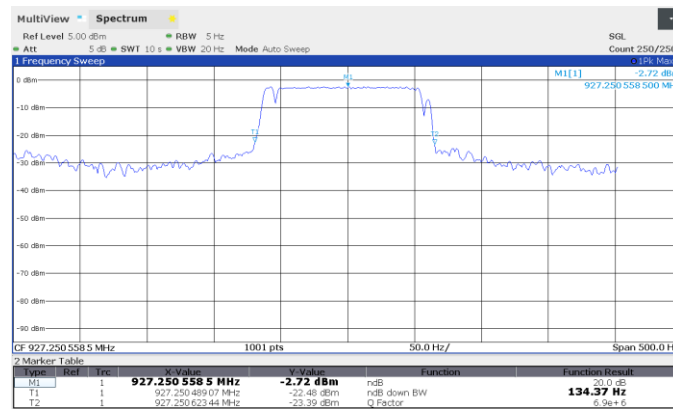


Figure 8.4-3: 20 dB bandwidth (902 – 928 MHz band), High channel: 927.25 MHz.

## 8.5 Channel separation

### 8.5.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(a)(1)
- ISED: RSS 247 6.2.1(b)
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024: §6.9.2

### 8.5.2 Test summary

|               |                                                                                       |                   |           |
|---------------|---------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                  |                   |           |
| Test date     | January 20, 2026                                                                      | Temperature       | 19°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1007 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 58%       |

### 8.5.3 Notes

Testing was performed with the frequency hopping mode enabled.

### 8.5.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

Receiver/spectrum analyzer settings:

|                      |                                    |
|----------------------|------------------------------------|
| Resolution bandwidth | 50 kHz                             |
| Video bandwidth      | 500 kHz                            |
| Detector mode        | Peak                               |
| Trace mode           | Max Hold                           |
| Measurement time     | Long enough for trace to stabilize |

### 8.5.5 Test data

Table 8.5-1: Channel separation results

| Channel Separation (kHz) | Limit                                              | Verdict |
|--------------------------|----------------------------------------------------|---------|
| 498.5                    | ≥ 25 kHz or 20 dB bandwidth (whichever is greater) | PASS    |

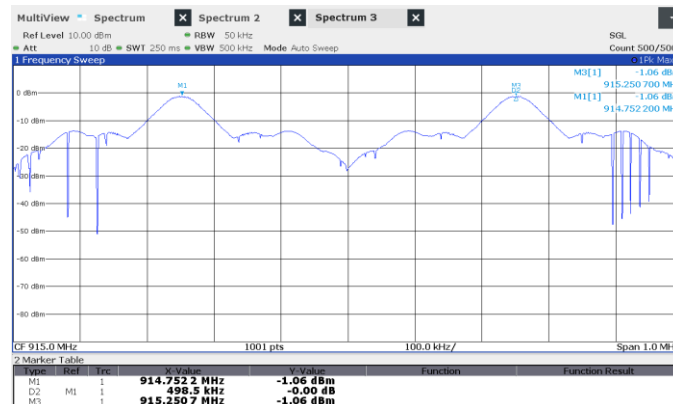


Figure 8.5-1: Channel separation, frequency hopping ON.

## 8.6 Number of hopping channels (902 – 928 MHz band)

### 8.6.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(a)(1)(i)
- ISSED: RSS-247 6.2.2.1
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024: §6.9.2

### 8.6.2 Test summary

|               |                                                                                       |                   |           |
|---------------|---------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                  |                   |           |
| Test date     | January 20, 2026                                                                      | Temperature       | 19°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1007 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 58%       |

### 8.6.3 Notes

Testing was performed with the frequency hopping mode enabled.

### 8.6.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

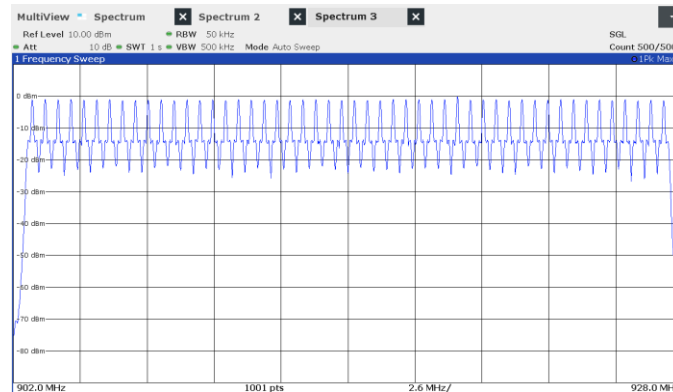
Receiver settings:

|                      |                                    |
|----------------------|------------------------------------|
| Resolution bandwidth | 50 kHz                             |
| Video bandwidth      | 500 kHz                            |
| Detector mode        | Peak                               |
| Trace mode           | Max Hold                           |
| Measurement time     | Long enough for trace to stabilize |

### 8.6.5 Test Data

**Table 8.6-1: Number of hopping channels (902 – 928 MHz band) results**

| Number of hopping channels (902 – 928 MHz band) | Limit | Verdict |
|-------------------------------------------------|-------|---------|
| 50                                              | ≥ 50  | Pass    |



**Figure 8.6-1: Number of hopping channels (902 – 928 MHz band), frequency hopping channels ON.**

## 8.7 Dwell time (902 – 928 MHz band)

### 8.7.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(a)(1)(i)
- ISSED: RSS-247 6.2.2.1
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024: §6.9.2

### 8.7.2 Test summary

|               |                                                                                       |                   |          |
|---------------|---------------------------------------------------------------------------------------|-------------------|----------|
| Verdict       | Pass                                                                                  |                   |          |
| Test date     | January 21, 2026                                                                      | Temperature       | 19°C     |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1005mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 56%      |

### 8.7.3 Notes

Testing was performed with the frequency hopping mode enabled.

### 8.7.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

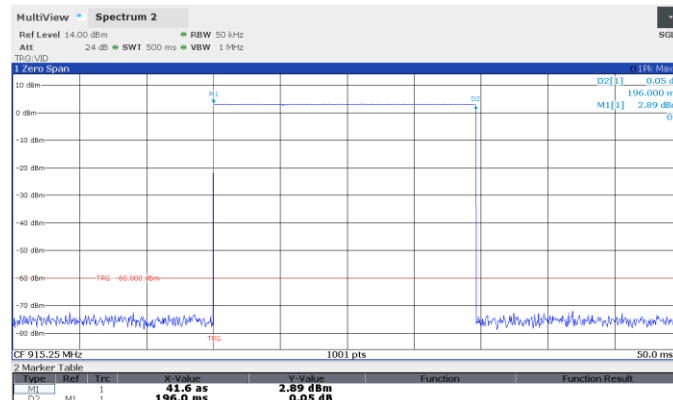
Receiver settings:

|                      |        |
|----------------------|--------|
| Resolution bandwidth | 50 kHz |
| Video bandwidth      | 1 MHz  |
| Detector mode        | Peak   |

### 8.7.5 Test Data

**Table 8.7-1: Dwell time (902 – 928 MHz band) results**

|                                               |        |
|-----------------------------------------------|--------|
| Measurement period                            | 20s    |
| Pulse width                                   | 196 ms |
| Number of pulses in measurement period        | 2      |
| Total time of occupancy in measurement period | 0.392s |
| Limit                                         | 0.4s   |



**Figure 8.7-1: Dwell time (902 – 928 MHz band), Middle channel: 915.25 MHz.**

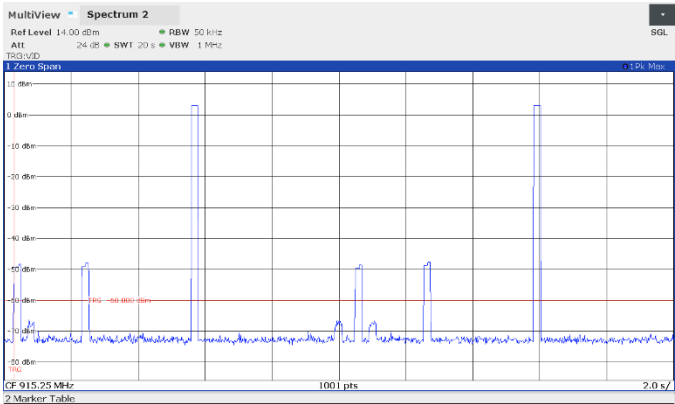


Figure 8.7-2: Dwell time (902 – 928 MHz band), Middle channel: 915.25 MHz at 20 seconds.

## 8.8 Maximum peak output power (902 – 928 MHz band)

### 8.8.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(b)(2)
- ISSED: RSS-247 6.2.2.2
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 §7.8.5

### 8.8.2 Test summary

|               |                                                                                       |                   |           |
|---------------|---------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                  |                   |           |
| Test date     | June 11, 2026                                                                         | Temperature       | 20°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1003 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 57 %      |

### 8.8.3 Notes

Testing was performed with the transmitter operating on a fixed channel (lowest, middle, and highest; frequency hopping disabled).

Testing was performed considering the supported antenna with the highest gain (7.21 dBi) and the lowest gain (including cable loss) (-8 dBi -3.5 dB cable loss = -11.5 dBi)

The maximum antenna gain is declared as 7.21 dBi, exceeding the 6 dBi limit. The 1.21 dB excess is deducted from the original limit at conducted port such that the EIRP does not exceed 36 dBm. The new output power limit = 30 dBm – 1.21 dB = 28.79 dBm.

The spectral plots within this section have been corrected with all relevant transducer factors.

### 8.8.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

Receiver/spectrum analyzer settings:

|                      |                                    |
|----------------------|------------------------------------|
| Resolution bandwidth | 300 Hz                             |
| Video bandwidth      | 1 kHz                              |
| Detector mode        | Peak                               |
| Trace mode           | Max Hold                           |
| Measurement time     | Long enough for trace to stabilize |

### 8.8.5 Test data

**Table 8.8-1: Maximum peak output power (902 – 928 MHz band) test data**

| Test Frequency (MHz) | Modulation | Conducted Power (dBm) | Limit (dBm) | Margin (dB) | Antenna gain (dBi)                      | EIRP (dBm) | Limit (dBm) |
|----------------------|------------|-----------------------|-------------|-------------|-----------------------------------------|------------|-------------|
| 902.75               | M 103      | 28.71                 | ≤ 28.79     | 0.08        | 7.21 dBi + 0 dB cable loss (highest)    | 35.92      | ≤ 36        |
| 915.25               | M 103      | 28.74                 | ≤ 28.79     | 0.05        | 7.21 dBi + 0 dB cable loss (highest)    | 35.95      | ≤ 36        |
| 927.25               | M 103      | 28.74                 | ≤ 28.79     | 0.05        | 7.21 dBi + 0 dB cable loss (highest)    | 35.95      | ≤ 36        |
| 902.75               | M 103      | 29.95                 | ≤ 30.00     | 0.05        | -11.00 dBi – 3.5 dB cable loss (lowest) | 18.95      | ≤ 36        |
| 915.25               | M 103      | 29.77                 | ≤ 30.00     | 0.23        | -11.00 dBi – 3.5 dB cable loss (lowest) | 18.77      | ≤ 36        |
| 927.25               | M 103      | 29.82                 | ≤ 30.00     | 0.18        | -11.00 dBi – 3.5 dB cable loss (lowest) | 18.82      | ≤ 36        |



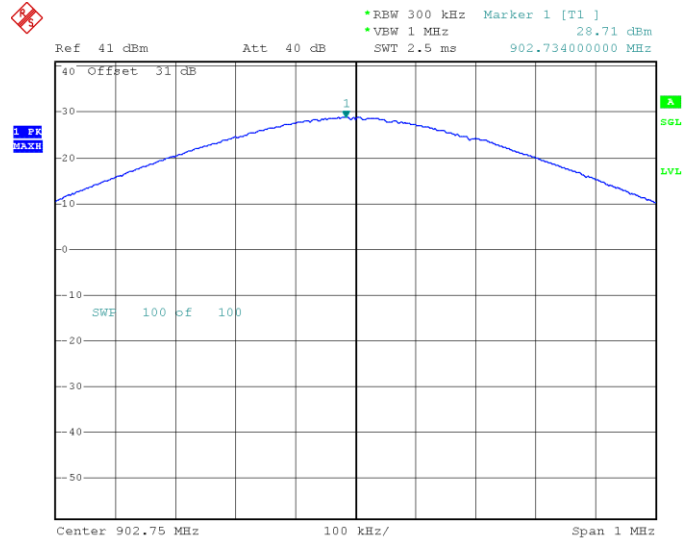


Figure 8.8-1: Maximum peak output power (902 – 928 MHz band), Low channel: 902.75 MHz, highest gain antenna assembly

