# COMPLIANCE WORLDWIDE INC.
# TEST REPORT 450-19

**In Accordance with the Requirements of**

## Federal Communications Commission CFR Title 47
## Part 15.249, Subpart C

## Innovation, Science and Economic Development Canada
## RSS 210, Issue 9

**Low Power License-Exempt Radio Communication Devices**
**Intentional Radiators**

**Issued to**

**Forsythe Technologies Worldwide**
**23924 Victory Blvd.**
**Woodland Hills, CA 91367**
**(818) 710-8694**

**for the**

**Rat Telemetry System**
**Pressure and Temperature Transceiver**
**Large Module Set**

**FCC ID: 2AC4C-AU430001LGC**
**IC: 12302A-AU430001LGC**

**Report Issued on December 10, 2019**

**Tested by**

Brian F. Breault

Reviewed by

Larry K. Stillings

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## 1. Scope

This test report certifies that the Rat Telemetry System Pressure and Temperature Transceiver, as tested, meets the FCC Part 15, Subpart C and ISED RSS 210, Issue 9 requirements. The scope of this test report is limited to the test sample provided by the client, only in as much as that sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required.

## 2. Product Details

2.1. Manufacturer: Forsythe Technologies Worldwide Inc.

2.2. Model Number: 430001-IMP-LGC

2.3. Serial Number: N/A

2.4. Description: Pressure and Temperature Transceiver

2.5. Power Source: 3 volts DC (2 AA batteries)
Provided as a replaceable source for product testing.
Note: For production units, two 1.55 (3.1 VDC total) volt Silver Oxide batteries will be used.

2.6. Hardware Revision: None

2.7. Software Revision: None

2.8. Modulation Type: ---

2.9. Operating Frequency: 915.6 MHz

2.10. EMC Modifications: None

## 3. Product Configuration

### 3.1. EUT Hardware

| Manufacturer | Model | Serial Number | Input Volts | Freq (Hz) Or DC | Description/Function |
|---|---|---|---|---|---|
| Forsythe Technologies Worldwide | Pressure and Temperature Transceiver | N/A | 3.6 nom. | DC | Large module set |

### 3.2. Support Equipment

| Device | Manufacturer | Model | Serial No. | Comment |
|---|---|---|---|---|
| AA Battery Pack | N/A | N/A | N/A | For test only. To provide AA replaceable batteries for ongoing testing |

### 3.3. Cables

| Cable Type | Length | Shield | From | To |
|---|---|---|---|---|
| None | | | | |



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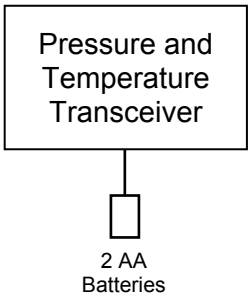
# 3. Product Configuration (continued)

## 3.4. Operational Characteristics & Software

Apply 3 VDC to the device under test.
The EUT transmits continuously once the voltage is applied.

## 3.5. Block Diagram




# 4. Measurements Parameters

## 4.1. Measurement Equipment Used to Perform Test

| Device | Manufacturer | Model No. | Serial No. | Cal Due | Interval |
|---|---|---|---|---|---|
| EMI Test Receiver, 9kHz - 7GHz [1] | Rohde & Schwarz | ESR7 | 101156 | 9/10/2020 | 2 Years |
| EMI Test Receiver, 10 Hz - 7GHz [1] | Rohde & Schwarz | ESR7 | 101770 | 10/3/2020 | 2 Years |
| Spectrum Analyzer, 2 Hz to 26.5 GHz[2] | Rohde & Schwarz | FSW26 | 102057 | 9/13/2020 | 2 Years |
| Spectrum Analyzer, 9 kHz to 40 GHz[3] | Rohde & Schwarz | FSV40 | 100899 | 9/10/2020 | 2 Years |
| EMI Receiver 9 kHz - 1 GHz | Hewlett Packard | 8546A | 3650A00360 | 9/11/2020 | 2 Years |
| Loop Antenna 9 kHz - 30 MHz | EMCO | 6512 | 9309-1139 | 1/28/2022 | 3 Years |
| Biconilog Antenna, 30 MHz - 2 GHz | Sunol Sciences | JB1 | A050913 | 6/5/2021 | 2 Years |
| Horn Antenna, 960 MHz to 18 GHz | Electro-Metrics | EM-6961 | 6337 | 10/3/2020 | 2 Years |
| Horn Antenna, 18 GHz to 40 GHz | Com-Power | AH-840 | 101032 | 9/28/2020 | 2 Years |
| Preamplifier, 1 GHz to 26.5 GHz | Hewlett Packard | 8449B | 3008A01323 | 9/11/2020 | 2 Years |
| Digital Barometer | Control Company | 4195 | ID236 | 4/3/2020 | 2 Years |
| Temperature Chamber | Associated Environmental | SD-308 | 10782 | CNR | |

[1] ESR7 Firmware revision: V3.46 SP1, Date installed: 12/22/2018 Previous V3.36 SP2, installed 12/5/2018.
[2] FSW26 Firmware revision: V4.30 SP1, Date installed: 02/22/2019 Previous V3.36 SP2, installed 10/26/2018.
[3] FSV40 Firmware revision: V2.30 SP4, Date installed: 05/04/2016 Previous V2.30 SP1, installed 10/22/2014.



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# 4. Measurements Parameters (continued)

## 4.2. Software Used to Perform Test

| Manufacturer | Software Description | Title or Model # | Rev. | Report Sections |
|---|---|---|---|---|
| Compliance Worldwide | Test Report Generation Software | Test Report Generator | 1.0 | Not used for this product. |

## 4.3. Measurement & Equipment Setup

| | |
|---|---|
| Test Dates: | 11/19/2019 - 12/6/2019 |
| Test Engineers: | Sean Defelice, Brian Breault |
| Normal Site Temperature (15 - 35°C): | 21.2 |
| Relative Humidity (20 -75%RH): | 35 |
| Frequency Range: | 32 kHz to 10 GHz |
| Measurement Distance: | 3 Meters |
| EMI Receiver IF Bandwidth: | 120 kHz - 30 MHz to 1 GHz<br>1 MHz - Above 1 GHz |
| EMI Receiver Average Bandwidth: | 300 kHz - 30 MHz to 1 GHz<br>3 MHz - Above 1 GHz |
| Detector Function: | Peak, Quasi-Peak & Average |

## 4.4. Measurement Procedure

Test measurements were made in accordance FCC Part 15.249, ISED RSS-210 B.10: Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

The test methods used to generate the data in this test report are in accordance with ANSI C63.10: 2013, American National Standard for Testing Unlicensed Wireless Devices.

