

# ANDSON BIOTECH TEST REPORT

**SCOPE OF WORK**

RADIO TESTING – DYNACHIP X1

**REPORT NUMBER**

106370695ATL-006A

**ISSUE DATE**

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21



**DOCUMENT CONTROL NUMBER**

Non-Specific Radio Report Shell Rev. January 2025

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**RADIO TEST REPORT****Report Number:** 106366295ATL-006A**Project Number:** G106366295**Revised Date:** 21 April 2026**Model(s) Tested:** Dynachip X1**FCC ID:** 2BSUS-DYNAX1**IC:** 34747-DYNAX1

**Standards:** 47 CFR Part 15 Subpart C, 15.225  
RSS-210, Issue 11  
ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024  
+ Errata to C63.10a-2024

**Test Location**

Intertek  
1950 Evergreen Blvd., Suite 100  
Duluth, GA 30096 USA  
FCC Designation: US1046  
CAB Designator: US0128

**Client**

Andson Biotech  
1705 Commerce Dr NW  
Suite 100  
Atlanta, GA 30318 USA

Report prepared by



Jeremy Pickens / Senior Staff Engineer

Report reviewed by



Uri Spector / Sr. EMC Staff Engineer

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## 1 Introduction and Conclusion

The tests indicated in Section 2 were performed on the product constructed as described in Section 4. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

## 2 Test Summary

| Section | Test Description                    | Test Specification           |                                | Result                 |
|---------|-------------------------------------|------------------------------|--------------------------------|------------------------|
|         |                                     | FCC                          | ISED                           |                        |
| 5       | Bandwidth                           | 15.215(c)                    | RSS-GEN S6.7                   | Compliant              |
| 6       | Field Strength / Spurious Emissions | 15.225(a)(b)(c)(d)<br>15.209 | RSS-210 B.6(a)<br>RSS-GEN S8.9 | Compliant              |
| 7       | AC Mains Conducted Emissions        | 15.207                       | RSS-GEN S8.8                   | Compliant              |
| 8       | Frequency Stability                 | 15.225(e)                    | RSS-210 B.6(b)                 | Compliant              |
| NA      | Antenna Requirement                 | 15.203                       | RSS-GEN S6.8                   | Compliant <sup>1</sup> |

1) The antenna is an integrated loop which is not removable by the end user.

### 3 Client Information

This evaluation was performed at the request of:

**Client:** Andson Biotech  
1705 Commerce Dr NW Suite 100  
Atlanta, GA 30318 USA

**Contact:** Rob Grier

**Email:** [Rgrier@andsonbiotech.com](mailto:Rgrier@andsonbiotech.com)

### 4 Description of Equipment Under Test and Variant Models

**Manufacturer:** Andson Biotech  
1705 Commerce Dr NW Suite 100  
Atlanta, GA 30318 USA

| Equipment Under Test                                                  |                |              |               |
|-----------------------------------------------------------------------|----------------|--------------|---------------|
| Description                                                           | Manufacturer   | Model Number | Serial Number |
| Electrospray ionization mass spectrometry sample preparation platform | Andson Biotech | DynaChip X1  | Not Labeled   |

|                            |                  |
|----------------------------|------------------|
| <b>Receive Date:</b>       | 24 November 2025 |
| <b>Received Condition:</b> | Good             |
| <b>Type:</b>               | Production       |

#### Description of Equipment Under Test (provided by client)

Andson's DynaChip X1 sample preparation platform enables streamlined sample preparation for electrospray ionization mass spectrometry. The X1 is deployed in climate-controlled laboratories for R&D, process development, and QC purposes. The system itself does not perform the biochemical analysis but rather accepts samples and isolates chemicals of interest from the media or formulation buffers via a consumable microfluidic device (Andson Dynachip 40) using the principal of tangential flow filtration. The conditioned sample is then infused into the mass spectrometer via a vendor agnostic fluidic coupling. The system includes various pumps, valves, and sensors for fluid handling and intelligent feedback as well as a touchscreen for user control. The system has RFID read/write capabilities for logging data associated with the consumable microfluidic device as well as Wi-Fi (via Wi-Fi dongle)/ethernet connectivity for remote access and control.

#### Certification Purpose

Original Certification: The RFID radio is based on a chip down design.

| Radio/Receiver Characteristics |                                                   |
|--------------------------------|---------------------------------------------------|
| <b>Frequency Range</b>         | 13.56MHz                                          |
| <b>Field Strength (3m):</b>    | 37.42dBµV/m (measured)                            |
| <b>Field Strength (30m):</b>   | -2.58dBµV/m (adjusted by $40 \cdot \log(d1/d2)$ ) |
| <b>Antenna Type</b>            | Loop                                              |

#### Software

| No. | Description of EUT Software |
|-----|-----------------------------|
| 1   | VTTE v5.4.11                |

#### 4.1 Justification

All testing performed in this report was for the radio only. Once the system was powered, the RFID radio automatically went into a constant transmit state.

#### 4.2 Modifications Required for Compliance

No modifications were made during compliance testing in order to bring the product into compliance.

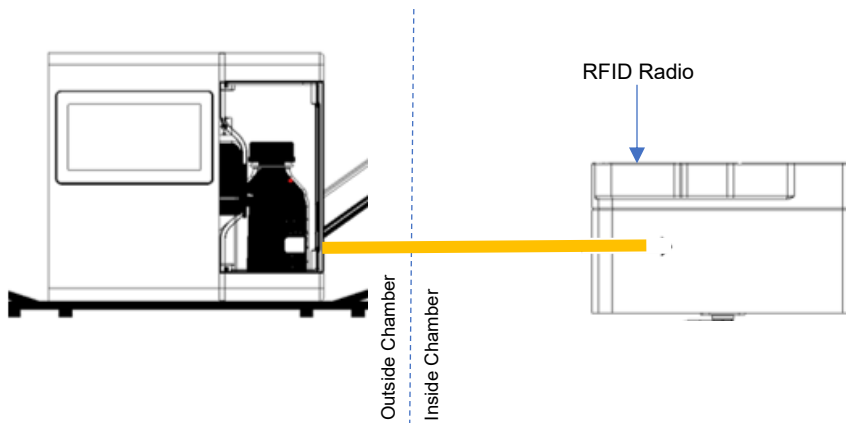
#### 4.3 Additions, Deviations and Exclusions from Standards

No additions, deviations or exclusion have been made from standard.

#### 4.4 Method

Configuration as required by ANSI C63.10.

#### 4.5 EUT Block Diagram – Radiated Measurements



## 5 Bandwidth

### 5.1 Method

The procedures from ANSI C63.10 Clause 6.9.3 were used to measure the 99% Occupied Bandwidth.