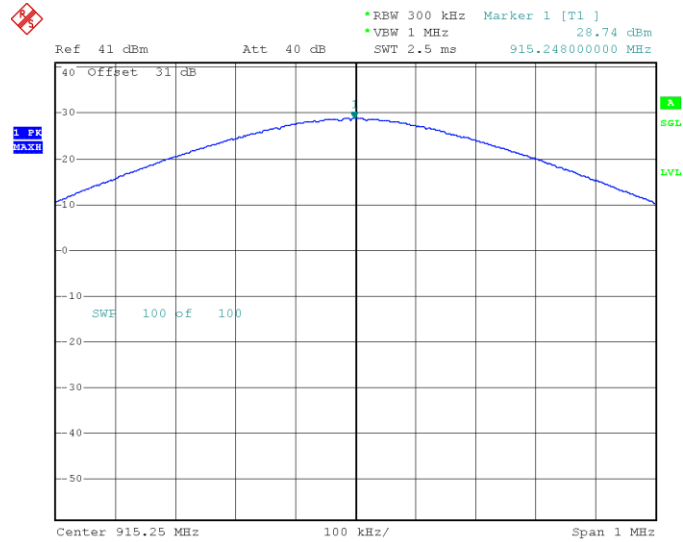


Figure 8.8-2: Maximum peak output power (902 – 928 MHz band), Middle channel: 915.25 MHz, highest gain antenna assembly

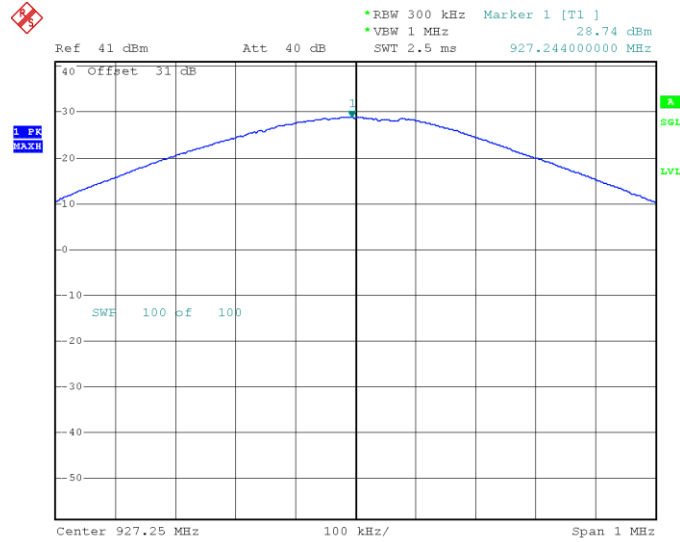


Figure 8.8-3: Maximum peak output power (902 – 928 MHz band), High channel: 927.25 MHz, highest gain antenna assembly

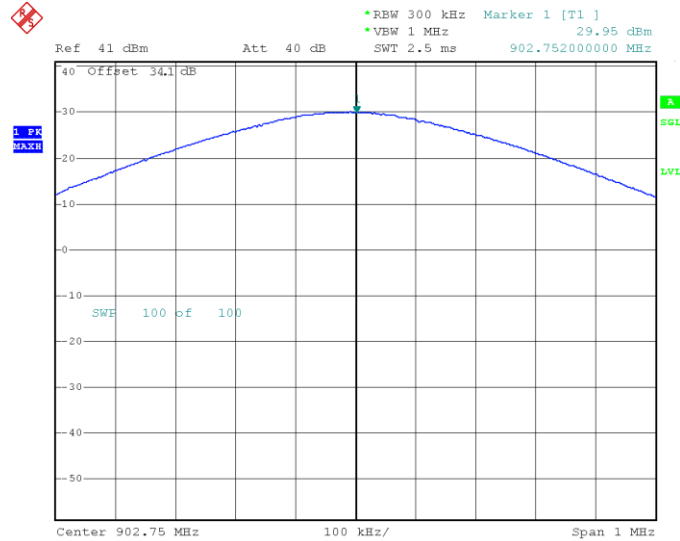


Figure 8.8-4: Maximum peak output power (902 – 928 MHz band), Low channel: 902.75 MHz, lowest gain antenna assembly (includes additional 3.5 dB offset to compensate for declared loss of antenna feed cable)

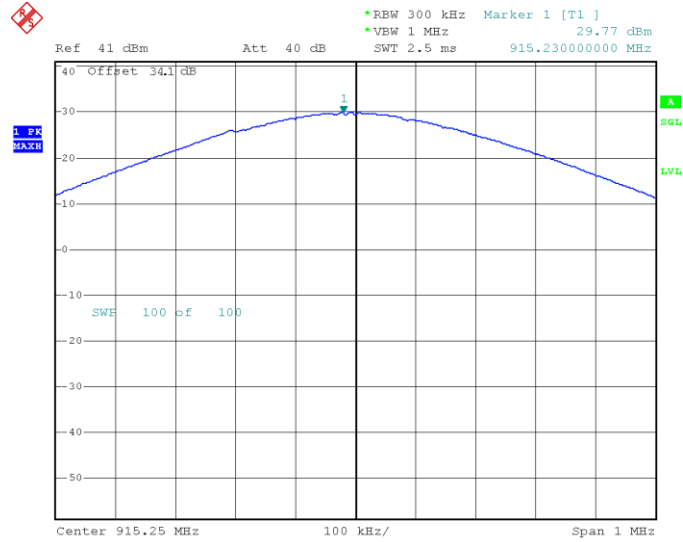


Figure 8.8-5: Maximum peak output power (902 – 928 MHz band), Mid channel: 915.25 MHz, lowest gain antenna assembly (includes additional 3.5 dB offset to compensate for declared loss of antenna feed cable)

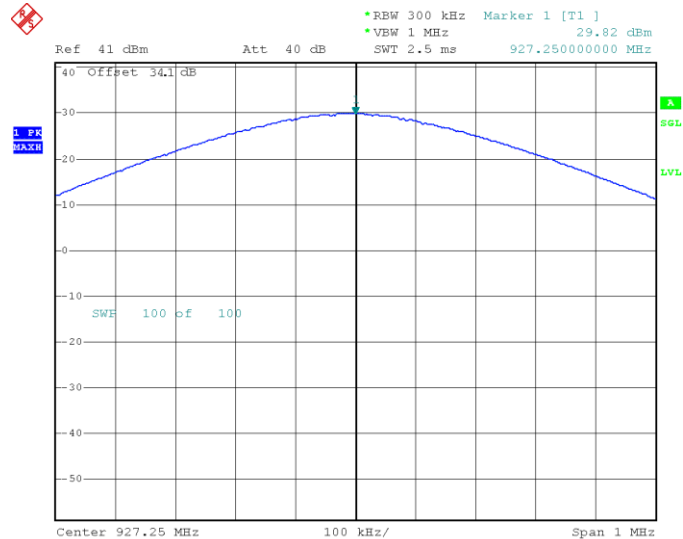


Figure 8.8-6: Maximum peak output power (902 – 928 MHz band), High channel: 927.25 MHz, lowest gain antenna assembly (includes additional 3.5 dB offset to compensate for declared loss of antenna feed cable)

## 8.9 Spurious emissions

### 8.9.1 References and limits

- FCC 47 CFR Part 15, Subpart C: §15.247(d)
- RSS-247: §6.6
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 §11.11 (antenna port conducted spurious emissions)
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 §6.5, 6.6 (radiated emissions in restricted bands)

### 8.9.2 Test summary

|               |                                                                                                                                                                                                                                                                   |                   |                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------|
| Verdict       | Pass                                                                                                                                                                                                                                                              |                   |                       |
| Test date     | January 21, 2026; January 22, 2026;<br>January 23, 2026                                                                                                                                                                                                           | Temperature       | 19°C; 20°C; 19°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                                                                                                                                                                                                           | Air pressure      | 1004; 1006; 1002 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench (conducted tests)<br><input type="checkbox"/> 10 m semi-anechoic chamber (radiated tests)<br><input checked="" type="checkbox"/> 3 m semi-anechoic chamber (radiated tests)<br><input type="checkbox"/> Other: | Relative humidity | 53; 56; 54%           |

### 8.9.3 Notes

Testing was performed with the transmitter operating on a fixed channel at full power. Low, middle, and high channels were tested. The spectrum was searched from 30 MHz to above the 10<sup>th</sup> harmonic of the highest transmit frequency.

For radiated measurements, the EUT was investigated to identify the worst-case orientation with respect to the fundamental transmitter power. All measurements were performed with the EUT in that worst-case orientation.

The spectral plots within this section have been corrected with all relevant transducer factors.

Radiated emissions are reported for the modulation / data rate settings that produced the highest transmitter output power as a worst-case. For this EUT, the worst-case modulation / data rate setting used was: Mode 103.

### 8.9.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

Spectrum analyzer settings (conducted emissions):

|                      |                                    |
|----------------------|------------------------------------|
| Resolution bandwidth | 100 kHz                            |
| Video bandwidth      | 300 kHz                            |
| Detector mode        | Peak                               |
| Trace mode           | Max Hold                           |
| Measurement time     | Long enough for trace to stabilize |

Receiver settings for radiated measurements within restricted bands below 1 GHz:

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Resolution bandwidth | 120 kHz                                                        |
| Video bandwidth      | 300 kHz                                                        |
| Detector mode        | Peak (preview measurements)<br>Quasi-Peak (final measurements) |

Receiver settings for radiated measurements within restricted bands above 1 GHz:

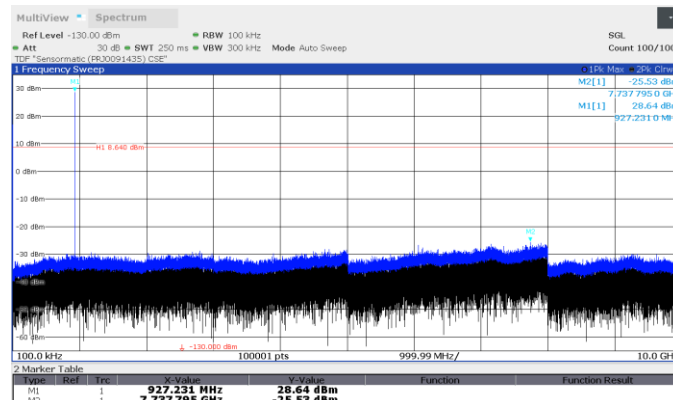
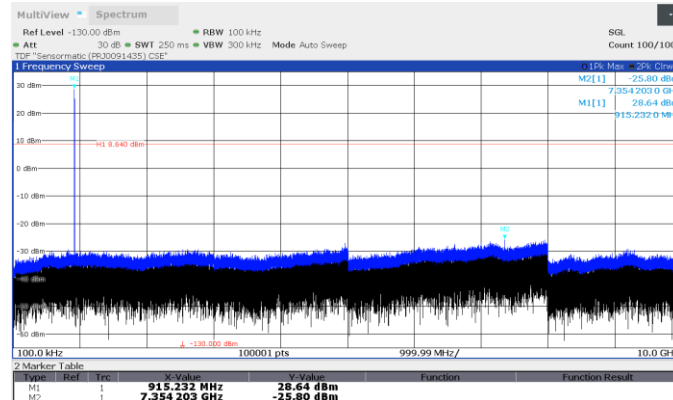
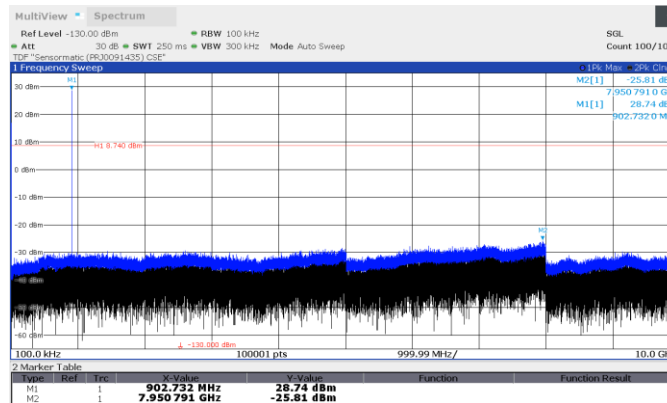
|                      |                                                                      |
|----------------------|----------------------------------------------------------------------|
| Resolution bandwidth | 1 MHz                                                                |
| Video bandwidth      | 3 MHz                                                                |
| Detector mode        | Peak (preview measurements)<br>Peak and average (final measurements) |

8.9.5 Test data

- Antenna port conducted spurious emissions:

Table 8.9-1: Antenna port conducted spurious emissions

| Test Frequency (MHz) | Modulation | Frequency of highest emission (MHz) | Amplitude (dBm) | Limit (dBm) | Margin (dB) |
|----------------------|------------|-------------------------------------|-----------------|-------------|-------------|
| 902.75               | M 103      | 7950.791                            | -25.81          | 8.740       | 34.55       |
| 915.25               | M 103      | 7354.203                            | -25.80          | 8.640       | 34.44       |
| 927.25               | M 103      | 7737.795                            | -25.53          | 8.640       | 34.17       |



- Radiated spurious emissions, restricted bands:

Full Spectrum

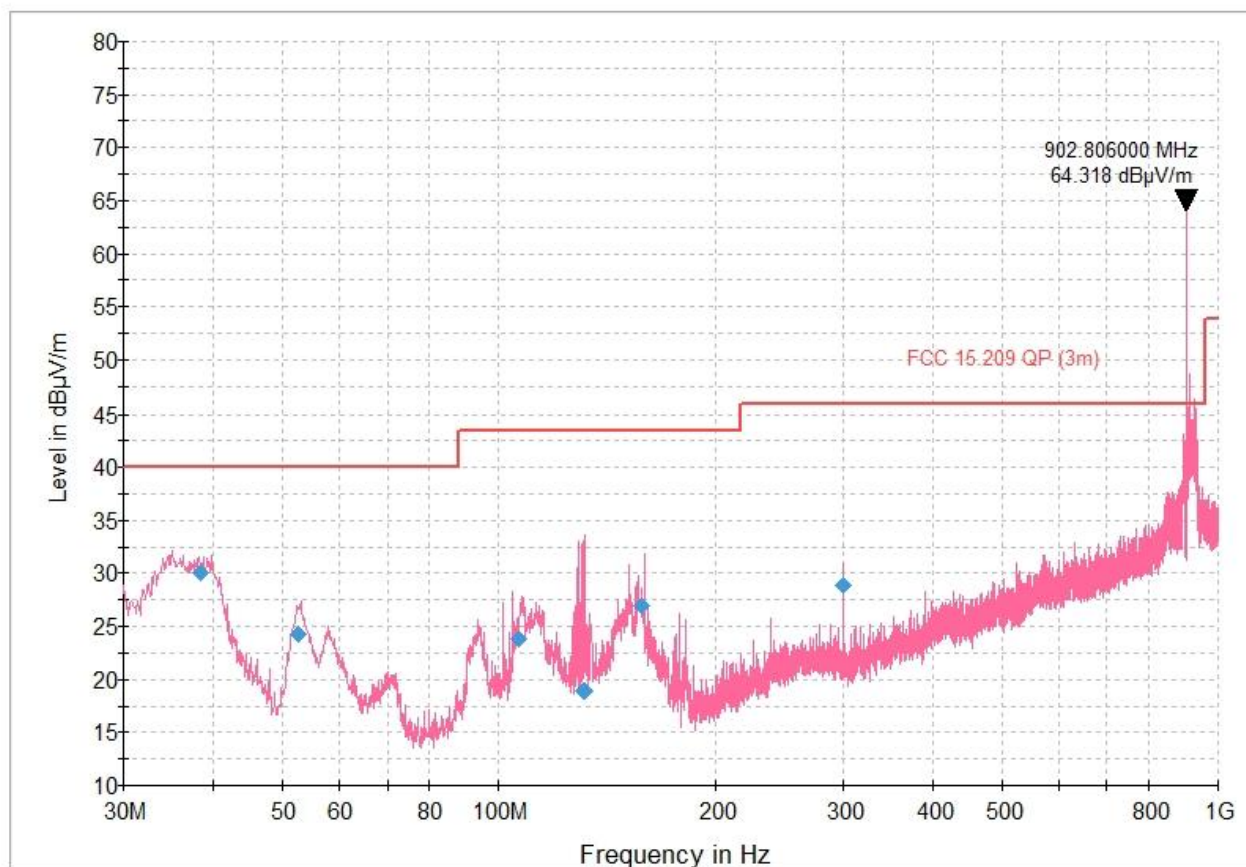


Figure 8.9-4: Radiated emissions spectral plot (30 MHz - 1 GHz). Low Channel: 902.75 MHz, vertical polarization.

Table 8.9-2: Radiated emissions results. Low Channel: 902.75 MHz, vertical polarization.

| Frequency (MHz) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 38.357000       | 30.06              | 40.00          | 9.94        | 5000.0          | 120.000         | 99.0        | V   | 329.0         | 22.1         |
| 52.446000       | 24.21              | 40.00          | 15.79       | 5000.0          | 120.000         | 106.0       | V   | 0.0           | 14.9         |
| 106.370000      | 23.75              | 43.50          | 19.75       | 5000.0          | 120.000         | 108.0       | V   | 205.0         | 18.5         |
| 131.239000      | 18.95              | 43.50          | 24.55       | 5000.0          | 120.000         | 374.0       | V   | 302.0         | 19.8         |
| 157.273000      | 27.00              | 43.50          | 16.50       | 5000.0          | 120.000         | 110.0       | V   | 205.0         | 19.0         |
| 300.014000      | 28.92              | 46.00          | 17.08       | 5000.0          | 120.000         | 136.0       | V   | 254.0         | 22.2         |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)  
<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)  
<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.  
<sup>4</sup> A notch filter was used to reduce the fundamental signal.

# Full Spectrum

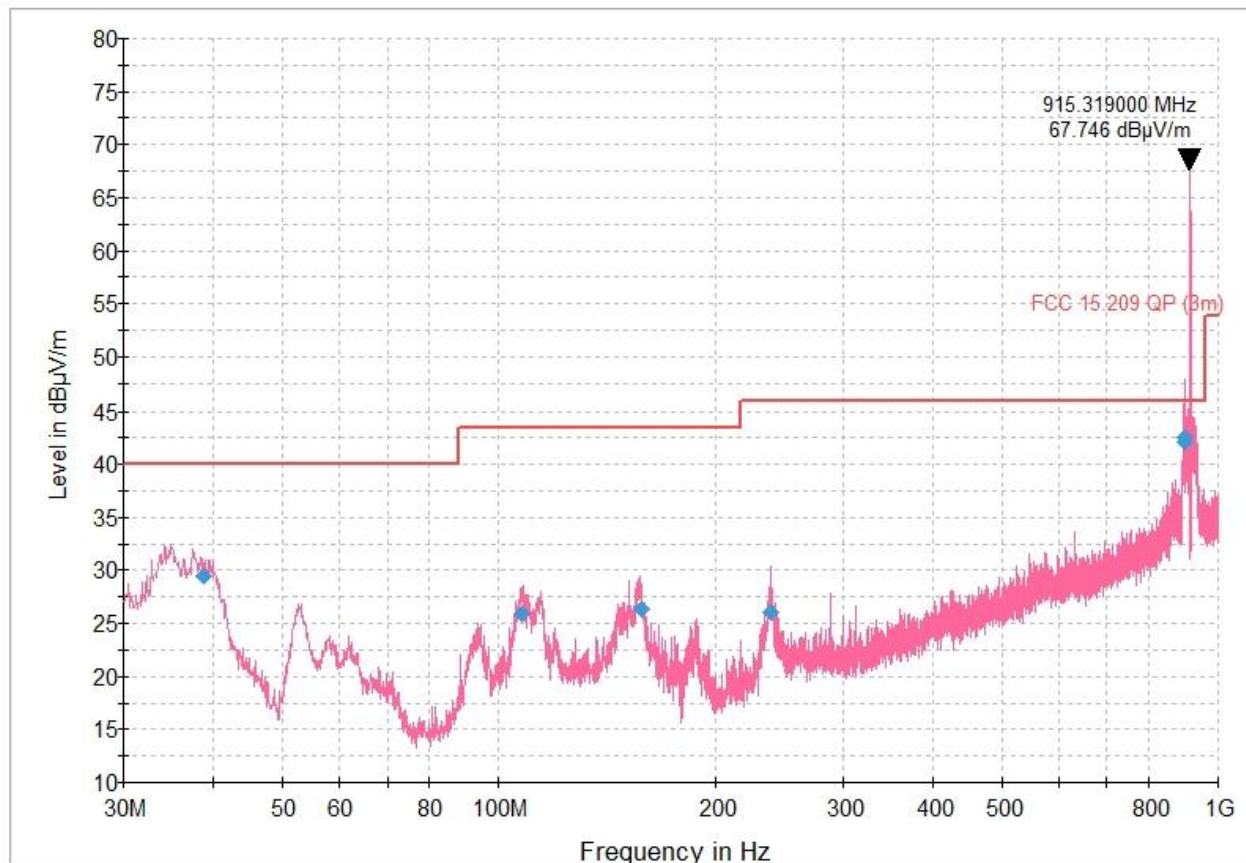


Figure 8.9-5: Radiated emissions spectral plot (30 MHz - 1 GHz). Middle Channel: 915.25 MHz, vertical polarization.

Table 8.9-3: Radiated emissions results. Middle Channel: 915.25 MHz, vertical polarization.

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 38.800000       | 29.49              | 40.00          | 10.51       | 5000.0          | 120.000         | 102.0       | V   | 323.0         | 21.9         |
| 107.959000      | 25.88              | 43.50          | 17.62       | 5000.0          | 120.000         | 122.0       | V   | 201.0         | 18.7         |
| 157.168000      | 26.40              | 43.50          | 17.10       | 5000.0          | 120.000         | 101.0       | V   | 193.0         | 19.0         |
| 238.248000      | 26.08              | 46.00          | 19.92       | 5000.0          | 120.000         | 151.0       | V   | 217.0         | 19.7         |
| 898.112000      | 42.57              | 46.00          | 3.43        | 5000.0          | 120.000         | 105.0       | V   | 0.0           | 33.4         |
| 899.804000      | 42.03              | 46.00          | 3.97        | 5000.0          | 120.000         | 99.0        | V   | 355.0         | 33.4         |

Notes:

- <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
- <sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)
- <sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.
- <sup>4</sup> A notch filter was used to reduce the fundamental signal.

# Full Spectrum

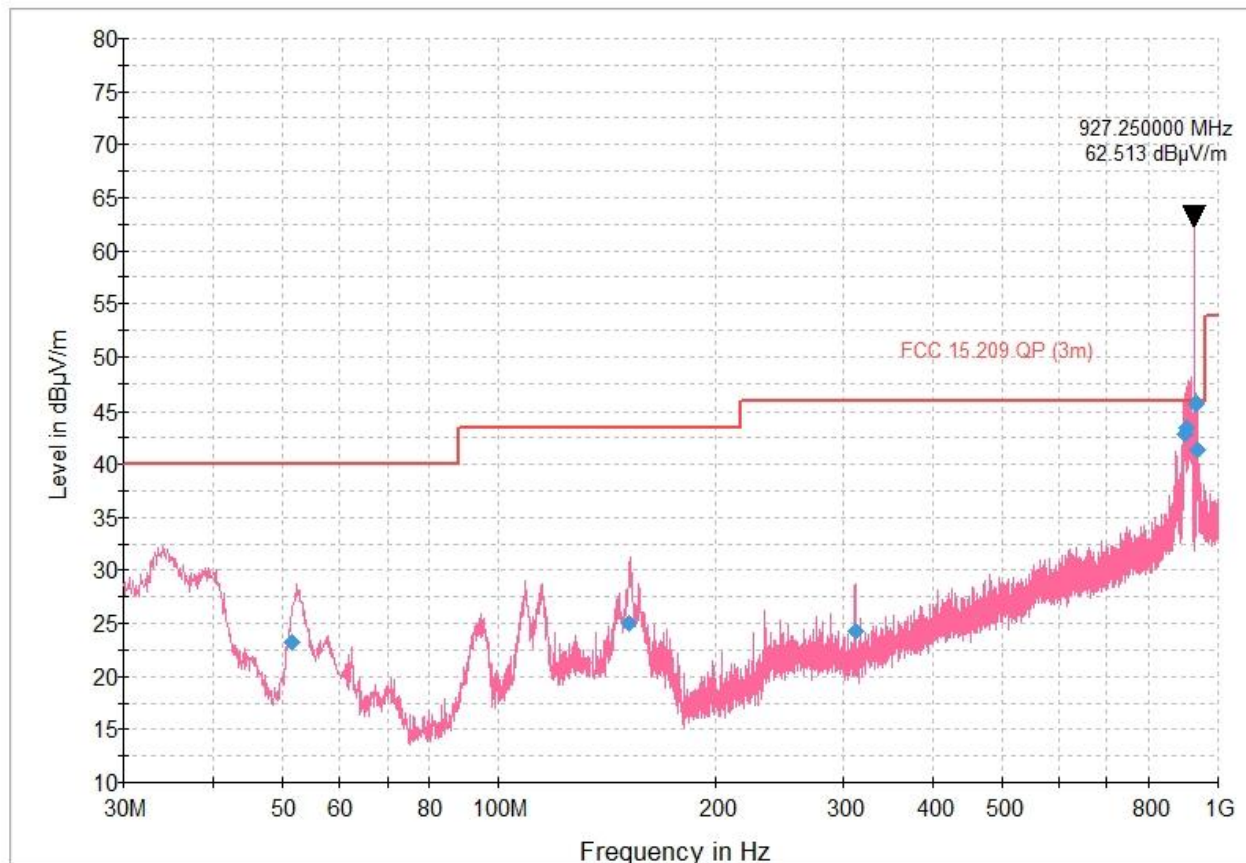


Figure 8.9-6: Radiated emissions spectral plot (30 MHz - 1 GHz). High Channel: 927.25 MHz, vertical polarization.

Table 8.9-4: Radiated emissions results. High Channel: 927.25 MHz, vertical polarization.

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 51.527000       | 23.30              | 40.00          | 16.70       | 5000.0          | 120.000         | 108.0       | V   | 0.0           | 15.3         |
| 151.124000      | 24.99              | 43.50          | 18.51       | 5000.0          | 120.000         | 130.0       | V   | 185.0         | 19.3         |
| 312.076000      | 24.21              | 46.00          | 21.79       | 5000.0          | 120.000         | 125.0       | V   | 230.0         | 22.4         |
| 897.392000      | 42.89              | 46.00          | 3.11        | 5000.0          | 120.000         | 99.0        | V   | 355.0         | 33.4         |
| 901.683000      | 43.47              | 46.00          | 2.53        | 5000.0          | 120.000         | 105.0       | V   | 0.0           | 33.4         |
| 931.284000      | 45.66              | 46.00          | 0.34        | 5000.0          | 120.000         | 99.0        | V   | 354.0         | 34.2         |
| 935.586000      | 41.38              | 46.00          | 4.62        | 5000.0          | 120.000         | 103.0       | V   | 0.0           | 34.2         |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A notch filter was used to reduce the fundamental signal.