## 4.5. Choice of Operating Frequencies

The device under test utilizes a single operating frequency at 915.6 MHz.

## 4.6. EUT Positions for Emissions Measurements

The device under test was tested in three orthogonal positions in accordance with ANSI C63.10-2013, Section 5.10.1.



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## 5. Measurement Summary

| Test Requirement | FCC Requirement | ISED Requirement | Test Section | Result | Comment |
|---|---|---|---|---|---|
| Antenna Requirement | 15.203 | RSS-GEN 6.7 | 6.1 | Compliant | |
| Radiated Field Strength of Fundamental | 15.249 (a),(c) | RSS-210 B.10 | 6.2 | Compliant | |
| Radiated Field Strength of Harmonics | 15.249 (a),(c) | RSS-210 B.10 | 6.3 | Compliant | |
| Fixed, Point-to-Point Operation | 15.249 (b) | N/A | --- | Not Required | |
| Band Edge Measurements | 15.249 (d) 15.209 | N/A | 6.4 | Compliant | |
| Spurious Radiated Emissions | 15.249 (d), 15.209 | RSS-210 B.10 | 6.5 | Compliant | |
| Occupied Bandwidth (-20 dB) | ANSI C63.4 § 13.1.7 | N/A | 6.6 | Compliant | |
| 99% Power Bandwidth | N/A | RSS-GEN 6.6 | 6.7 | Compliant | |
| AC Power Line Conducted Emissions | 15.207 | RSS-GEN 8.8 | --- | Not Required | Battery operated device |
| RF Safety | 2.1093 1.1307 (b)(1)) | RSS-102 Issue 5 | 6.8 | Compliant | |

## 6. Measurement Data

### 6.1. Antenna Requirement (Section 15.203, RSS-GEN, Issue 5)

Requirement: 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.

Result: The unit under test will be installed in a permanent, non-user accessible enclosure.



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## 6. Measurement Data (continued)

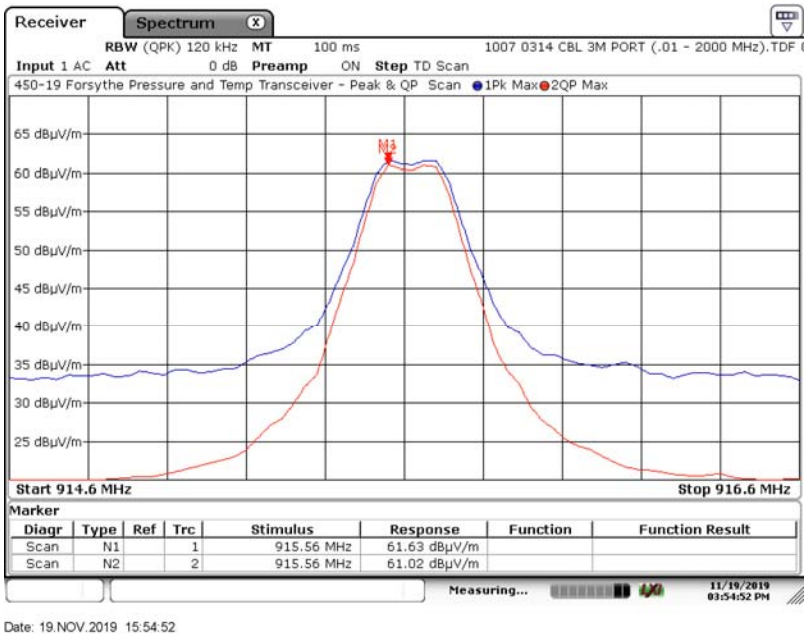
### 6.2. Radiated Field Strength of Fundamental (15.249, Section (a), (c), ISED RSS-210 B.10)

Requirement: The 3 meter field strength of the fundamental emissions from intentional radiators operating within the 902 MHz to 928 MHz frequency band shall comply with the following requirement: 50 millivolts/meter (94 dBµV/m) Quasi-Peak mode measurement and 500 millivolts/meter (114 dBµV/m) peak mode measurement.

| Frequency (MHz) | Amplitude[1] (dBµV/m) at 3 Meters | | Limit (dBµV/m) at 3 Meters | | Margin (dBµV/m) at 3 Meters | | Ant Polarity | Ant Height | Turntable Azimuth | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | Peak | Quasi-Pk | Peak | Quasi-Pk | Peak | Quasi-Pk | H/V | cm | Deg | |
| 915.6 | 61.63 | 61.02 | 114.00 | 94.00 | -52.37 | -32.98 | H | 100 | 114 | Compliant |

[1] All correction factors are included in measurement values.

6.2.1. Radiated Field Strength of Fundamental, 915.6 MHz (Worst case)



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## 6. Measurement Data (continued)

### 6.3. Radiated Field Strength of Harmonics (15.249, Section (a), ISED RSS-210 A.1.4 (d))

Requirement: The 3 meter field strength of the harmonic emissions from intentional radiators operated within the 902 MHz to 928 MHz frequency bands shall comply with the following: 500 microvolts/meter (54 dBµV/m), average mode measurement. Peak field strength may not be greater than 20 dB above the average limit (74 dBµV/m).

Test Results : Compliant

Notes: All correction factors are included in the field strength values. The tabled values represent the worst case antenna polarity and orthogonal position of the DUT.