#### TEST SITE: RF Bench

The RF bench consists of a Rohde & Schwarz TS8997 automated test system coupled with a temperature/humidity environmental chamber. The TS8997 system houses a switch matrix (OSP), along with a spectrum analyzer, vector network analyzer, and analog signal generator.

### 5.2 Test Equipment

| Asset  | Description                          | Manufacturer    | Model   | Serial | Cal Date   | Cal Due    |
|--------|--------------------------------------|-----------------|---------|--------|------------|------------|
| 212164 | Temperature/Pressure/Humidity Sensor | Extech          | SD700   | 109402 | 07/08/2025 | 07/08/2026 |
| 213500 | Analog Signal Generator (8kHz-40GHz) | Rohde & Schwarz | SMB100B | 106096 | 05/08/2025 | 05/08/2027 |
| 213502 | Spectrum Analyzer (2Hz-43.5GHz)      | Rohde & Schwarz | FSW43   | 102972 | 08/01/2024 | 08/01/2026 |

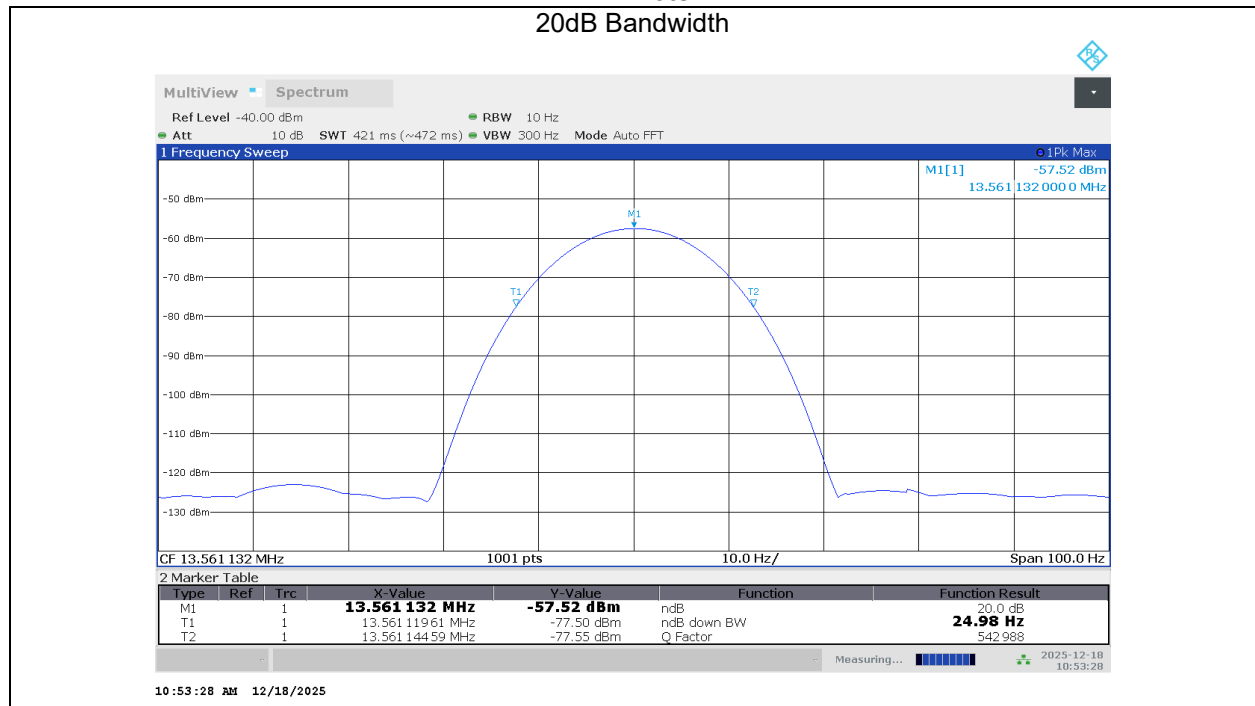
### Software Utilized

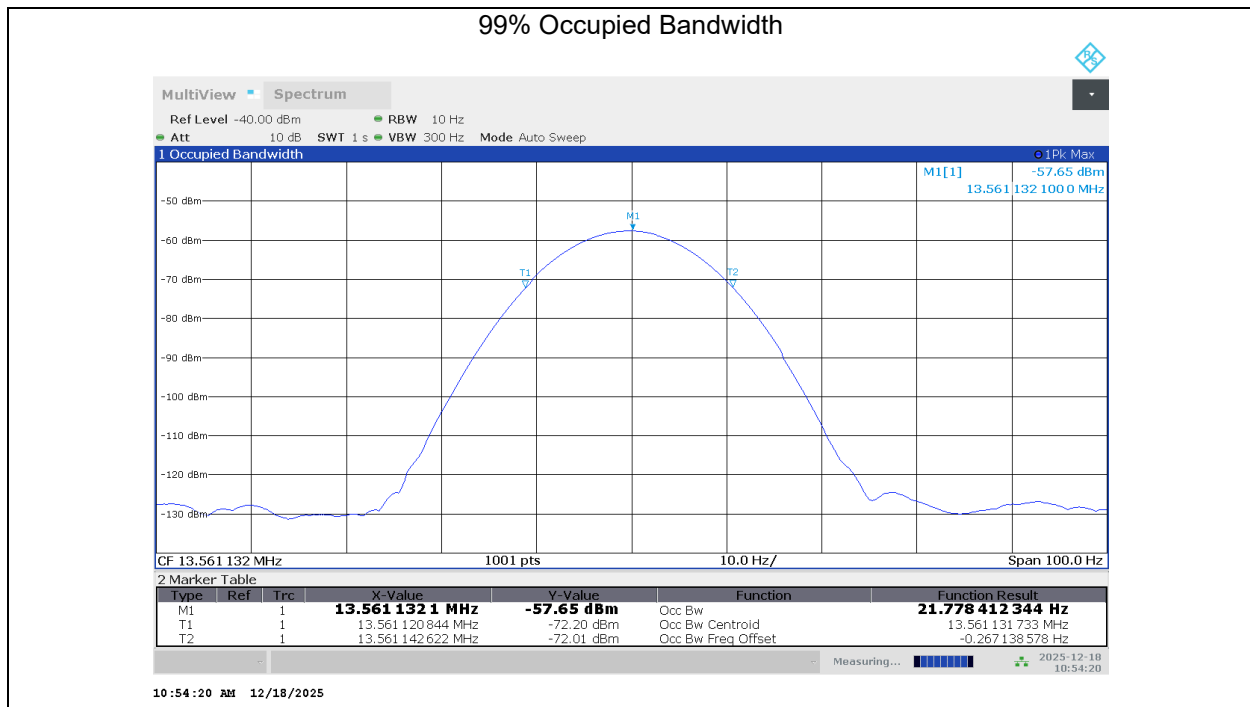
| Name         | Manufacturer    | Version             |
|--------------|-----------------|---------------------|
| RSCCommander | Rohde & Schwarz | 2.4.2 64-bit (2023) |

### 5.3 Test Data

| Frequency (MHz) | Bandwidth Measurement | F <sub>LOW</sub> (MHz) | F <sub>HIGH</sub> (MHz) | Bandwidth (kHz) | Result    |
|-----------------|-----------------------|------------------------|-------------------------|-----------------|-----------|
| 13.56           | 20dB                  | 13.56112               | 13.56114                | 0.025           | Compliant |
| 13.56           | 99% OBW               | 13.56112               | 13.56114                | 0.022           | Reported  |

**BW Plots**  
20dB Bandwidth





Note: Due to the CW nature of the fundamental, it was not possible to set the resolution bandwidth between 1 and 5% of the measured bandwidths.