# Full Spectrum

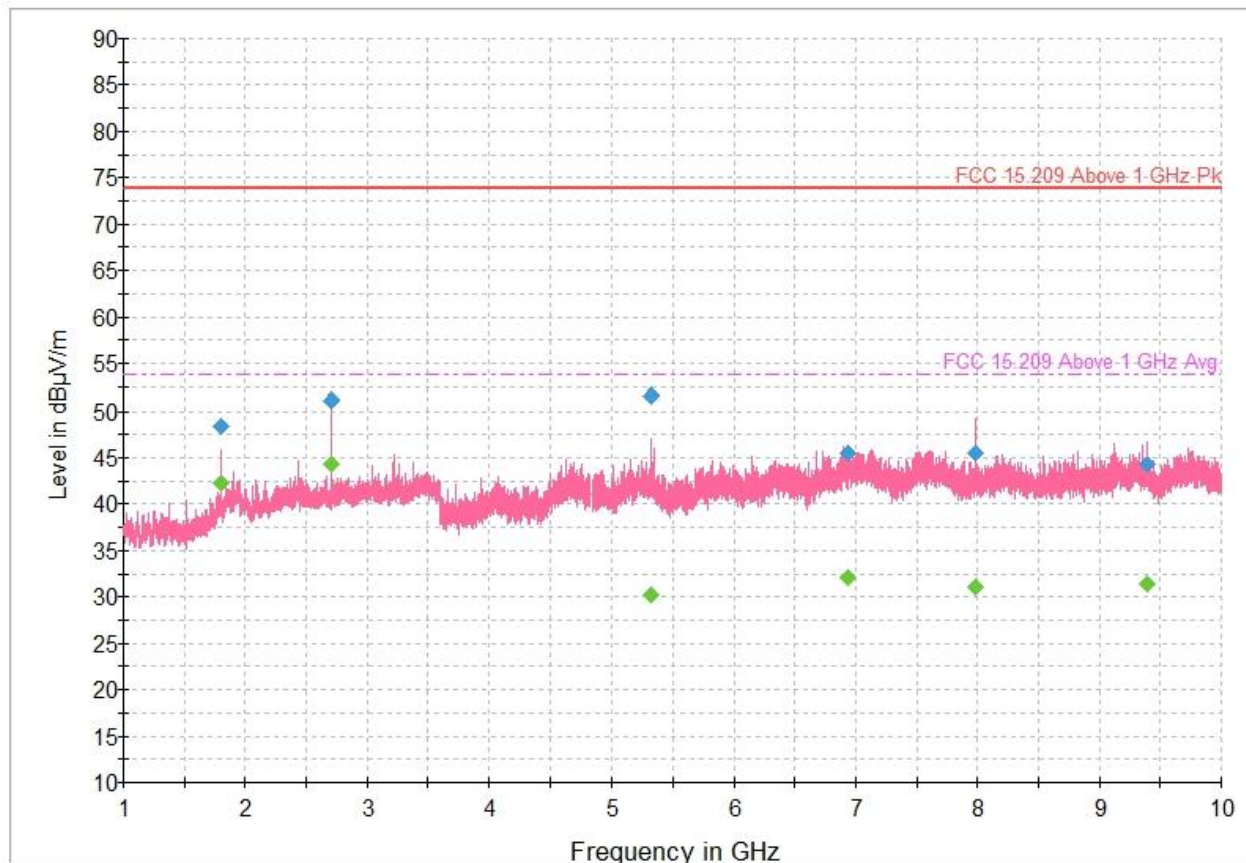


Figure 8.9-7: Radiated emissions spectral plot (1 GHz - 10 GHz). Low Channel: 902.75 MHz, vertical polarization.

Table 8.9-5: Radiated emissions results. Low Channel: 902.75 MHz, vertical polarization.

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1805.500000     | 48.43            | ---               | 73.90          | 25.47       | 5000.0          | 1000.000        | 201.0       | V   | 0.0           | -6.6         |
| 1805.500000     | ---              | 42.19             | 53.90          | 11.71       | 5000.0          | 1000.000        | 201.0       | V   | 0.0           | -6.6         |
| 2708.000000     | ---              | 44.30             | 53.90          | 9.60        | 5000.0          | 1000.000        | 160.0       | V   | 323.0         | -3.2         |
| 2708.000000     | 51.18            | ---               | 73.90          | 22.72       | 5000.0          | 1000.000        | 160.0       | V   | 323.0         | -3.2         |
| 5321.000000     | 51.55            | ---               | 73.90          | 22.35       | 5000.0          | 1000.000        | 99.0        | V   | 71.0          | 3.5          |
| 5321.000000     | ---              | 30.22             | 53.90          | 23.68       | 5000.0          | 1000.000        | 99.0        | V   | 71.0          | 3.5          |
| 6936.000000     | 45.42            | ---               | 73.90          | 28.48       | 5000.0          | 1000.000        | 357.0       | V   | 342.0         | 5.5          |
| 6936.000000     | ---              | 32.08             | 53.90          | 21.82       | 5000.0          | 1000.000        | 357.0       | V   | 342.0         | 5.5          |
| 7980.300000     | 45.46            | ---               | 73.90          | 28.44       | 5000.0          | 1000.000        | 99.0        | V   | 108.0         | 7.2          |
| 7980.300000     | ---              | 31.09             | 53.90          | 22.81       | 5000.0          | 1000.000        | 99.0        | V   | 108.0         | 7.2          |
| 9394.800000     | ---              | 31.39             | 53.90          | 22.51       | 5000.0          | 1000.000        | 356.0       | V   | 180.0         | 9.7          |
| 9394.800000     | 44.36            | ---               | 73.90          | 29.54       | 5000.0          | 1000.000        | 356.0       | V   | 180.0         | 9.7          |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A high pass filter was used to suppress the fundamental signal.

# Full Spectrum

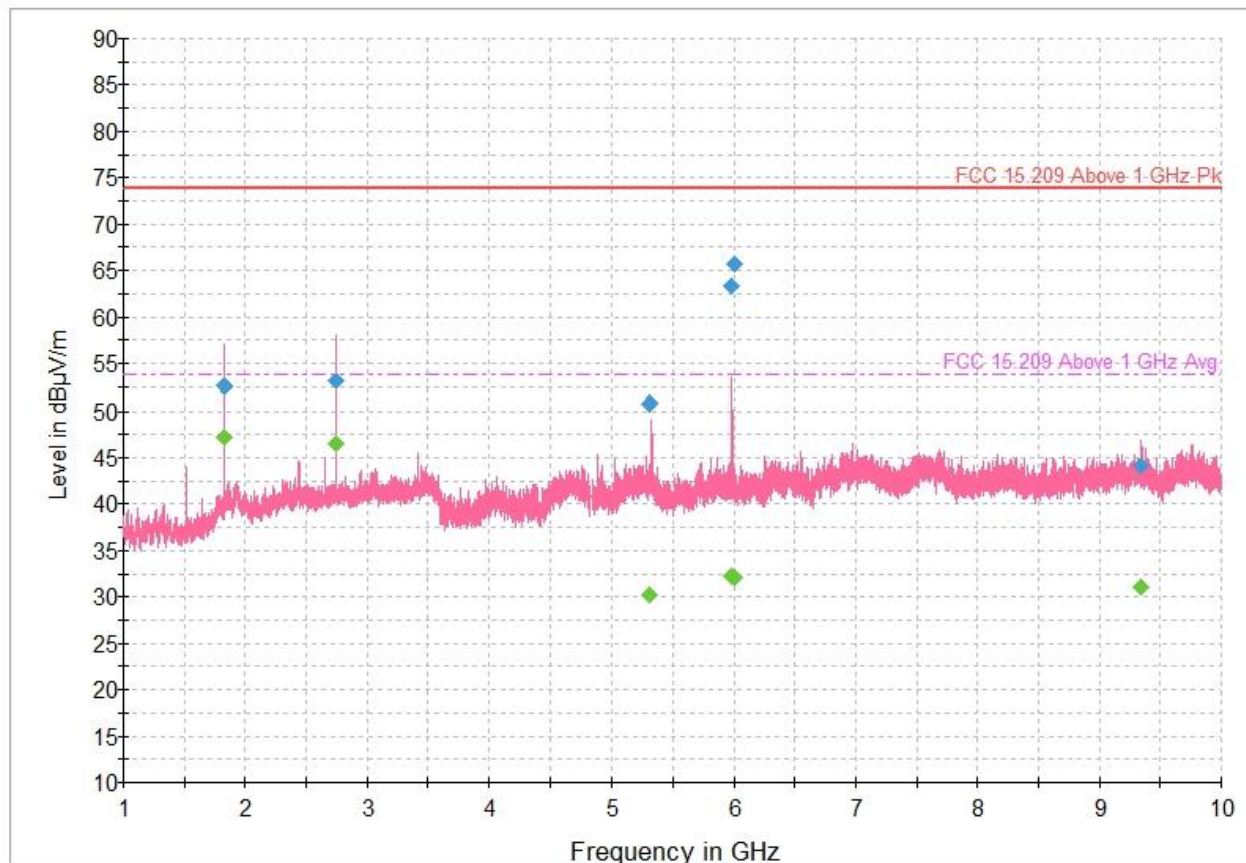


Figure 8.9-8: Radiated emissions spectral plot (1 GHz - 10 GHz). Middle Channel: 915.25 MHz, vertical polarization.

Table 8.9-6: Radiated emissions results. Middle Channel: 915.25 MHz, vertical polarization.

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1830.500000     | 52.67            | ---               | 73.90          | 21.23       | 5000.0          | 1000.000        | 137.0       | V   | 11.0          | -6.3         |
| 1830.500000     | ---              | 47.15             | 53.90          | 6.75        | 5000.0          | 1000.000        | 137.0       | V   | 11.0          | -6.3         |
| 2745.500000     | 53.13            | ---               | 73.90          | 20.77       | 5000.0          | 1000.000        | 190.0       | V   | 0.0           | -3.0         |
| 2745.500000     | ---              | 46.53             | 53.90          | 7.37        | 5000.0          | 1000.000        | 190.0       | V   | 0.0           | -3.0         |
| 5311.400000     | ---              | 30.22             | 53.90          | 23.68       | 5000.0          | 1000.000        | 182.0       | V   | 144.0         | 3.5          |
| 5311.400000     | 50.68            | ---               | 73.90          | 23.22       | 5000.0          | 1000.000        | 182.0       | V   | 144.0         | 3.5          |
| 5973.600000     | ---              | 32.18             | 53.90          | 21.72       | 5000.0          | 1000.000        | 99.0        | V   | 146.0         | 4.9          |
| 5973.600000     | 63.26            | ---               | 73.90          | 10.64       | 5000.0          | 1000.000        | 99.0        | V   | 146.0         | 4.9          |
| 5999.500000     | ---              | 32.06             | 53.90          | 21.84       | 5000.0          | 1000.000        | 107.0       | V   | 0.0           | 4.8          |
| 5999.500000     | 65.68            | ---               | 73.90          | 8.22        | 5000.0          | 1000.000        | 107.0       | V   | 0.0           | 4.8          |
| 9340.500000     | ---              | 31.03             | 53.90          | 22.87       | 5000.0          | 1000.000        | 203.0       | V   | 74.0          | 9.5          |
| 9340.500000     | 44.10            | ---               | 73.90          | 29.80       | 5000.0          | 1000.000        | 203.0       | V   | 74.0          | 9.5          |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A highpass filter was used to suppress the fundamental signal.