6.3.1. Fundamental Frequency = 915.6 MHz

| Freq. (MHz) | Field Strength (dBµV/m) | | Limit (dBµV/m) | | Margin (dBµV/m) | | Antenna Polarity (H/V) | Result |
|---|---|---|---|---|---|---|---|---|
| | Peak | Average | Peak | Average | Peak | Average | | |
| 1831.2 | 43.26 | 31.17 | 74.00 | 54.00 | -30.74 | -22.83 | V | Compliant |
| 2746.8 | 45.76 | 33.53 | 74.00 | 54.00 | -28.24 | -20.47 | H | Compliant |
| 3662.4 | 46.16 | 33.54 | 74.00 | 54.00 | -27.84 | -20.46 | H | Compliant |
| 4578.0 | 48.13 | 35.86 | 74.00 | 54.00 | -25.87 | -18.14 | H | Compliant |
| 5493.6 | 49.50 | 36.72 | 74.00 | 54.00 | -24.50 | -17.28 | H | Compliant |
| 6409.2 | 50.46 | 38.24 | 74.00 | 54.00 | -23.54 | -15.76 | H | Compliant |
| 7324.8 | 50.16 | 38.40 | 74.00 | 54.00 | -23.84 | -15.60 | H | Compliant |
| 8240.4 | 54.17 | 42.27 | 74.00 | 54.00 | -19.83 | -11.73 | H | Compliant |
| 9156.0 | 56.52 | 43.68 | 74.00 | 54.00 | -17.48 | -10.32 | H | Compliant |



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## 6. Measurement Data (continued)

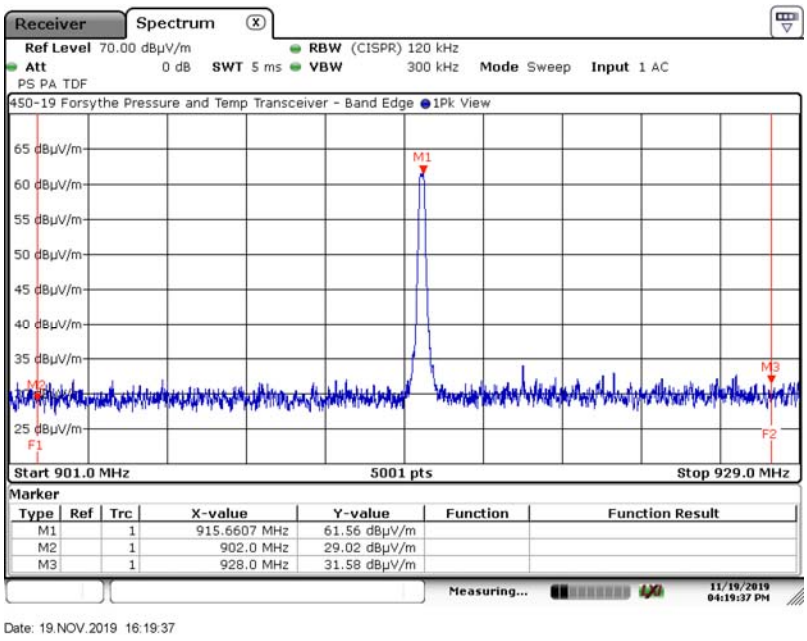
### 6.4. Band Edge Measurements (15.249, Section (d), ISED RSS-210 A.1.4 (d))

Requirement: Emissions radiated outside of the specified frequency band of 902 to 928 MHz, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Test Note: The upper and lower band edge peak mode measurements meet the FCC Part 15, Section 15.209 quasi-peak requirement of 46 dBµV/m.

#### 6.4.1. Band Edge

| Freq. (MHz) | Amplitude (dBµV/m) | | Band Edge (dBµV/m) | | | | Limit (dBµV/m) | Margin (dBµV/m) | Result |
|---|---|---|---|---|---|---|---|---|---|
| | Peak | Quasi Peak | Band Edge | Freq MHz | Peak | Quasi Peak | 15.209 QP | 15.209 QP | |
| 915.6 | 61.56 | --- | Lower | 902 | 29.02 | --- | 46.00 | -16.98 | Compliant |
| | | | Upper | 928 | 31.58 | --- | 46.00 | -14.42 | Compliant |



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## 6. Measurement Data (continued)

### 6.5. Spurious Radiated Emissions, 32 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4

Requirement: Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Test Notes: Spurious emissions screen captures are located in Appendix A.
The highest amplitude signal in plots A1.3.1, A1.3.2, A2.3.1, A2.3.2, A3.3.1 and A3.3.2 is the intentional radiator at 915.6 MHz and not a spurious emission.

The lowest frequency generated by the device under test is 32.768 kHz.

6.5.1. Regulatory Limit: FCC Part 209, Quasi-Peak & Average

| Frequency Range (MHz) | Distance (Meters) | Limit (dBµV/m) |
|---|---|---|
| 0.009 to 0.490 | 3 | 128.5 to 93.8 |
| 0.490 to 1.705 | 3 | 73.8 to 63 |
| 1.705 to 30 | 3 | 69.5 |
| 30 to 88 | 3 | 40.0 |
| 88 to 216 | 3 | 43.5 |
| 216 to 960 | 3 | 46.0 |
| Above 960 | 3 | 54.0 |

6.5.2. Measurement Summary

Notes: Each of the tabled entries represents the worst case turntable position and receive antenna height. All measurements were made using a peak detector.

| Frequency Range (MHz) | Worst-Case Measured Frequency | Field Strength | FCC Part 15.209 Limit | Margin | Worst Case Axis | Receive Antenna Polarity | Reference |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBµV/m) | (dBµV/m) | (dB) | X, Y, Z | (H/V) | Appendix A |
| 0.01 - 0.15 | 0.01175 | 80.87 | 126.19 | -45.32 | Y | Gnd Parallel | A.2.1.3 |
| 0.15 kHz - 30 | 0.56625 | 48.67 | 72.55 | -23.88 | Y | Gnd Parallel | A.2.2.3 |
| 30 - 1000 | 934.05000 | 30.11 | 40.00 | -9.89 | X | H | A.1.3.1 |
| 1000 - 10000 | 8795.60000 | 46.31 | 54.00 | -7.69 | Y | H | A.2.4.1 |