Test Personnel: Jeremy Pickens

Supervising/Reviewing Engineer: \_\_\_\_\_

(Where Applicable)

Product Standard: ANSI C63.10

Input Voltage: 120Vac, 60Hz

Test Date: 18 December 2025

Ambient Temperature: 19.5°C

Relative Humidity: 29.5%

Atmospheric Pressure: 98.2kPa

## 6 Field Strength of the Fundamental / Radiated Spurious Emissions

### 6.1 Method

Tests were performed in accordance with ANSI C63.10 using the following bandwidth settings:

|                    |                                                          |
|--------------------|----------------------------------------------------------|
| Below 150 kHz      | Pre-scans: RBW: 300 Hz / VBW: 1kHz; Finals: RBW: 200Hz   |
| 150 kHz to 30 MHz  | Pre-scans: RBW: 10 kHz VBW: 30kHz; Finals: RBW: 9kHz     |
| 30 MHz to 1000 MHz | Pre-scans: RBW: 120 kHz VBW: 500kHz, Finals: RBW: 120kHz |

#### TEST SITE: 10 Meter Chamber

**10 Meter Semi-Anechoic Chamber** The test site for radiated emissions is located at 1950 Evergreen Blvd, Suite 100, Duluth, Georgia 30096. It is a 10-meter semi-anechoic chamber manufactured by Panashield. Embedded in the floor is a 3-meter diameter turntable.

#### Limits – Fundamental

| Frequency (MHz) | Limit (μV/m@30m) | Limit (dBμV/m@30m) | Limit (dBμV/m@3m) |
|-----------------|------------------|--------------------|-------------------|
| < 13.11         | 30               | 29.5               | 69.5              |
| 13.110 - 13.410 | 106              | 40.5               | 80.5              |
| 13.41 - 13.553  | 334              | 50.5               | 90.5              |
| 13.553 - 13.567 | 15848            | 84                 | 124               |
| 13.567 - 13.710 | 334              | 50.5               | 90.5              |
| 13.710 - 14.010 | 106              | 40.5               | 80.5              |
| > 14.01         | 30               | 29.5               | 69.5              |

#### 15.209 Limits – Spurious Emissions

| Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) |
|-----------------|-----------------------------------|-------------------------------|
| 0.490-1.705     | 24000/F(kHz)                      | 30                            |
| 1.705-30.0      | 30                                | 30                            |
| 30-88           | 100 **                            | 3                             |
| 88-216          | 150 **                            | 3                             |
| 216-960         | 200 **                            | 3                             |
| Above 960       | 500                               | 3                             |

**RSS-GEN, Clause 8.9****Table 5 – General field strength limits at frequencies above 30 MHz**

| Frequency (MHz) | Field strength (μV/m at 3 m) |
|-----------------|------------------------------|
| 30 – 88         | 100                          |
| 88 – 216        | 150                          |
| 216 – 960       | 200                          |
| Above 960       | 500                          |

**Table 6 – General field strength limits at frequencies below 30 MHz**

| Frequency                     | Magnetic field strength (H-Field) (μA/m) | Measurement distance (m) |
|-------------------------------|------------------------------------------|--------------------------|
| 9 - 490 kHz <sup>Note 1</sup> | 6.37/F (F in kHz)                        | 300                      |
| 490 - 1705 kHz                | 63.7/F (F in kHz)                        | 30                       |
| 1.705 - 30 MHz                | 0.08                                     | 30                       |

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

Note: For measurements below 30MHz the limits were adjusted by 40dB per decade to account for measurements at 3 meters.

**Example**

30μV/m at 30 meters = 20\*log (30) = 29.5dBμV/m

At 3 meters: 29.5dBμV/m + 40dB = 69.5dBμV/m.

**Sample Calculation**

The field strength was calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

FS = Field Strength in dBμV/m

RA = Receiver Amplitude (including preamplifier) in dBμV

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

$$FS = 32 \text{ dB}\mu\text{V/m}$$

$$RA = 52.0 \text{ dB}\mu\text{V}$$

$$CF = 1.6 \text{ dB}$$

$$AF = 7.4 \text{ dB/m}$$

$$AG = 29.0 \text{ dB}$$

To convert from dBμV to μV or mV the following was used

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

**Example**

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0\text{dB}\mu\text{V/m}$$

$$UF = 10^{(32 \text{ dB}\mu\text{V/m} / 20)} = 39.8 \mu\text{V/m}$$

## 6.2 Test Equipment

| Asset      | Description                              | Manufacturer       | Model             | Serial    | Cal Date   | Cal Due    |
|------------|------------------------------------------|--------------------|-------------------|-----------|------------|------------|
| 200074     | Preamplifier, 10 MHz to 2000 MHz         | Mini-Circuits      | ZKL-2             | D052005   | 08/04/2025 | 08/04/2026 |
| 200162     | EMI Receiver (20Hz-40GHz)                | Rohde & Schwarz    | ESU 40            | 100314    | 10/07/2025 | 10/07/2026 |
| 211262     | Controller - Turntable and Mast          | Sunol              | SC99V             | SC99V-1   | VBV        | VBV        |
| 211264     | Mast - Antenna                           | Sunol              | TWR95             | NNN2      | VBV        | VBV        |
| 211386     | Antenna, BiLog, 20-2000MHz               | Chase              | CBL6112B          | 2622      | 06/30/2025 | 06/30/2026 |
| 212166     | Temperature/Pressure/Humidity Sensor     | Extech             | SD700             | 110392    | 04/02/2025 | 04/02/2026 |
| 213365     | PreAmplifier 100Hz-30MHz                 | Com-Power          | PAL-010           | 181492    | 06/18/2025 | 06/18/2026 |
| 213451     | Omni -directional Comb Generator         | Com-Power          | CGO-520           | 281266    | VBV        | VBV        |
| MM2        | RF Coax Cable 9kHz-18GHz                 | Maury Microwave    | UC-N-MM78         | 1514381   | 07/28/2025 | 07/28/2026 |
| MM8        | RF Coax Cable 9kHz-18GHz                 | Maury Microwave    | UC-N-MM-267       | 1635289   | 06/18/2025 | 06/18/2026 |
| MM36       | RF Coax Cable 9kHz-18GHz                 | Maury Microwave    | UC-N-MM-36        | 16 32 10  | 06/18/2025 | 06/18/2026 |
| MP10       | RF Coax Cable 9KHz-18GHz                 | Fairview Microwave | FMCA1282-394      | MP10      | 06/18/2025 | 06/18/2026 |
| MM12       | RF Coax Cable 9kHz-18GHz                 | Fairview Microwave | SCE18110505-600CM | MM12      | 09/11/2025 | 09/11/2026 |
| NYM-EMC-36 | Antenna, Loop, Passive (10 kHz - 30 MHz) | EMCO               | 6512              | 9810-1228 | 07/14/2025 | 07/14/2026 |