# Full Spectrum

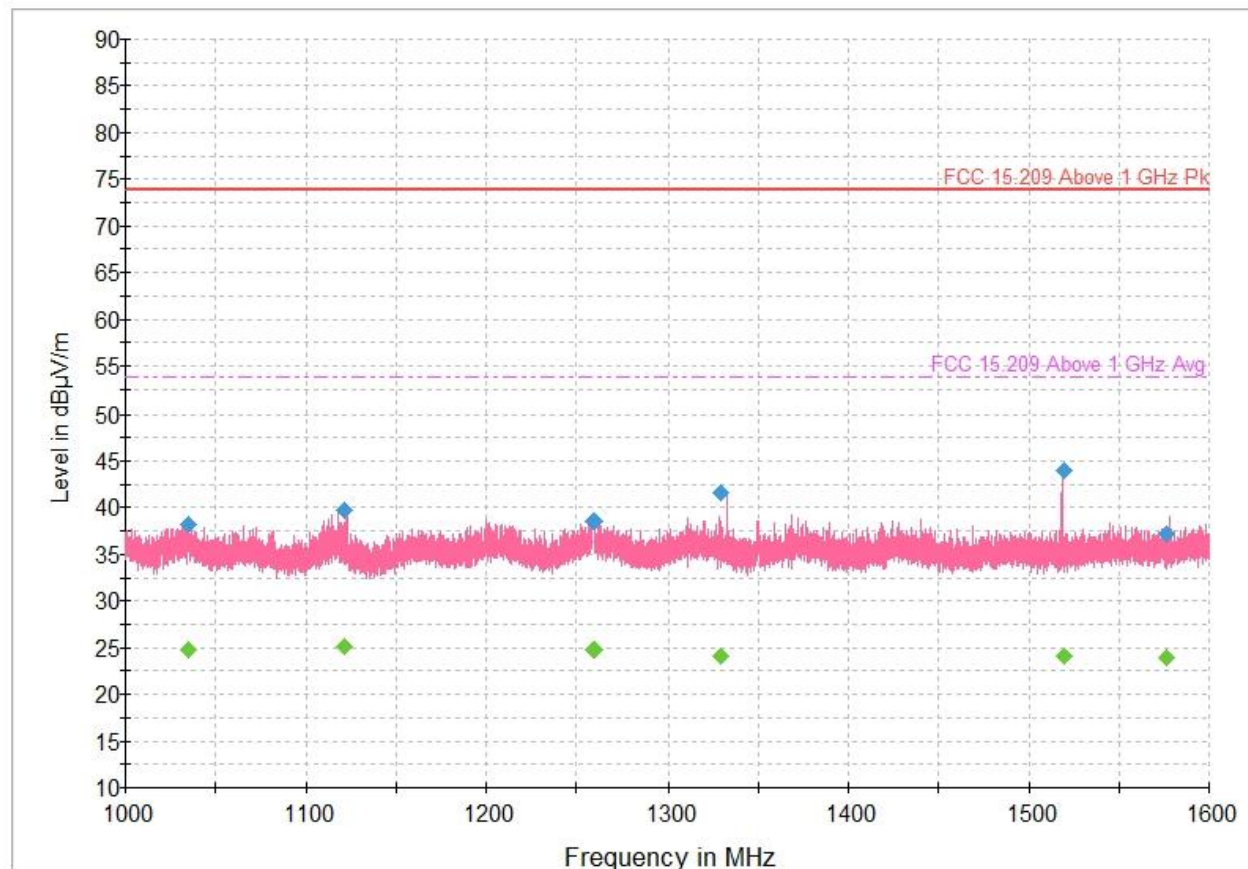


Figure 8.9-9: Radiated emissions spectral plot (1 GHz - 1.6 GHz). High Channel: 927.25 MHz, vertical polarization.

Table 8.9-7: Radiated emissions results. High Channel: 927.25 MHz, vertical polarization.

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1034.766667     | 38.27            | ---               | 73.90          | 35.63       | 5000.0          | 1000.000        | 178.0       | V   | 132.0         | -11.1        |
| 1034.766667     | ---              | 24.72             | 53.90          | 29.18       | 5000.0          | 1000.000        | 178.0       | V   | 132.0         | -11.1        |
| 1121.133333     | 39.73            | ---               | 73.90          | 34.17       | 5000.0          | 1000.000        | 220.0       | V   | 144.0         | -11.6        |
| 1121.133333     | ---              | 25.08             | 53.90          | 28.82       | 5000.0          | 1000.000        | 220.0       | V   | 144.0         | -11.6        |
| 1259.400000     | 38.58            | ---               | 73.90          | 35.32       | 5000.0          | 1000.000        | 268.0       | V   | 222.0         | -10.4        |
| 1259.400000     | ---              | 24.85             | 53.90          | 29.05       | 5000.0          | 1000.000        | 268.0       | V   | 222.0         | -10.4        |
| 1329.633333     | ---              | 24.02             | 53.90          | 29.88       | 5000.0          | 1000.000        | 157.0       | V   | 119.0         | -10.4        |
| 1329.633333     | 41.59            | ---               | 73.90          | 32.31       | 5000.0          | 1000.000        | 157.0       | V   | 119.0         | -10.4        |
| 1519.400000     | 43.92            | ---               | 73.90          | 29.98       | 5000.0          | 1000.000        | 127.0       | V   | 118.0         | -10.3        |
| 1519.400000     | ---              | 24.04             | 53.90          | 29.86       | 5000.0          | 1000.000        | 127.0       | V   | 118.0         | -10.3        |
| 1576.466667     | ---              | 23.88             | 53.90          | 30.02       | 5000.0          | 1000.000        | 138.0       | V   | 182.0         | -9.6         |
| 1576.466667     | 37.20            | ---               | 73.90          | 36.70       | 5000.0          | 1000.000        | 138.0       | V   | 182.0         | -9.6         |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

# Full Spectrum

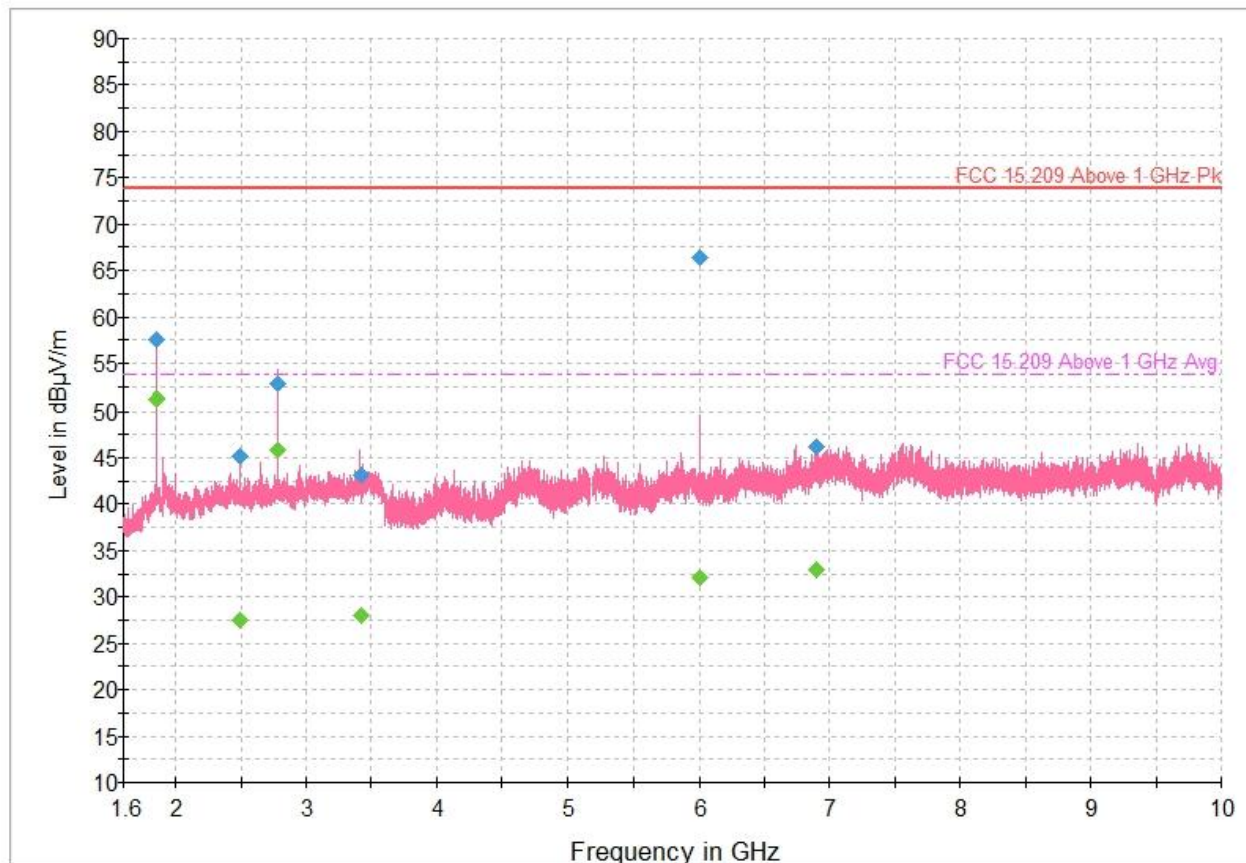


Figure 8.9-10: Radiated emissions spectral plot (1.6 GHz - 10 GHz). High Channel: 927.25 MHz, vertical polarization.

Table 8.9-8: Radiated emissions results. High Channel: 927.25 MHz, vertical polarization.

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1854.733333     | 57.52            | ---               | 73.90          | 16.38       | 5000.0          | 1000.000        | 302.0       | V   | 241.0         | -5.9         |
| 1854.733333     | ---              | 51.31             | 53.90          | 2.59        | 5000.0          | 1000.000        | 302.0       | V   | 241.0         | -5.9         |
| 2495.200000     | 45.23            | ---               | 73.90          | 28.67       | 5000.0          | 1000.000        | 327.0       | V   | 109.0         | -3.7         |
| 2495.200000     | ---              | 27.57             | 53.90          | 26.33       | 5000.0          | 1000.000        | 327.0       | V   | 109.0         | -3.7         |
| 2782.000000     | ---              | 45.90             | 53.90          | 8.00        | 5000.0          | 1000.000        | 264.0       | V   | 306.0         | -2.8         |
| 2782.000000     | 52.76            | ---               | 73.90          | 21.14       | 5000.0          | 1000.000        | 264.0       | V   | 306.0         | -2.8         |
| 3418.000000     | 43.16            | ---               | 73.90          | 30.74       | 5000.0          | 1000.000        | 200.0       | V   | 96.0          | -0.9         |
| 3418.000000     | ---              | 28.08             | 53.90          | 25.82       | 5000.0          | 1000.000        | 200.0       | V   | 96.0          | -0.9         |
| 5999.333333     | 66.42            | ---               | 73.90          | 7.48        | 5000.0          | 1000.000        | 107.0       | V   | 0.0           | 4.8          |
| 5999.333333     | ---              | 32.04             | 53.90          | 21.86       | 5000.0          | 1000.000        | 107.0       | V   | 0.0           | 4.8          |
| 6892.733333     | ---              | 32.92             | 53.90          | 20.98       | 5000.0          | 1000.000        | 352.0       | V   | 96.0          | 5.7          |
| 6892.733333     | 46.24            | ---               | 73.90          | 27.66       | 5000.0          | 1000.000        | 352.0       | V   | 96.0          | 5.7          |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A high pass filter was used to suppress the fundamental signal.



# Full Spectrum

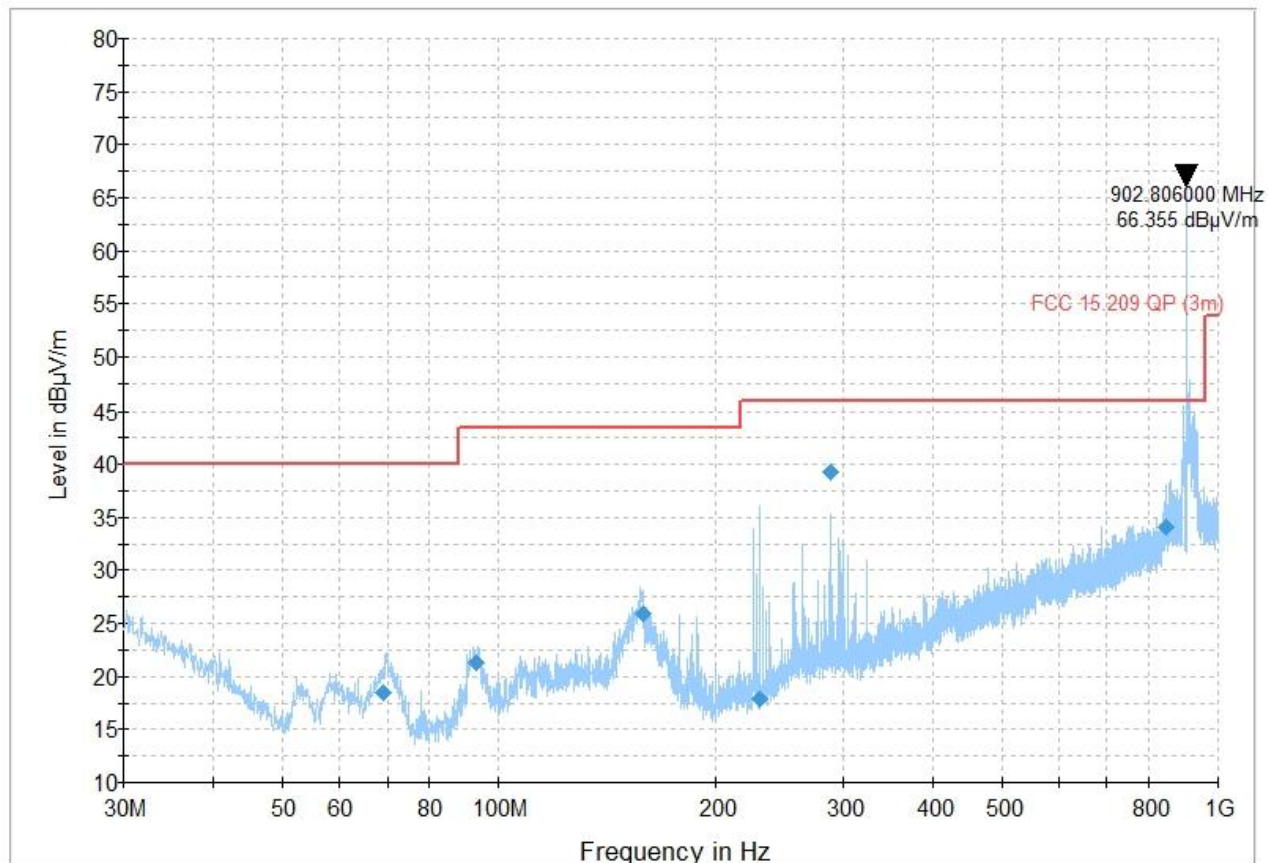


Figure 8.9-11: Radiated emissions spectral plot (30 MHz - 1 GHz). Low Channel: 902.75 MHz, horizontal polarization.