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## 6. Measurement Data (continued)

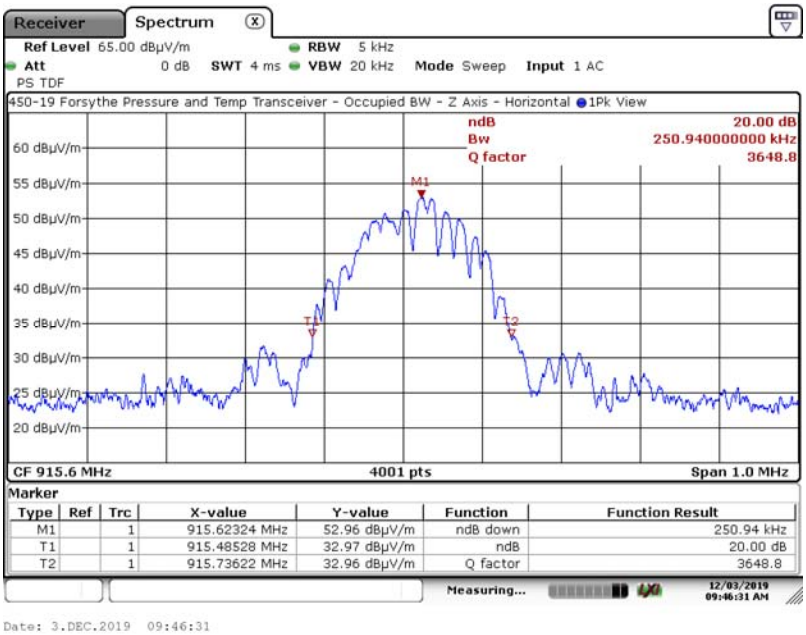
### 6.6 Occupied Bandwidth (ANSI C63.10, Section 6.9.1 & ISED RSS-GEN, Issue 4)

Requirement: The occupied bandwidth measurements on an intentional radiator shall be made in accordance with the requirements outlined in ANSI C63.10-2013, Section 6.9.1. If no bandwidth requirement is specified by the procuring or regulatory agency, the bandwidth will be measured at –20 dB with respect to the reference level.

Test Notes: The span range for the SA display shall be between two times and five times the OBW. The nominal IF filter bandwidth (3 dB RBW) should be approximately 1% to 5% of the OBW, unless otherwise specified, depending on the applicable requirement. The dynamic range of the SA at the selected RBW shall be more than 10 dB below the target "dB down" (attenuation) requirement, i.e., if the requirement calls for measuring the –20 dB OBW, the SA noise floor at the selected RBW shall be at least 30 dB below the largest measured value on the display.

| Frequency (MHz) | -20 dB Bandwidth (kHz) |
|---|---|
| 915.60 | 250.94 |

6.6.1. Occupied (-20 dB) Bandwidth, Fundamental Frequency = 908.4 MHz



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## 6. Measurement Data (continued)

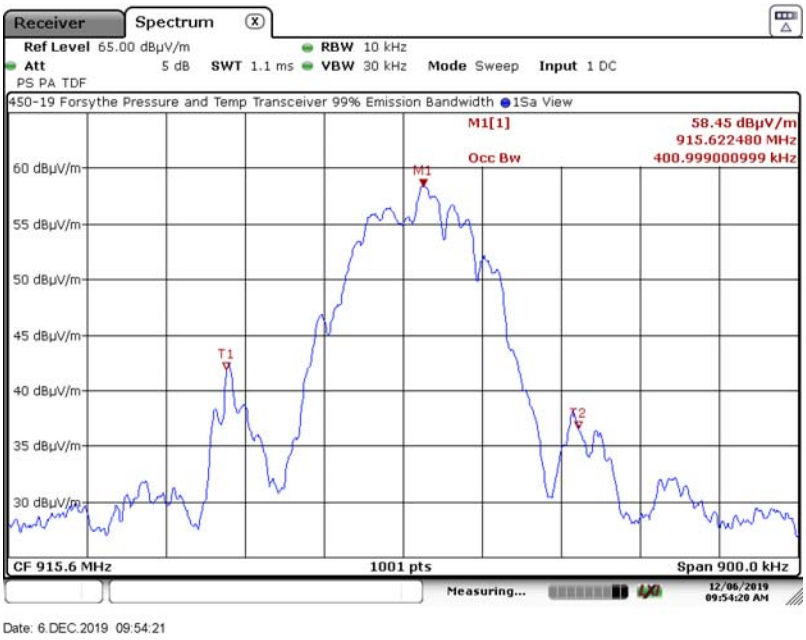
### 6.7 99% Emission Bandwidth (ISED RSS-GEN)

Requirement: When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.

Test Notes: The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual.

| Frequency (MHz) | 99% Power Bandwidth (kHz) |
|---|---|
| 915.60 | 400.100 |

6.7.1. 99% Power Bandwidth, Fundamental Frequency = 908.4 MHz



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## 6. Measurement Data (continued)

### 6.8. Public Exposure to Radio Frequency Energy Levels (15.247(i) (1.1307 (b)(1)) RSS-GEN, ISSUE 4 5.5, RSS 102)

#### 6.8.1. 15.247(i) (1.1307 (b)(1) Requirements

Requirement: Portable devices are subject to radio frequency radiation exposure requirements.

For a 1-g SAR, the test exclusion result must be ≤ 3.0.

Test Notes: The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by the following formula:

$$\text{SAR Test Exclusion} = \frac{P_{MAX}}{d_{MIN}} \times \sqrt{f_{(GHz)}} \qquad (1)$$

| | | |
|---|---|---|
| $P_{MAX}$ | mW | Maximum power of channel, including tune-up tolerance |
| $d_{MIN}$ | mm | Minimum test separation distance, mm (≤ 50 mm) |
| $f_{(GHz)}$ | GHz | $f_{(GHz)}$ is the RF channel transmit frequency in GHz (>100 MHz and <6 GHz) |

(1) FCC OET 447498 - Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

Conclusion: Compliant - The device under test meets the exclusion requirement detailed in FCC OET 447498.

| | | | |
|---|---|---|---|
| **Input:** | $P_{MAX}$[1] | (mW) | 0.0004 |
| | $d_{MIN}$ | (mm) | 5.0000 |
| | $f_{(GHz)}$ | | 0.9150 |
| **Test Exclusion:** | | | **0.0001** |
| **Limit Exemption:** | | | **3.0000** |

[1] Taken from column 5 of the table in Section 7.4 of this test report.