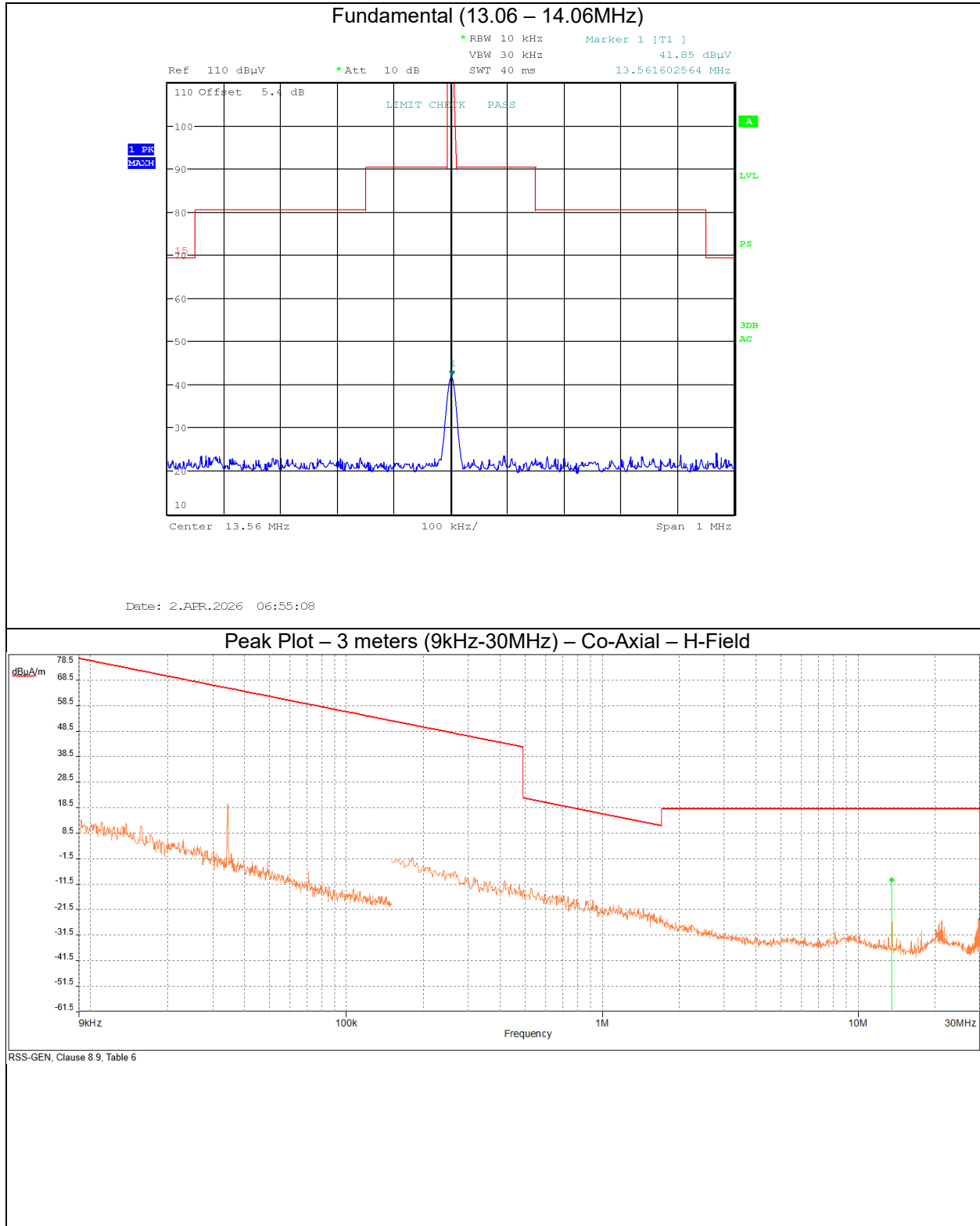
## Software Utilized

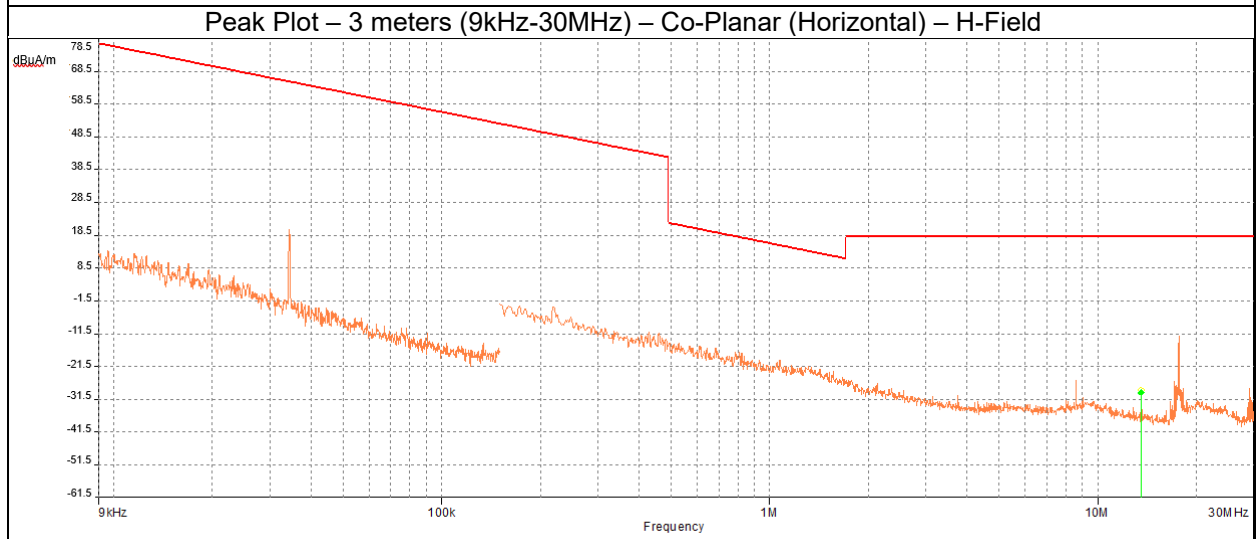
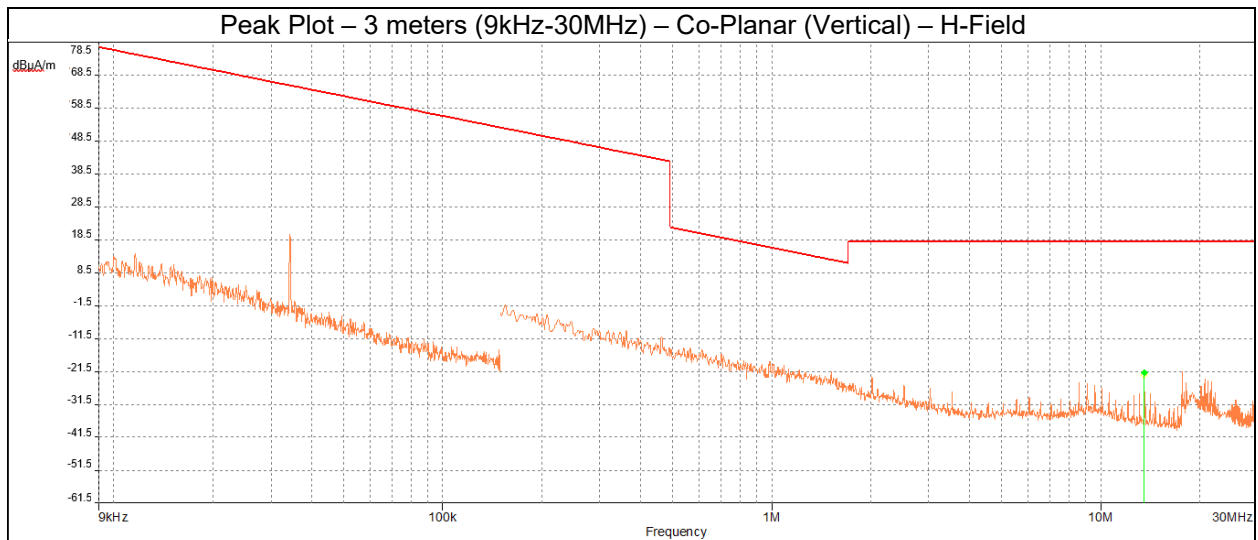
| Name    | Manufacturer | Version   |