Table 8.9-9: Radiated emissions results. Low Channel: 902.75 MHz, horizontal polarization.

| Frequency (MHz) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 69.130000       | 18.40              | 40.00          | 21.60       | 5000.0          | 120.000         | 236.0       | H   | 146.0         | 13.6         |
| 92.901000       | 21.25              | 43.50          | 22.25       | 5000.0          | 120.000         | 171.0       | H   | 248.0         | 16.8         |
| 157.871000      | 25.84              | 43.50          | 17.66       | 5000.0          | 120.000         | 214.0       | H   | 96.0          | 19.0         |
| 229.346000      | 17.89              | 46.00          | 28.11       | 5000.0          | 120.000         | 152.0       | H   | 216.0         | 18.8         |
| 288.043000      | 39.31              | 46.00          | 6.69        | 5000.0          | 120.000         | 99.0        | H   | 158.0         | 21.8         |
| 845.096000      | 34.08              | 46.00          | 11.92       | 5000.0          | 120.000         | 325.0       | H   | 0.0           | 33.0         |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A notch filter was used to reduce the fundamental signal.

# Full Spectrum

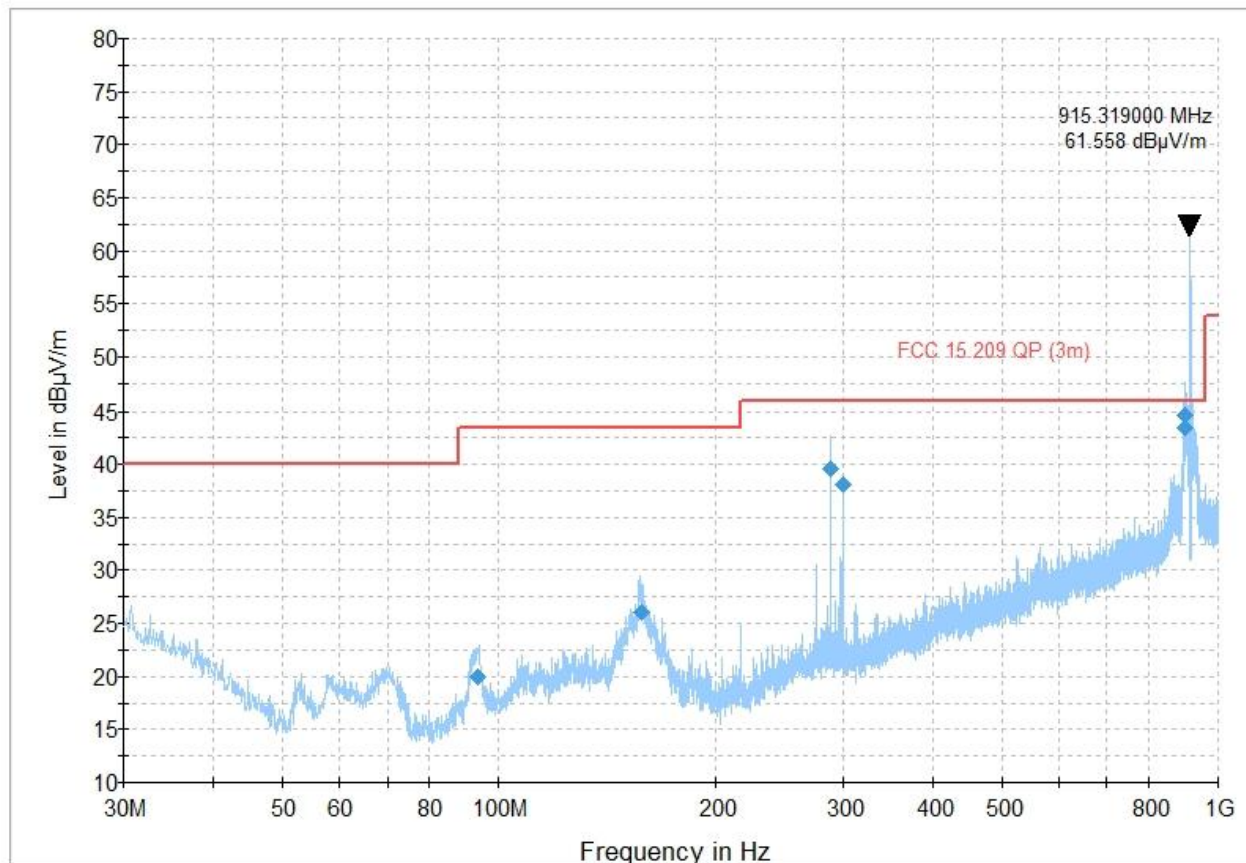


Figure 8.9-12: Radiated emissions spectral plot (30 MHz - 1 GHz). Middle Channel: 915.25 MHz, horizontal polarization.

Table 8.9-10: Radiated emissions results. Middle Channel: 915.25 MHz, horizontal polarization.

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 93.483000       | 19.93              | 43.50          | 23.57       | 5000.0          | 120.000         | 344.0       | H   | 72.0          | 16.9         |
| 157.299000      | 26.05              | 43.50          | 17.45       | 5000.0          | 120.000         | 132.0       | H   | 222.0         | 19.0         |
| 288.020000      | 39.61              | 46.00          | 6.39        | 5000.0          | 120.000         | 99.0        | H   | 160.0         | 21.8         |
| 299.991000      | 38.02              | 46.00          | 7.98        | 5000.0          | 120.000         | 102.0       | H   | 172.0         | 22.2         |
| 898.522000      | 43.39              | 46.00          | 2.61        | 5000.0          | 120.000         | 118.0       | H   | 352.0         | 33.4         |
| 900.718000      | 44.57              | 46.00          | 1.43        | 5000.0          | 120.000         | 124.0       | H   | 356.0         | 33.4         |

Notes:

<sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup> A notch filter was used to reduce the fundamental signal.

# Full Spectrum

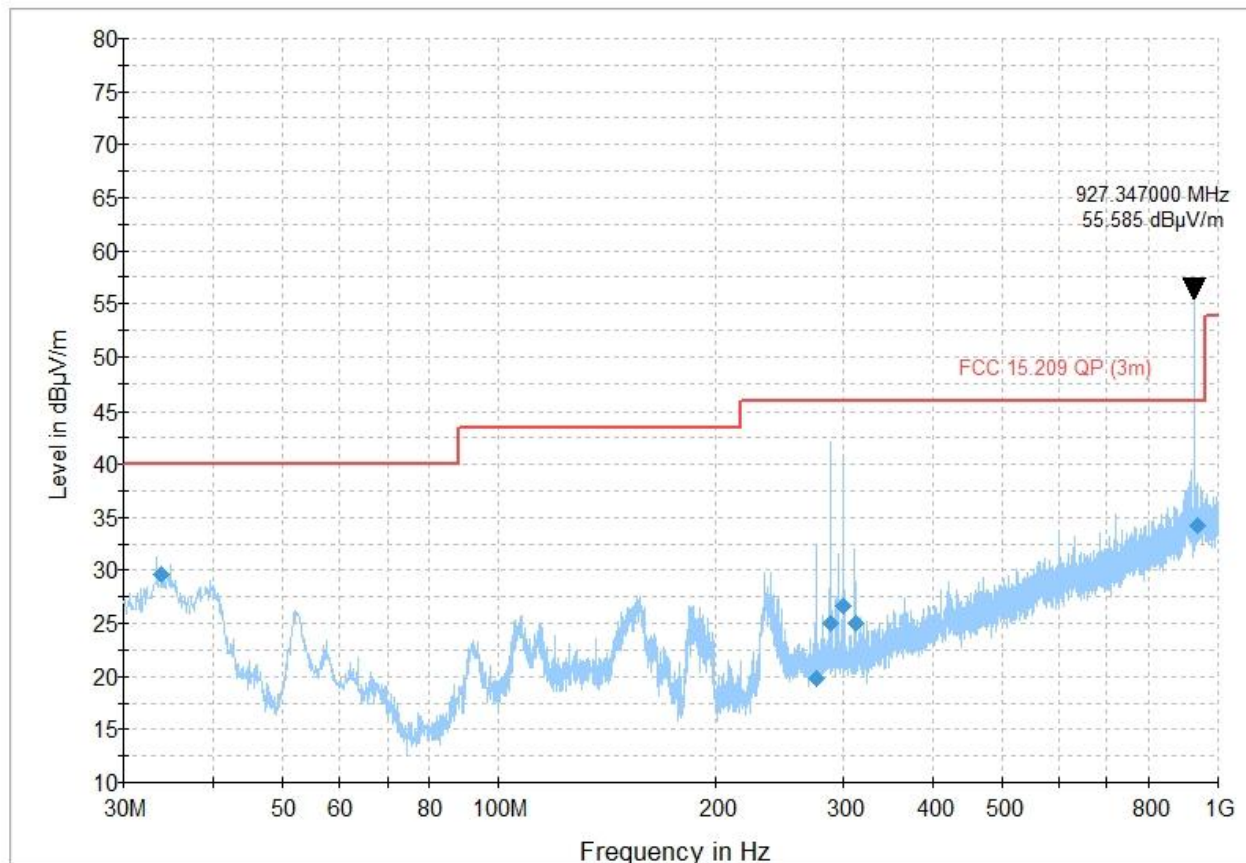


Figure 8.9-13: Radiated emissions spectral plot (30 MHz - 1 GHz). High Channel: 927.25 MHz, horizontal polarization.

Table 8.9-11: Radiated emissions results. High Channel: 927.25 MHz, horizontal polarization.

| Frequency (MHz) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 33.875000       | 29.64              | 40.00          | 10.36       | 5000.0          | 120.000         | 110.0       | H   | 334.0         | 24.5         |
| 275.495000      | 19.74              | 46.00          | 26.26       | 5000.0          | 120.000         | 253.0       | H   | 118.0         | 21.5         |
| 287.923000      | 25.06              | 46.00          | 20.94       | 5000.0          | 120.000         | 133.0       | H   | 280.0         | 21.8         |
| 299.951000      | 26.64              | 46.00          | 19.36       | 5000.0          | 120.000         | 119.0       | H   | 259.0         | 22.2         |
| 312.059000      | 25.01              | 46.00          | 20.99       | 5000.0          | 120.000         | 147.0       | H   | 235.0         | 22.4         |
| 936.797000      | 34.30              | 46.00          | 11.70       | 5000.0          | 120.000         | 197.0       | H   | 272.0         | 34.2         |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)  
<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)  
<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.  
<sup>4</sup> A notch filter was used to reduce the fundamental signal.

# Full Spectrum

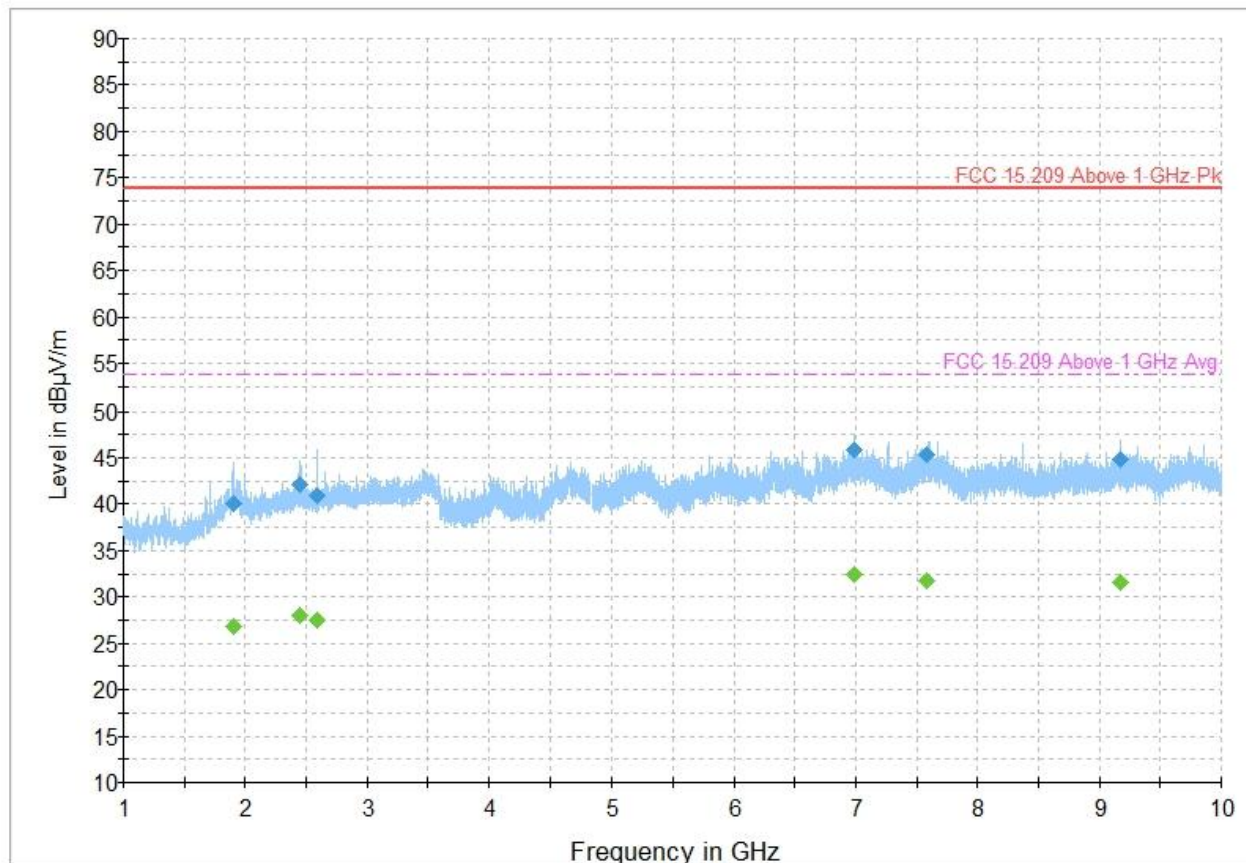


Figure 8.9-14: Radiated emissions spectral plot (1 GHz - 10 GHz). Low Channel: 902.75 MHz, horizontal polarization.