#### 6.8.2. RSS-102 Issue 5 Requirements

Requirement: SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1. Portable devices are subject to radio frequency radiation exposure requirements.

Test Notes: The limit was taken from Table 1 of RSS-102 Issue 5.

| Frequency | Separation Distance | Maximum Power | RSS-102 Limit | Result |
|---|---|---|---|---|
| (MHz) | (mm) | (mW) | (mW) | |
| 915.60 | ≤5 | 0.0004 | 16.24 | Compliant |



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## 7. Test Site Description

Compliance Worldwide is located at 357 Main Street in Sandown, New Hampshire. The test sites at Compliance Worldwide are used for conducted and radiated emissions testing in accordance with the Federal Communications Commission (FCC) and Innovation Science and Economic Development Canada (ISED) standards. Through our American Association for Laboratory Accreditation (A2LA) ISO Guide 17025 Accreditation our test sites are designated with the FCC (designation number **US1091**), Industry Canada (file number **IC 3023A-1)** and VCCI (Member number 3168) under registration number A-0274.

Compliance Worldwide is also designated as a Phase 1 CAB under APEC-MRA (US0132) for Australia/New Zealand AS/NZS CISPR 22, Chinese-Taipei (Taiwan) BSMI CNS 13438 and Korea (RRA) KN 11, KN 13, KN 14-1, KN 22, KN 32, KN 61000-6-3, KN 61000-6-4.

The radiated emissions test site is a 3 and 10 meter enclosed open area test site (OATS). Personnel, support equipment and test equipment are located in the basement beneath the OATS ground plane.

The conducted emissions site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical ground plane required by EN 55022. A second conducted emissions site is also located in the basement of the OATS site with a 2.3 x 2.5 meter ground plane and a 2.4 x 2.4 meter vertical wall.

Both sites are designed to test products or systems 1.5 meters W x 1.5 meters L x 2.0 meters H, floor standing or table top.



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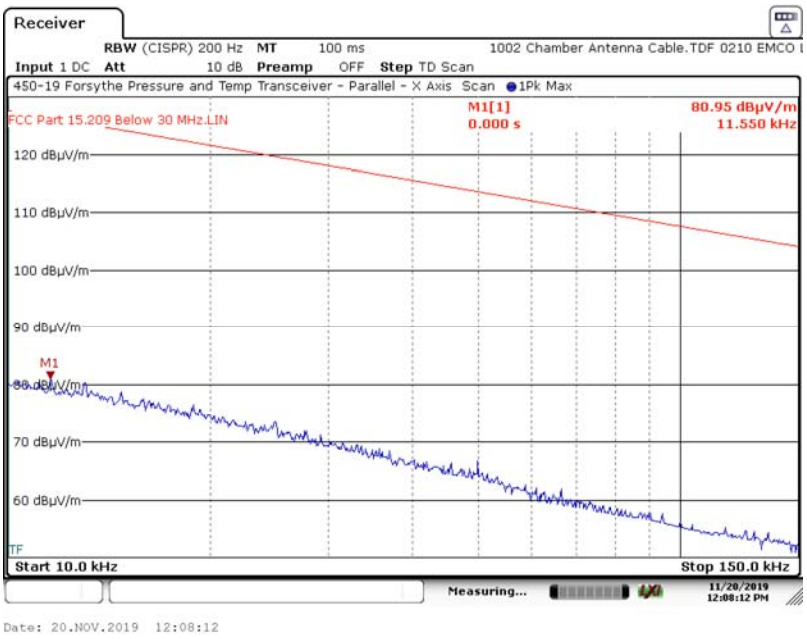
# Appendix A

## Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

### A.1. Device Orientation X-Axis

#### A.1.1. Spurious Radiated Emissions (10 kHz to 150 kHz)

##### A.1.1.1. Measurement Results – Parallel Antenna

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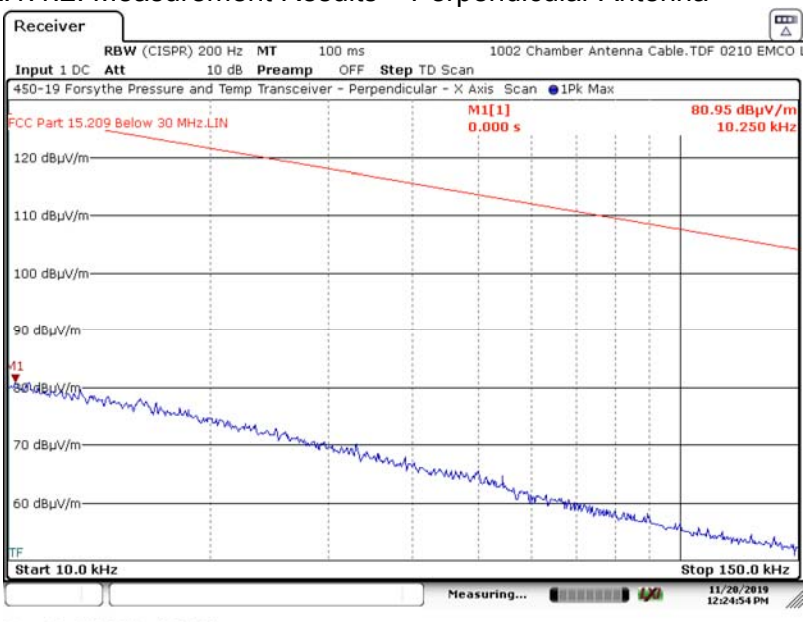
##### A.1.1.2. Measurement Results – Perpendicular Antenna