|---------|--------------|-----------|
| BAT EMC | NEXIO        | 3.19.1.18 |

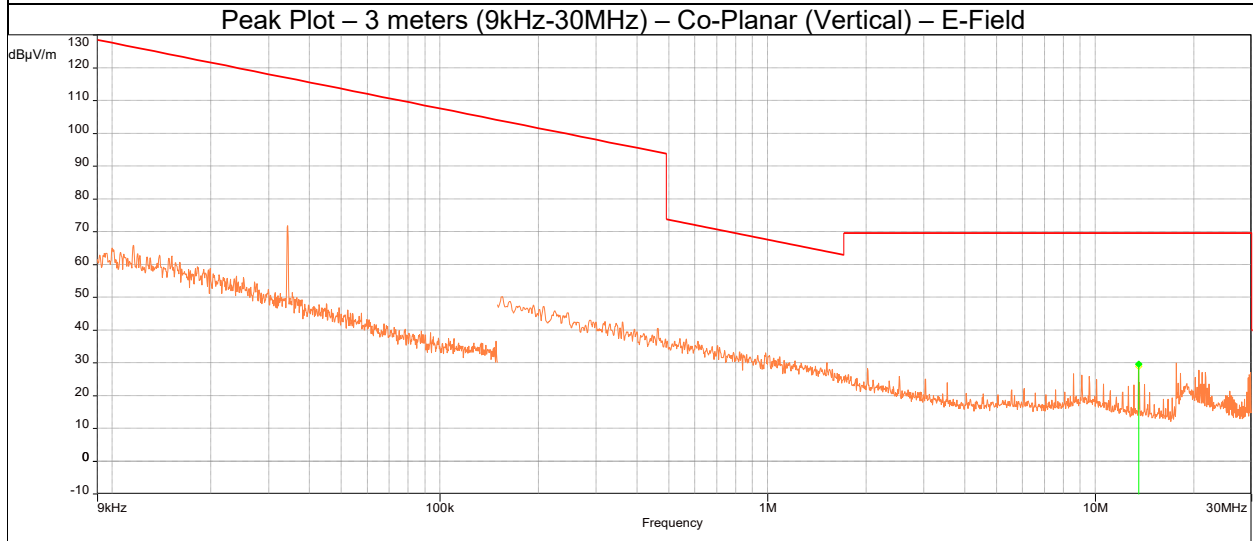
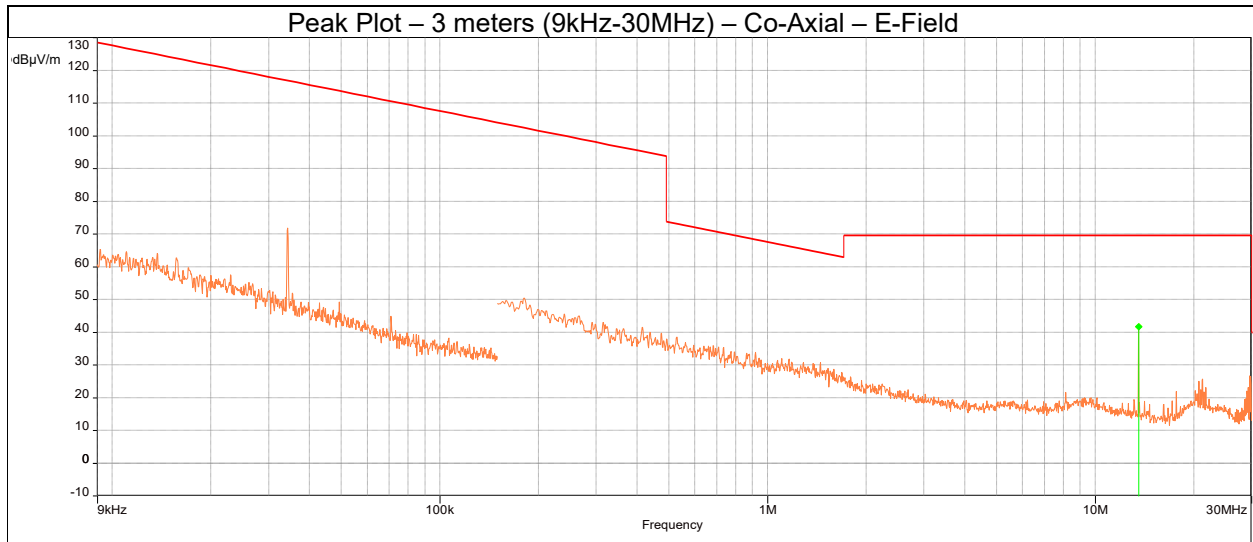
## 6.3 Results