Table 8.9-12: Radiated emissions results. Low Channel: 902.75 MHz, horizontal polarization.

| Frequency (MHz) | MaxPeak (dBμV/m) | CAverage (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1904.300000     | ---              | 26.79             | 53.90          | 27.11       | 5000.0          | 1000.000        | 195.0       | H   | 179.0         | -5.5         |
| 1904.300000     | 40.12            | ---               | 73.90          | 33.78       | 5000.0          | 1000.000        | 195.0       | H   | 179.0         | -5.5         |
| 2444.500000     | ---              | 27.99             | 53.90          | 25.91       | 5000.0          | 1000.000        | 219.0       | H   | 118.0         | -3.8         |
| 2444.500000     | 42.11            | ---               | 73.90          | 31.79       | 5000.0          | 1000.000        | 219.0       | H   | 118.0         | -3.8         |
| 2588.400000     | 40.99            | ---               | 73.90          | 32.91       | 5000.0          | 1000.000        | 325.0       | H   | 122.0         | -3.6         |
| 2588.400000     | ---              | 27.52             | 53.90          | 26.38       | 5000.0          | 1000.000        | 325.0       | H   | 122.0         | -3.6         |
| 6985.700000     | ---              | 32.37             | 53.90          | 21.53       | 5000.0          | 1000.000        | 353.0       | H   | 280.0         | 5.7          |
| 6985.700000     | 45.88            | ---               | 73.90          | 28.02       | 5000.0          | 1000.000        | 353.0       | H   | 280.0         | 5.7          |
| 7586.000000     | ---              | 31.82             | 53.90          | 22.08       | 5000.0          | 1000.000        | 118.0       | H   | 191.0         | 7.0          |
| 7586.000000     | 45.31            | ---               | 73.90          | 28.59       | 5000.0          | 1000.000        | 118.0       | H   | 191.0         | 7.0          |
| 9173.100000     | 44.75            | ---               | 73.90          | 29.15       | 5000.0          | 1000.000        | 263.0       | H   | 108.0         | 9.0          |
| 9173.100000     | ---              | 31.54             | 53.90          | 22.36       | 5000.0          | 1000.000        | 263.0       | H   | 108.0         | 9.0          |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A high pass filter was used to suppress the fundamental signal.



# Full Spectrum

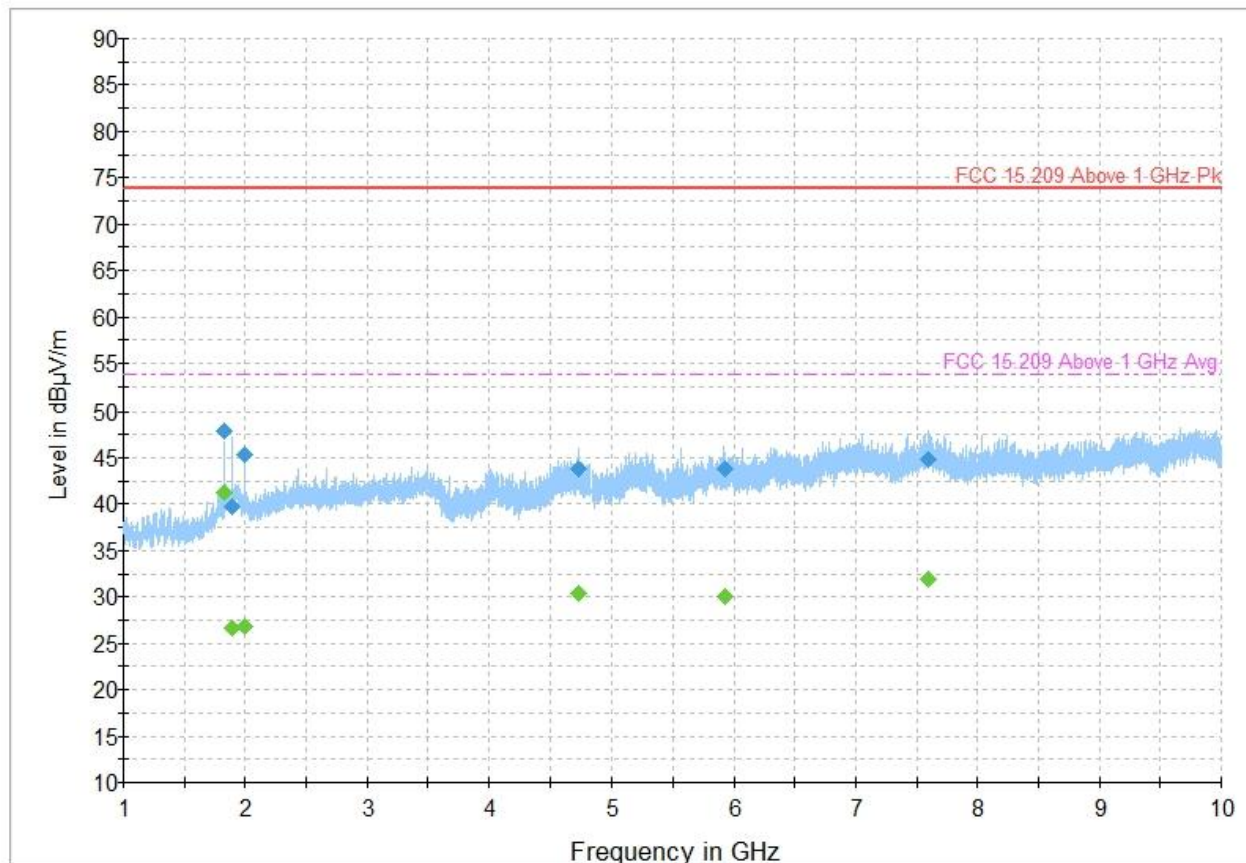


Figure 8.9-15: Radiated emissions spectral plot (1 GHz - 10 GHz). Middle Channel: 915.25 MHz, horizontal polarization.

Table 8.9-13: Radiated emissions results. Middle Channel: 915.25 MHz, horizontal polarization

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1830.500000     | ---              | 41.18             | 53.90          | 12.72       | 5000.0          | 1000.000        | 107.0       | H   | 349.0         | -6.3         |
| 1830.500000     | 47.95            | ---               | 73.90          | 25.95       | 5000.0          | 1000.000        | 107.0       | H   | 349.0         | -6.3         |
| 1886.700000     | ---              | 26.58             | 53.90          | 27.32       | 5000.0          | 1000.000        | 308.0       | H   | 264.0         | -5.6         |
| 1886.700000     | 39.75            | ---               | 73.90          | 34.15       | 5000.0          | 1000.000        | 308.0       | H   | 264.0         | -5.6         |
| 1998.200000     | 45.34            | ---               | 73.90          | 28.56       | 5000.0          | 1000.000        | 108.0       | H   | 143.0         | -5.9         |
| 1998.200000     | ---              | 26.88             | 53.90          | 27.02       | 5000.0          | 1000.000        | 108.0       | H   | 143.0         | -5.9         |
| 4738.700000     | ---              | 30.35             | 53.90          | 23.55       | 5000.0          | 1000.000        | 218.0       | H   | 275.0         | 2.1          |
| 4738.700000     | 43.84            | ---               | 73.90          | 30.06       | 5000.0          | 1000.000        | 218.0       | H   | 275.0         | 2.1          |
| 5924.400000     | ---              | 30.07             | 53.90          | 23.83       | 5000.0          | 1000.000        | 380.0       | H   | 180.0         | 4.7          |
| 5924.400000     | 43.72            | ---               | 73.90          | 30.18       | 5000.0          | 1000.000        | 380.0       | H   | 180.0         | 4.7          |
| 7600.100000     | 44.86            | ---               | 73.90          | 29.04       | 5000.0          | 1000.000        | 401.0       | H   | 337.0         | 7.1          |
| 7600.100000     | ---              | 31.92             | 53.90          | 21.98       | 5000.0          | 1000.000        | 401.0       | H   | 337.0         | 7.1          |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A high pass filter was used to suppress the fundamental signal.

Full Spectrum

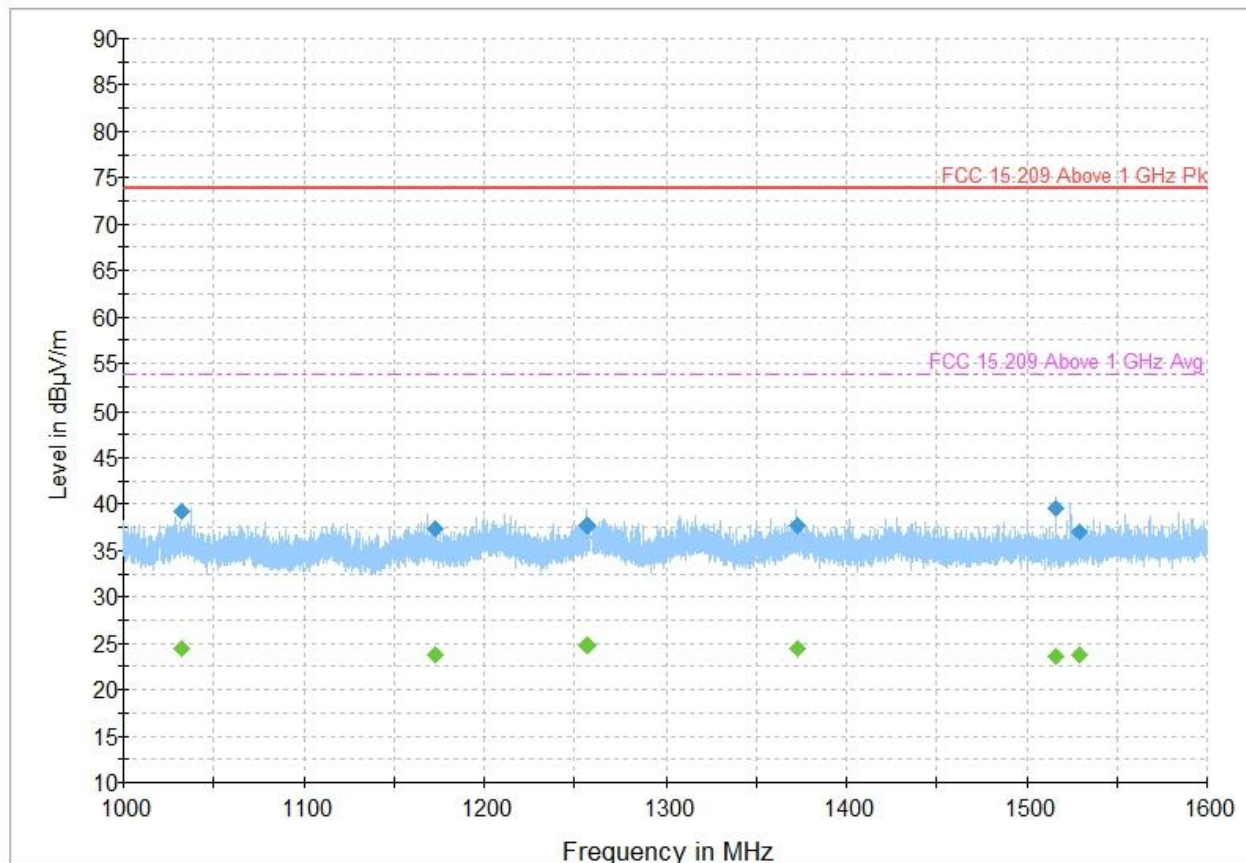


Figure 8.9-16: Radiated emissions spectral plot (1 GHz - 1.6 GHz). High Channel: 927.25 MHz, horizontal polarization.

Table 8.9-14: Radiated emissions results. High Channel: 927.25 MHz, horizontal polarization.