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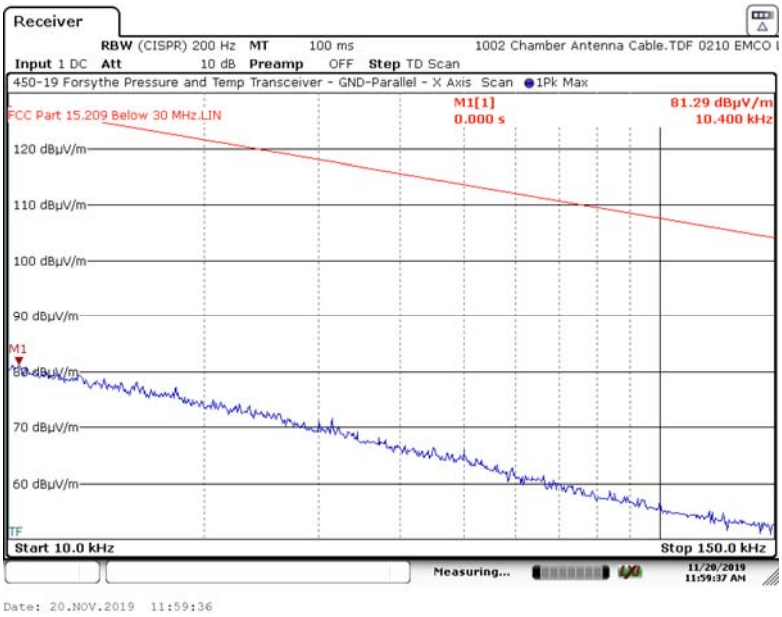
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.1. Device Orientation X-Axis

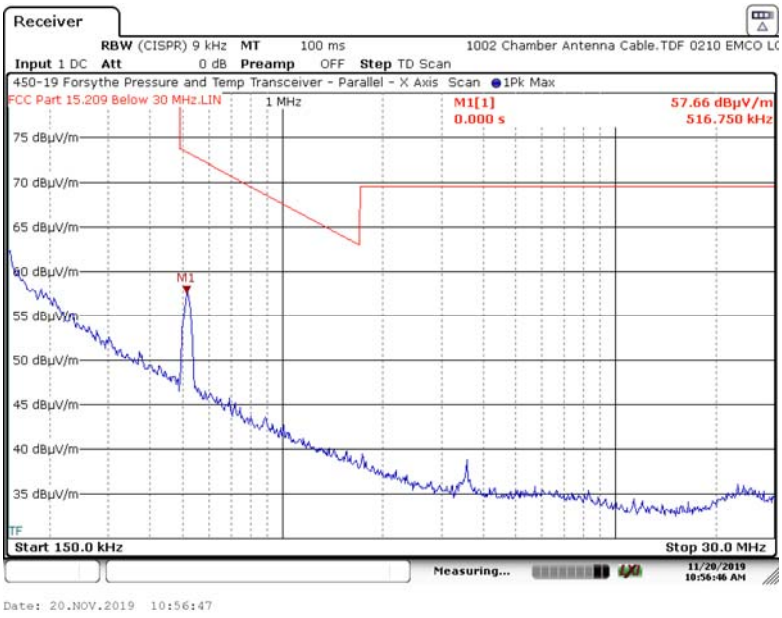
A.1.1. Spurious Radiated Emissions (10 kHz to 150 kHz)

A.1.1.3. Measurement Results – Ground Parallel Antenna




A.1.2. Spurious Radiated Emissions (150 kHz to 30 MHz)

A.1.2.1. Measurement Results – Parallel Antenna



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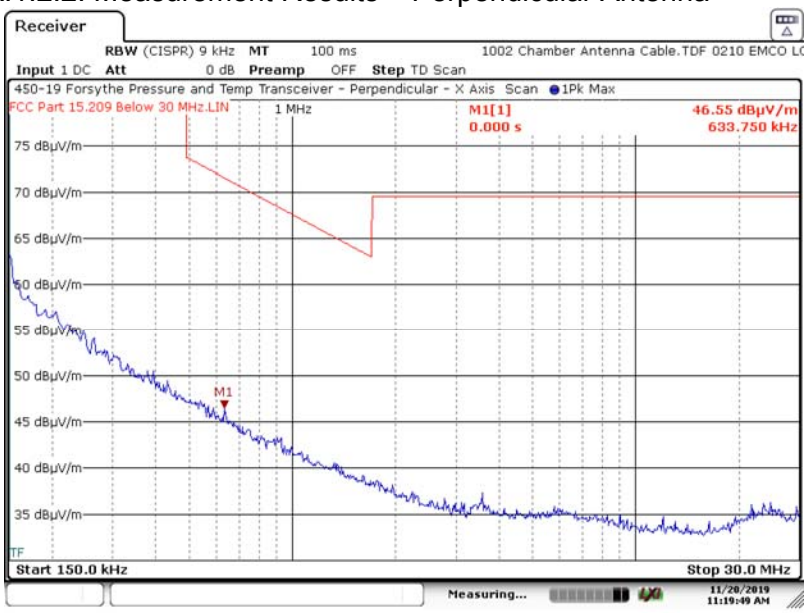
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.1. Device Orientation X-Axis