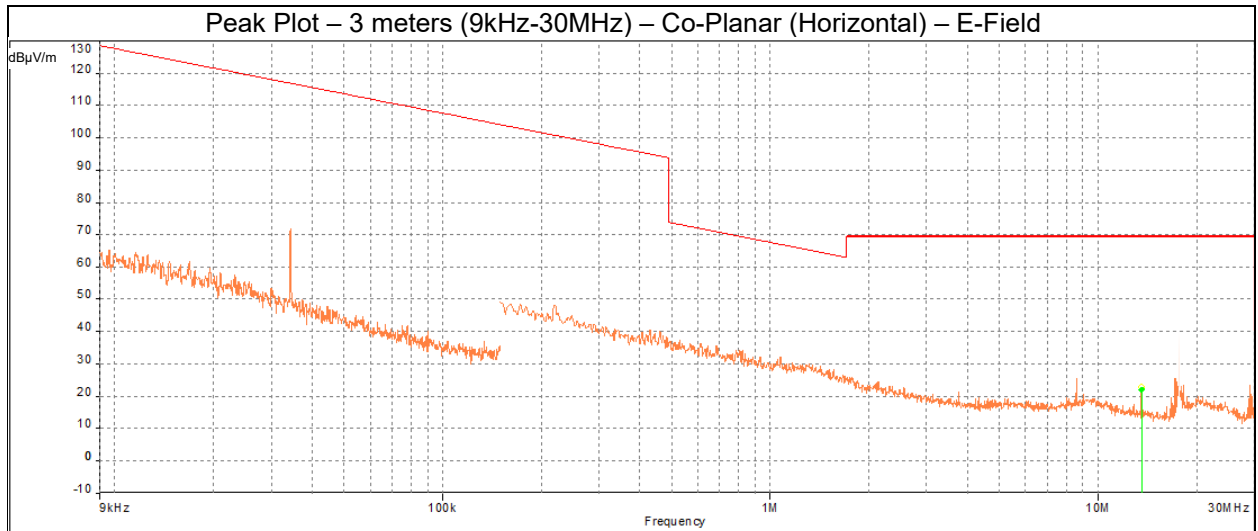
The sample tested was found to Comply.

## 6.4 Plots/Data

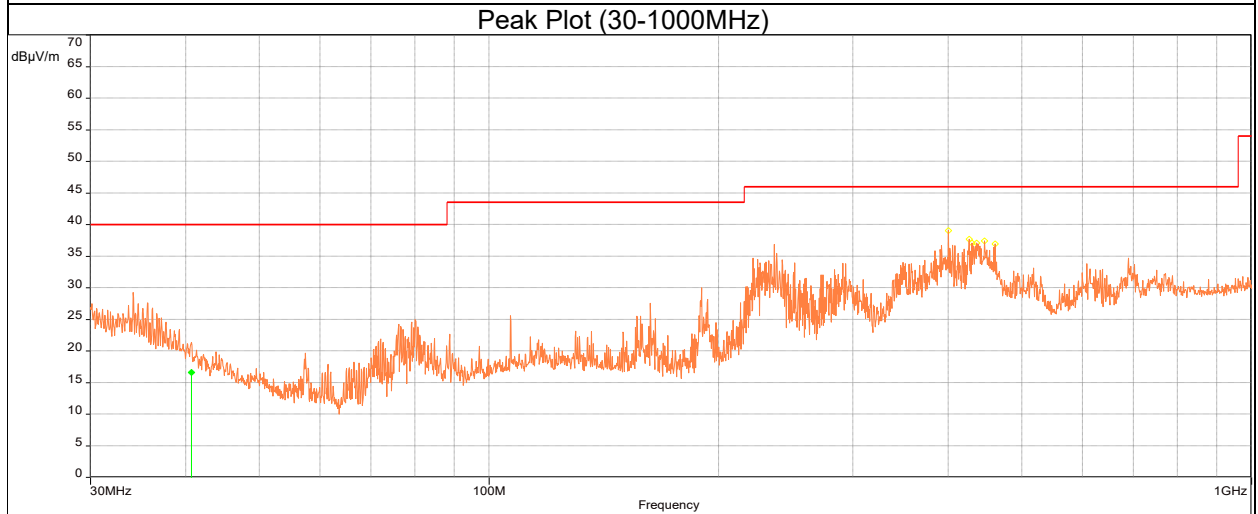








FCC Part 15 Transmitters/FCC 15.209



FCC Part 15 Transmitters/FCC 15.209

All other spurious emissions were associated with the digital portions of the system and not subject to the 15.209 limits. These emissions are reported in a separate Subpart B, Class A evaluation.

## Tabular Data

| Frequency (MHz) | Level@3m (dBµV/m) | Level@30m (dBµV/m) | Limit@3m (dBµV/m) | Limit@30m (dBµV/m) | Margin (dB) | Azimuth (°) | Polarity      | RBW (kHz) | Correction (dB) |
|-----------------|-------------------|--------------------|-------------------|--------------------|-------------|-------------|---------------|-----------|-----------------|
| 13.561          | 41.85             | 1.85               | 124               | 84                 | -82.15      | 183         | Co-Axial      | 9         | 5.39            |
| 13.561          | 29.62             | -10.38             | 124               | 84                 | -94.38      | 107         | Co-Planar - V | 9         | 5.39            |
| 13.561          | 22.03             | -17.97             | 124               | 84                 | -101.97     | 189         | Co-Planar - H | 9         | 5.39            |
| 40.680          | 16.62             | NA                 | 40                | NA                 | -23.38      | 9           | Vertical      | 120       | -20.57          |

Note: Adjustments to the readings below 30MHz were applied using the equation  $40 \cdot \log(d1/d2)$

Test Personnel: Jeremy Pickens   
 Supervising/Reviewing Engineer:  
 (Where Applicable) \_\_\_\_\_  
 Product Standard: ANSI C63.10  
 Input Voltage: 120Vac, 60Hz  
 Pretest Verification w/  
 Ambient Signals or  
 BB Source: BB

Test Date: 02 April 2026

v

Limit Applied: 15.209

Ambient Temperature: 19.7°C

Relative Humidity: 35.8%

Atmospheric Pressure: 97.9kPa

Deviations, Additions, or Exclusions: None

## 7 AC Mains Conducted Emissions

### 7.1 Method

Tests were performed in accordance with ANSI C63.10 Clause 6.2.