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1032.533333     | ---              | 24.46             | 53.90          | 29.44       | 5000.0          | 1000.000        | 137.0       | H   | 132.0         | -11.1        |
| 1032.533333     | 39.19            | ---               | 73.90          | 34.71       | 5000.0          | 1000.000        | 137.0       | H   | 132.0         | -11.1        |
| 1172.566667     | 37.28            | ---               | 73.90          | 36.62       | 5000.0          | 1000.000        | 292.0       | H   | 336.0         | -10.9        |
| 1172.566667     | ---              | 23.81             | 53.90          | 30.09       | 5000.0          | 1000.000        | 292.0       | H   | 336.0         | -10.9        |
| 1257.033333     | 37.74            | ---               | 73.90          | 36.16       | 5000.0          | 1000.000        | 401.0       | H   | 317.0         | -10.5        |
| 1257.033333     | ---              | 24.74             | 53.90          | 29.16       | 5000.0          | 1000.000        | 401.0       | H   | 317.0         | -10.5        |
| 1372.566667     | 37.72            | ---               | 73.90          | 36.18       | 5000.0          | 1000.000        | 332.0       | H   | 0.0           | -10.4        |
| 1372.566667     | ---              | 24.41             | 53.90          | 29.49       | 5000.0          | 1000.000        | 332.0       | H   | 0.0           | -10.4        |
| 1515.966667     | ---              | 23.55             | 53.90          | 30.35       | 5000.0          | 1000.000        | 343.0       | H   | 47.0          | -10.3        |
| 1515.966667     | 39.56            | ---               | 73.90          | 34.34       | 5000.0          | 1000.000        | 343.0       | H   | 47.0          | -10.3        |
| 1529.133333     | 37.04            | ---               | 73.90          | 36.86       | 5000.0          | 1000.000        | 209.0       | H   | 20.0          | -10.2        |
| 1529.133333     | ---              | 23.68             | 53.90          | 30.22       | 5000.0          | 1000.000        | 209.0       | H   | 20.0          | -10.2        |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

# Full Spectrum

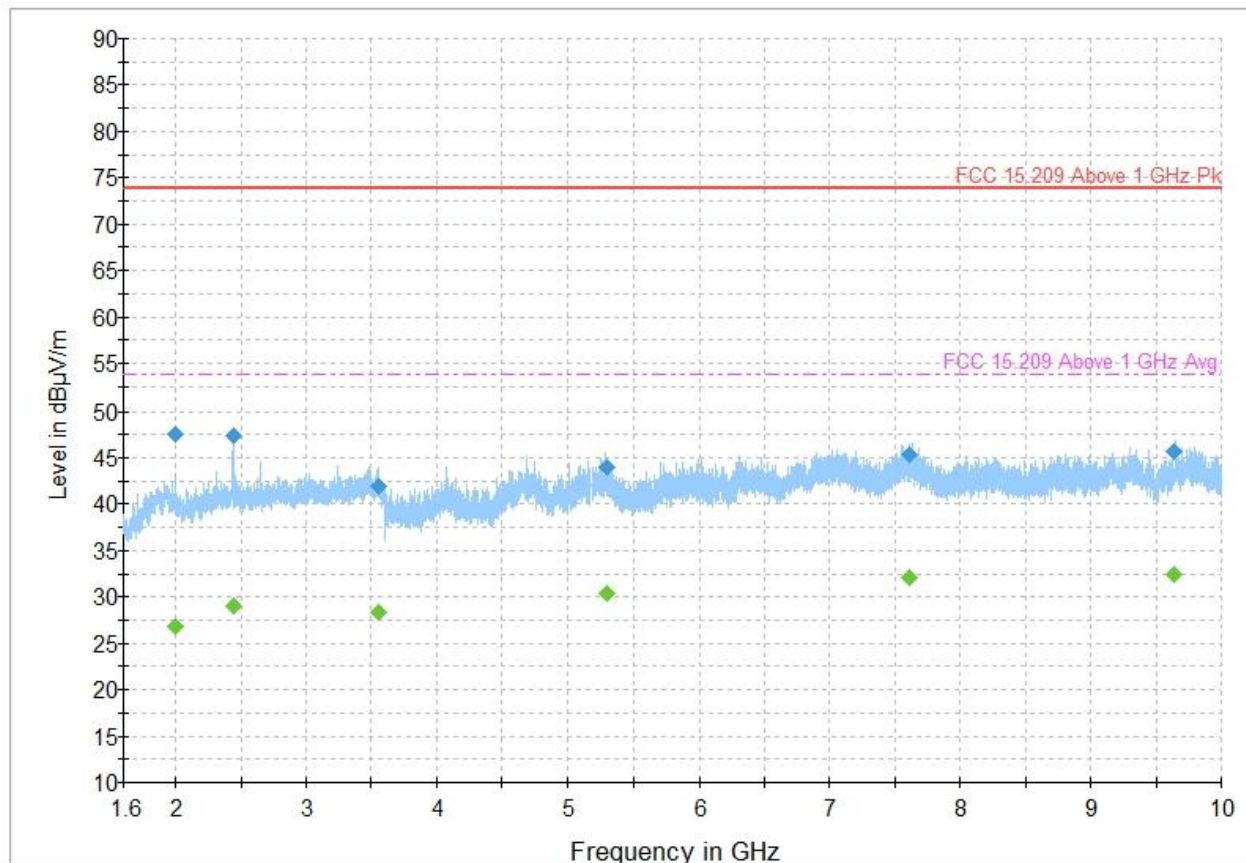


Figure 8.9-17: Radiated emissions spectral plot (1.6 GHz - 10 GHz). High Channel: 927.25 MHz, horizontal polarization.

Table 8.9-15: Radiated emissions results. High Channel: 927.25 MHz, horizontal polarization.

| Frequency (MHz) | MaxPeak (dBμV/m) | CAverage (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|-------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 1996.733333     | 47.54            | ---               | 73.90          | 26.36       | 5000.0          | 1000.000        | 316.0       | H   | 59.0          | -5.9         |
| 1996.733333     | ---              | 26.89             | 53.90          | 27.01       | 5000.0          | 1000.000        | 316.0       | H   | 59.0          | -5.9         |
| 2441.733333     | 47.43            | ---               | 73.90          | 26.47       | 5000.0          | 1000.000        | 401.0       | H   | 292.0         | -3.8         |
| 2441.733333     | ---              | 28.96             | 53.90          | 24.94       | 5000.0          | 1000.000        | 401.0       | H   | 292.0         | -3.8         |
| 3555.266667     | ---              | 28.39             | 53.90          | 25.51       | 5000.0          | 1000.000        | 253.0       | H   | 205.0         | -0.9         |
| 3555.266667     | 41.95            | ---               | 73.90          | 31.95       | 5000.0          | 1000.000        | 253.0       | H   | 205.0         | -0.9         |
| 5289.666667     | ---              | 30.43             | 53.90          | 23.47       | 5000.0          | 1000.000        | 401.0       | H   | 355.0         | 3.5          |
| 5289.666667     | 43.94            | ---               | 73.90          | 29.96       | 5000.0          | 1000.000        | 401.0       | H   | 355.0         | 3.5          |
| 7607.866667     | 45.35            | ---               | 73.90          | 28.55       | 5000.0          | 1000.000        | 401.0       | H   | 194.0         | 7.1          |
| 7607.866667     | ---              | 32.08             | 53.90          | 21.82       | 5000.0          | 1000.000        | 401.0       | H   | 194.0         | 7.1          |
| 9640.600000     | 45.70            | ---               | 73.90          | 28.20       | 5000.0          | 1000.000        | 149.0       | H   | 330.0         | 10.5         |
| 9640.600000     | ---              | 32.43             | 53.90          | 21.47       | 5000.0          | 1000.000        | 149.0       | H   | 330.0         | 10.5         |

Notes: <sup>1</sup> Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

<sup>2</sup> Correction factors = antenna factor ACF (dB) + cable loss (dB)

<sup>3</sup> Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

<sup>4</sup>A high pass filter was used to suppress the fundamental signal.

## 8.10 99% occupied bandwidth

### 8.10.1 References and limits

- ISSED: RSS-Gen: §6.7
- Test method: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024: §6.9.2

### 8.10.2 Test summary

|               |                                                                                       |                   |           |
|---------------|---------------------------------------------------------------------------------------|-------------------|-----------|
| Verdict       | Pass                                                                                  |                   |           |
| Test date     | January 20, 2026                                                                      | Temperature       | 19°C      |
| Test engineer | Martha Espinoza, Wireless Test Engineer                                               | Air pressure      | 1007 mbar |
| Test location | <input checked="" type="checkbox"/> Wireless bench<br><input type="checkbox"/> Other: | Relative humidity | 58%       |

### 8.10.3 Notes

Testing was performed with the transmitter operating on a fixed channel (lowest, middle, and highest) at maximum output power.

### 8.10.4 Setup details

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| EUT power input during test | PoE                                                                                                                         |
| EUT setup configuration     | <input checked="" type="checkbox"/> Table-top<br><input type="checkbox"/> Floor standing<br><input type="checkbox"/> Other: |

Receiver settings:

|                      |                                    |
|----------------------|------------------------------------|
| Resolution bandwidth | 10 kHz                             |
| Video bandwidth      | 30 kHz                             |
| Detector mode        | Peak                               |
| Trace mode           | Max Hold                           |
| Measurement time     | Long enough for trace to stabilize |

### 8.10.5 Test data

Table 8.10-1: 99% occupied bandwidth test data

| Test Frequency (MHz) | Modulation | 99% BW (kHz)  | f <sub>L</sub> (MHz) | f <sub>H</sub> (MHz) | Limit                                                | Verdict          |
|----------------------|------------|---------------|----------------------|----------------------|------------------------------------------------------|------------------|
| 902.75               | Mode 103   | 402.375309021 | 902.549691           | 902.952067           | f <sub>H</sub> and f <sub>L</sub> within 902-928 MHz | Within the range |
| 915.25               | Mode 103   | 402.662403656 | 915.049537           | 915.452199           | f <sub>H</sub> and f <sub>L</sub> within 902-928 MHz | Within the range |
| 927.25               | Mode 103   | 403.412232356 | 927.049052           | 927.452464           | f <sub>H</sub> and f <sub>L</sub> within 902-928 MHz | Within the range |

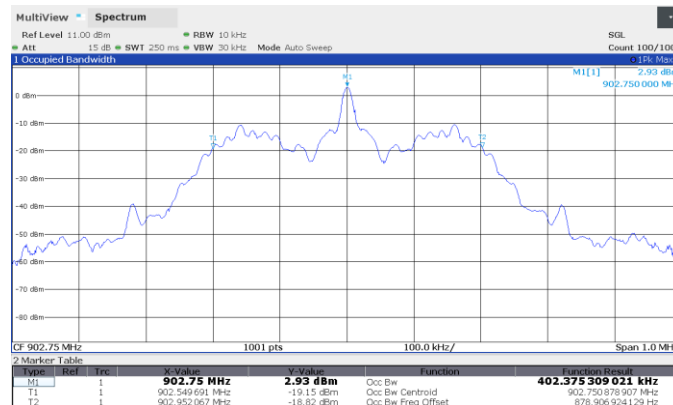


Figure 8.10-1: 99% occupied bandwidth: Low channel: 902.75 MHz.

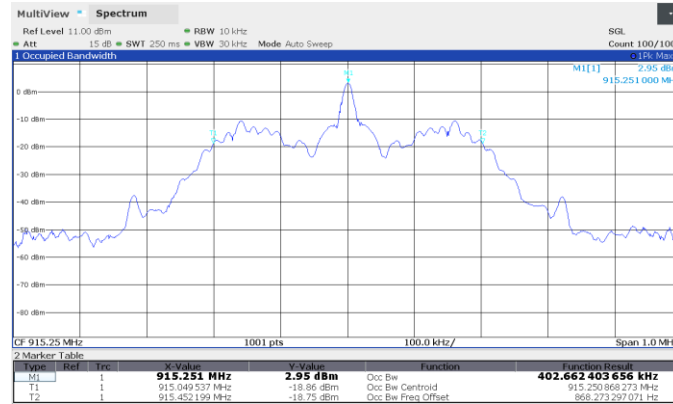


Figure 88.10-2: 99% occupied bandwidth: Middle channel: 915.25 MHz.

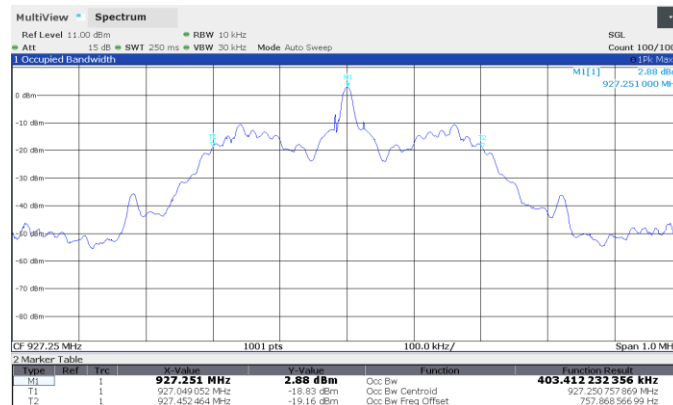


Figure 8.10-3: 99% occupied bandwidth: High channel: 927.25 MHz.

End of test report