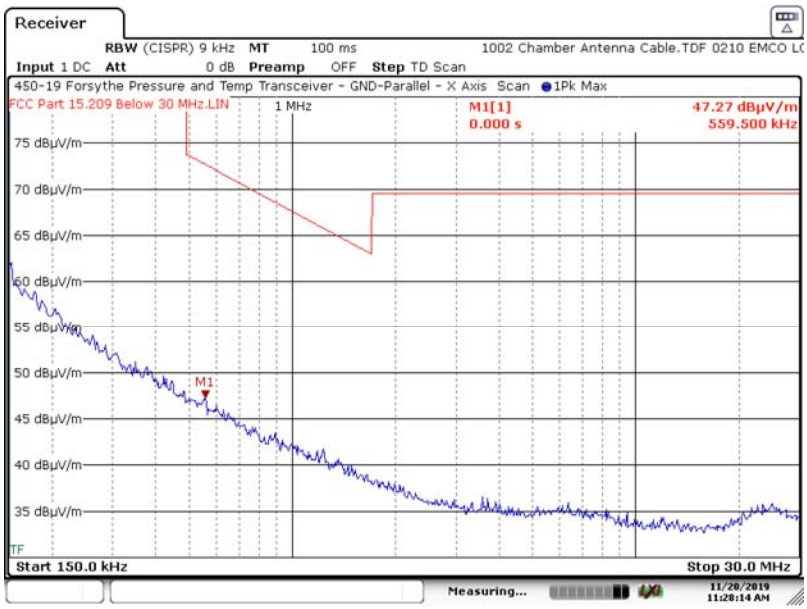
A.1.2. Spurious Radiated Emissions (150 kHz to 30 MHz)

A.1.2.2. Measurement Results – Perpendicular Antenna




Date: 20.NOV.2019 11:19:50

A.1.2.3. Measurement Results – Ground Parallel Antenna




Date: 20.NOV.2019 11:28:13



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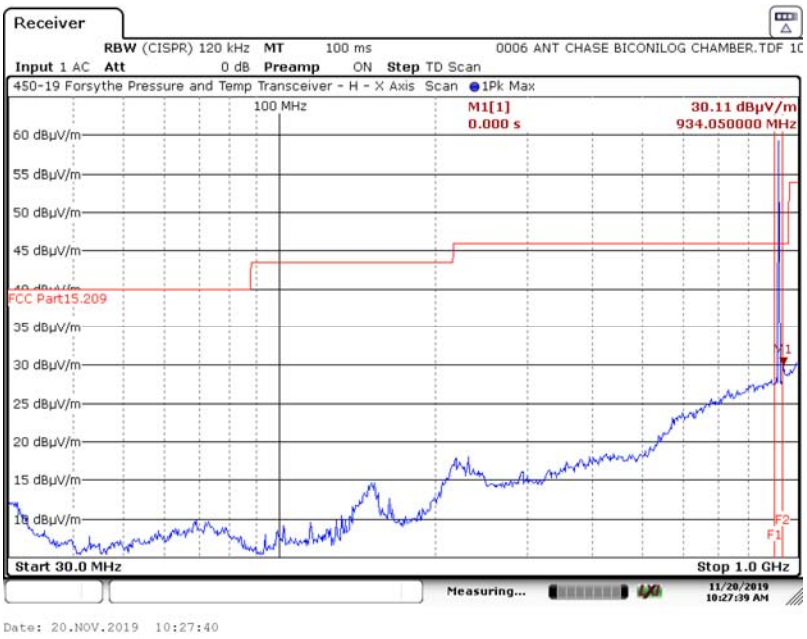
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.1. Device Orientation X-Axis

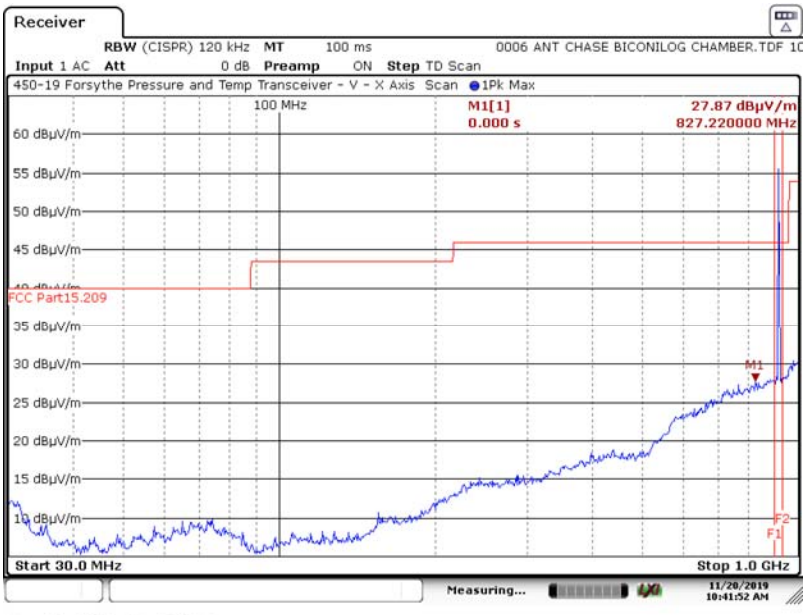
A.1.3. Spurious Radiated Emissions (30 MHz to 1 GHz)

A.1.3.1. Measurement Results – Horizontal Antenna




Date: 20.NOV.2019 10:27:40

A.1.3.2. Measurement Results – Vertical Antenna




Date: 20.NOV.2019 10:41:53



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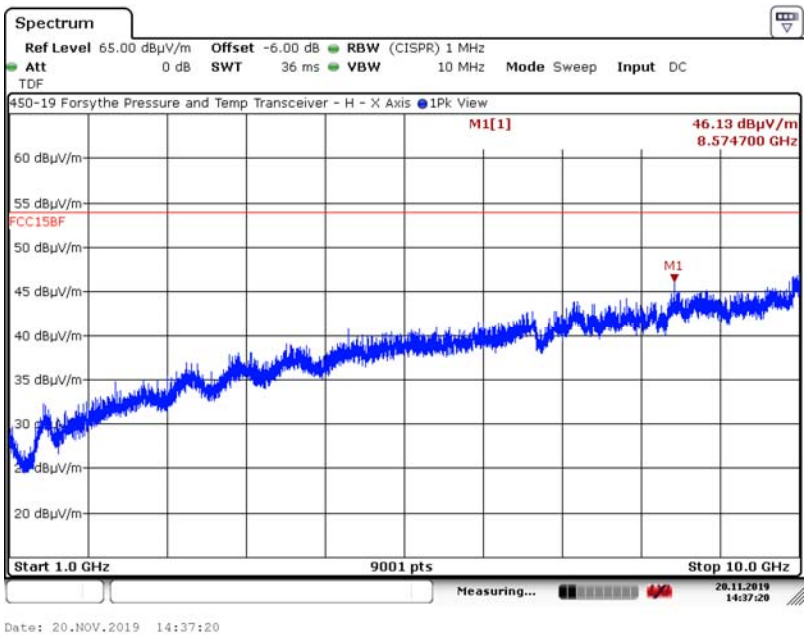
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.1. Device Orientation X-Axis