#### TEST SITE: 10 Meter Chamber

**10 Meter Semi-Anechoic Chamber** The test site for radiated emissions is located at 1950 Evergreen Blvd, Suite 100, Duluth, Georgia 30096. It is a 10-meter semi-anechoic chamber manufactured by Panashield. Embedded in the floor is a 3-meter diameter turntable.

#### Measurement Uncertainty

| Measurement                 | Frequency Range  | Expanded Uncertainty (k=2) | $U_{CISPR}$ |
|-----------------------------|------------------|----------------------------|-------------|
| AC Line Conducted Emissions | 150 kHz - 30 MHz | 2.8 dB                     | 3.4dB       |
| Telco Port Emissions        | 150 kHz - 30 MHz | 2.4 dB                     | 5.0dB       |

As shown in the table above our conducted emissions  $U_{lab}$  is less than the corresponding  $U_{CISPR}$  reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

#### Sample Calculations

The following calculations were used to determine the net line-conducted measurements:

$$NF = RF + LF + CF + AF$$

Where NF = Net Reading in dB $\mu$ V  
 RF = Reading from receiver in dB $\mu$ V  
 LF = LISN or ISN Correction Factor in dB  
 CF = Cable Correction Factor in dB  
 AF = Attenuator Loss Factor in dB

To convert from dB $\mu$ V to  $\mu$ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

#### Example:

$$NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 \text{ dB}\mu\text{V}$$

$$UF = 10^{(49.1 \text{ dB}\mu\text{V} / 20)} = 285.1 \mu\text{V}$$

### 7.2 Test Equipment Used

| Asset  | Description                          | Manufacturer    | Model       | Serial  | Cal Date   | Cal Due    |
|--------|--------------------------------------|-----------------|-------------|---------|------------|------------|
| 200162 | EMI Receiver (20Hz-40GHz)            | Rohde & Schwarz | ESU 40      | 100314  | 10/07/2025 | 10/07/2026 |
| 212166 | Temperature/Pressure/Humidity Sensor | Extech          | SD700       | 110392  | 04/02/2025 | 04/02/2026 |
| 213498 | 2-Line LISN                          | Rohde & Schwarz | ENV216      | 101577  | 10/15/2025 | 10/15/2026 |
| MM8    | RF Coax Cable 9kHz-18GHz             | Maury Microwave | UC-N-MM-267 | 1635289 | 06/18/2025 | 06/18/2026 |

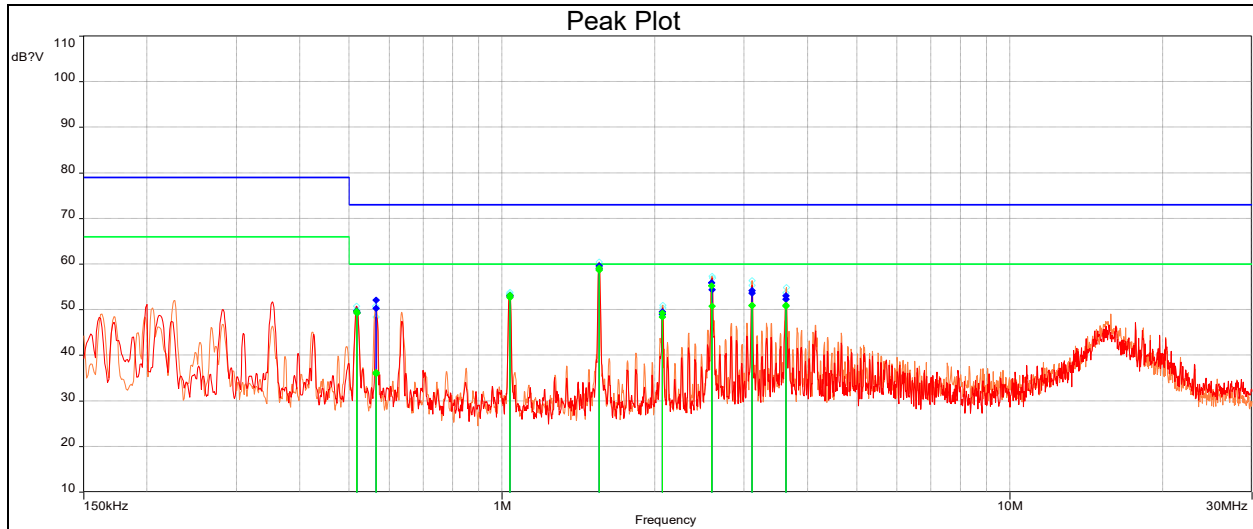
#### Software Utilized

| Name    | Manufacturer | Version   |
|---------|--------------|-----------|
| EMC BAT | Nexio        | 3.19.1.18 |

### 7.3 Results

The sample tested was found to Comply.

## 7.4 Plots/Data



Tabular Data

| Frequency (MHz) | AVG Level (dB $\mu$ V) | QP Level (dB $\mu$ V) | Limit AVG (dB $\mu$ V) | Limit QP (dB $\mu$ V) | AVG Margin (dB) | QP Margin (dB) | Line    | Correction (dB) |
|-----------------|------------------------|-----------------------|------------------------|-----------------------|-----------------|----------------|---------|-----------------|
| 0.517           | 49.68                  | 49.76                 | 60.0                   | 73.0                  | -10.32          | -23.24         | Phase 1 | 10.0            |
| 0.565           | 36.2                   | 52.07                 | 60.0                   | 73.0                  | -23.8           | -20.93         | Phase 1 | 10.0            |
| 1.036           | 52.64                  | 52.98                 | 60.0                   | 73.0                  | -7.36           | -20.02         | Phase 1 | 9.9             |
| 1.553           | 58.67                  | 58.97                 | 60.0                   | 73.0                  | -1.33           | -14.03         | Phase 1 | 9.9             |
| 2.069           | 48.36                  | 48.96                 | 60.0                   | 73.0                  | -11.64          | -24.04         | Phase 1 | 9.9             |
| 2.592           | 50.81                  | 54.37                 | 60.0                   | 73.0                  | -9.19           | -18.63         | Phase 1 | 9.9             |
| 3.105           | 50.87                  | 53.61                 | 60.0                   | 73.0                  | -9.13           | -19.39         | Phase 1 | 9.9             |
| 3.623           | 50.82                  | 52.32                 | 60.0                   | 73.0                  | -9.18           | -20.68         | Phase 1 | 9.9             |
| 0.518           | 49.22                  | 49.39                 | 60.0                   | 73.0                  | -10.78          | -23.61         | Phase 2 | 9.8             |
| 0.565           | 35.98                  | 50.36                 | 60.0                   | 73.0                  | -24.02          | -22.64         | Phase 2 | 9.8             |
| 1.036           | 53.12                  | 53.17                 | 60.0                   | 73.0                  | -6.88           | -19.83         | Phase 2 | 9.9             |
| 1.553           | 59.17                  | 59.64                 | 60.0                   | 73.0                  | -0.83           | -13.36         | Phase 2 | 9.9             |
| 2.071           | 49.23                  | 49.57                 | 60.0                   | 73.0                  | -10.77          | -23.43         | Phase 2 | 9.9             |
| 2.588           | 55.22                  | 55.89                 | 60.0                   | 73.0                  | -4.78           | -17.11         | Phase 2 | 9.9             |
| 3.104           | 50.98                  | 54.2                  | 60.0                   | 73.0                  | -9.02           | -18.8          | Phase 2 | 10.0            |
| 3.625           | 50.93                  | 53.05                 | 60.0                   | 73.0                  | -9.07           | -19.95         | Phase 2 | 10.0            |

Test Personnel: Jeremy Pickens

Supervising/Reviewing Engineer: \_\_\_\_\_

(Where Applicable) \_\_\_\_\_

Product Standard: ANSI C63.10

Input Voltage: 120Vac, 60Hz

Pretest Verification w/ Ambient Signals or BB Source: BB

Test Date: 18 December 2025

Limit Applied: 15.207

Ambient Temperature: 18.2°C

Relative Humidity: 29.7%

Atmospheric Pressure: 98.7kPa

Deviations, Additions, or Exclusions: None

## 8 Frequency Stability

### 8.1 Method

The methods defined in ANSI C63.10, Section 6.8 were applied for measuring the Frequency Stability. The DUT was placed within a temperature chamber, and a near field probe was used to couple the signal to the spectrum analyzer. Frequency measurements were made over the temperature range -20°C to +55°C. The nominal operating voltage was 120Vac and frequency was also measured at 85% and 115% of the nominal voltage at +20°C. For each temperature measured, a period of time sufficient to stabilize all components was allowed. At each temperature, the frequency was measured at startup, 2 min, 5 min, and 10 min after the EUT was energized. Worst-case for each temperature is reported.

#### TEST SITE: RF Bench

The RF bench consists of a Rohde & Schwarz TS8997 automated test system coupled with a temperature/humidity environmental chamber. Where applicable, 2.4 and 5GHz radio measurements are automated using the Rohde & Schwarz EMC32 test software. The TS8997 system houses a switch matrix (OSP), along with a spectrum analyzer, vector network analyzer, and analog signal generator.

### 8.2 Test Equipment

| Asset  | Description                        | Manufacturer    | Model     | Serial    | Cal Date   | Cal Due    |
|--------|------------------------------------|-----------------|-----------|-----------|------------|------------|
| 211992 | Digital thermometer - Two channel. | General Tool    | DT80-2    | 140402566 | 02/27/2025 | 02/27/2026 |
| 213502 | Spectrum Analyzer (2Hz-43.5GHz)    | Rohde & Schwarz | FSW43     | 102972    | 08/01/2024 | 08/01/2026 |
| 213505 | Temperature/Humidity Chamber       | Sanwood         | SMC-64-LL | 10301     | VBU        | VBU        |

#### Software Utilized

| Name | Manufacturer | Version |
|------|--------------|---------|
| None |              |         |

### 8.3 Results

The sample tested was found to Comply.

### 8.4 Test Data

| Temperature °C | Input Voltage Vac | Measured Carrier Frequency MCF <sub>MHz</sub> | Frequency Error % | FCC Limit % | Frequency Error (ppm) | ISED Limit (ppm) | Verdict   |
|----------------|-------------------|-----------------------------------------------|-------------------|-------------|-----------------------|------------------|-----------|
| -20            | 120               | 13.561172                                     | 0.0086%           | +/-0.01     | 86                    | +/-100           | Compliant |
| -10            | 120               | 13.561183                                     | 0.0087%           | +/-0.01     | 87                    | +/-100           | Compliant |
| 0              | 120               | 13.561179                                     | 0.0087%           | +/-0.01     | 87                    | +/-100           | Compliant |
| 10             | 120               | 13.561153                                     | 0.0085%           | +/-0.01     | 85                    | +/-100           | Compliant |
| 20             | 120               | 13.561147                                     | 0.0085%           | +/-0.01     | 85                    | +/-100           | Compliant |
| 30             | 120               | 13.561128                                     | 0.0083%           | +/-0.01     | 83                    | +/-100           | Compliant |
| 40             | 120               | 13.561122                                     | 0.0083%           | +/-0.01     | 83                    | +/-100           | Compliant |
| 50             | 120               | 13.561135                                     | 0.0084%           | +/-0.01     | 84                    | +/-100           | Compliant |
| 55             | 120               | 13.561148                                     | 0.0085%           | +/-0.01     | 85                    | +/-100           | Compliant |
| 20             | 102               | 13.561142                                     | 0.0084%           | +/-0.01     | 84                    | +/-100           | Compliant |
| 20             | 138               | 13.561149                                     | 0.0085%           | +/-0.01     | 85                    | +/-100           | Compliant |

Test Personnel: Jeremy Pickens

Test Date: 10 December 2025

Ambient Temperature: 20.1°C

Reference Standard: ANSI C63.10

Relative Humidity: 32.1%

Atmospheric Pressure: 98.5kPa

## 9 Measurement Uncertainty

| Parameter                        | Expanded Uncertainty for Normal k factor<br>equal to 2 |
|----------------------------------|--------------------------------------------------------|
| Radio Frequency                  | 0.07                                                   |
| Total RF Power (Conducted)       | 0.65                                                   |
| Power Density (Conducted)        | 0.65                                                   |
| RF Spurious (Conducted)          | 1.8 dB                                                 |
| Radiated Emissions (9kHz-30MHz)  | 4.7 dB                                                 |
| Radiated Emissions (30MHz-1GHz)  | 4.1 dB                                                 |
| Radiated Emissions (1GHz-18GHz)  | 4.5dB                                                  |
| Radiated Emissions (18GHz-40GHz) | 4.7 dB                                                 |
| AC Line Conducted Emissions      | 2.8 dB                                                 |
| Temperature                      | 0.7°                                                   |
| Humidity                         | 3.9%                                                   |

**10 Revision History**

| Revision Level | Date          | Prepared By | Reviewed By | Notes                                                                      |
|----------------|---------------|-------------|-------------|----------------------------------------------------------------------------|
| 0              | 13 April 2026 | JOP         | US          | Original Issue                                                             |
| 1              | 21 April 2026 | JOP         | US          | • Added H-Field plots to show compliance with RSS-GEN, Clause 8.9, Table 6 |
|                |               |             |             |                                                                            |
|                |               |             |             |                                                                            |
|                |               |             |             |                                                                            |
|                |               |             |             |                                                                            |

**END OF REPORT**