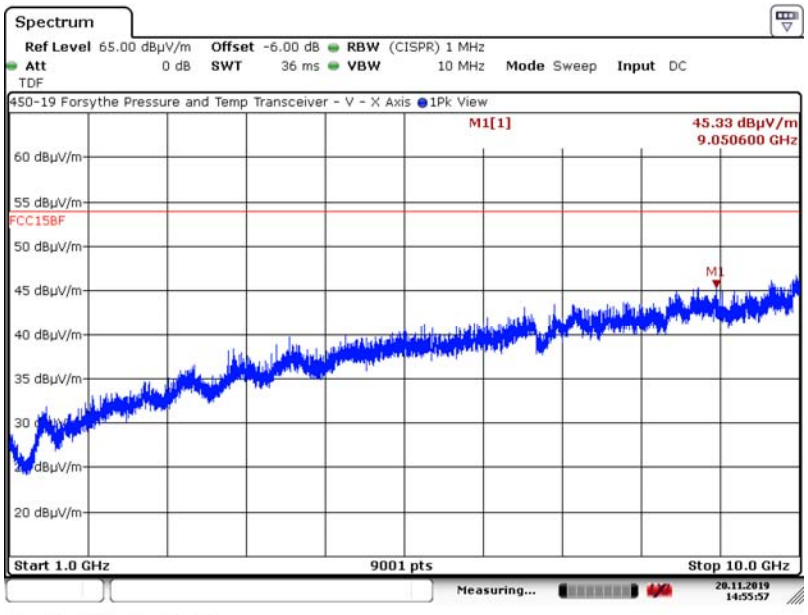
A.1.4. Spurious Radiated Emissions (1 GHz to 10 GHz)

A.1.4.1. Measurement Results – Horizontal Antenna




Date: 20.NOV.2019 14:37:20

A.1.4.2. Measurement Results – Vertical Antenna




Date: 20.NOV.2019 14:55:57



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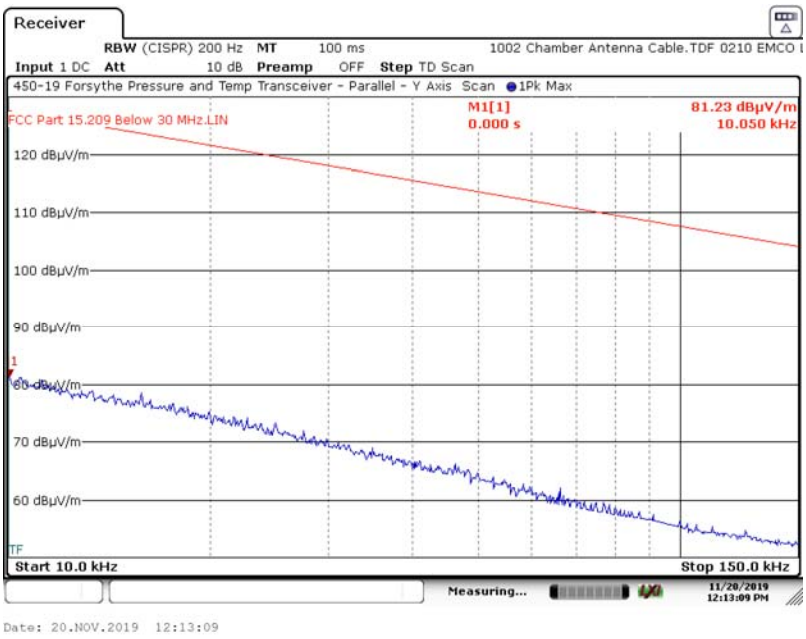
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.2. Device Orientation Y-Axis

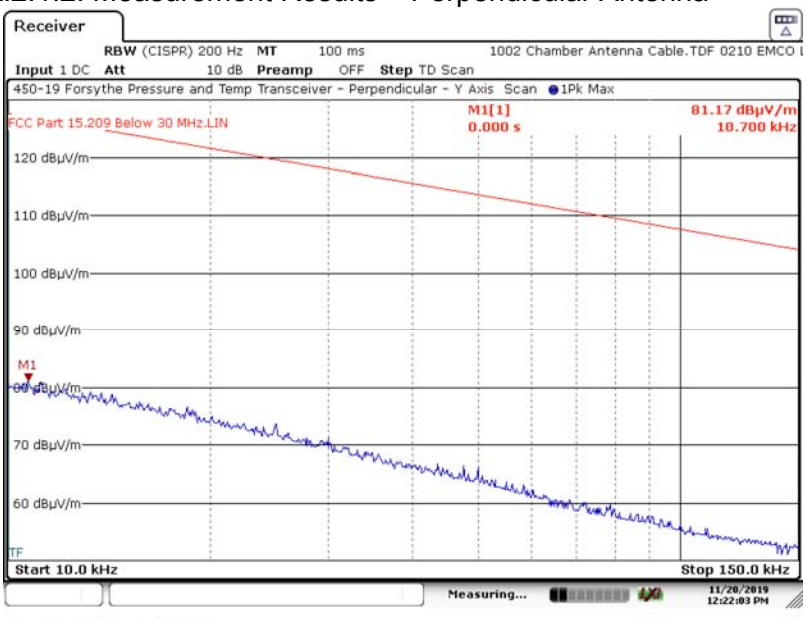
A.2.1. Spurious Radiated Emissions (10 kHz to 150 kHz)

A.2.1.1. Measurement Results – Parallel Antenna




Date: 20.NOV.2019 12:13:09

A.2.1.2. Measurement Results – Perpendicular Antenna




Date: 20.NOV.2019 12:22:03



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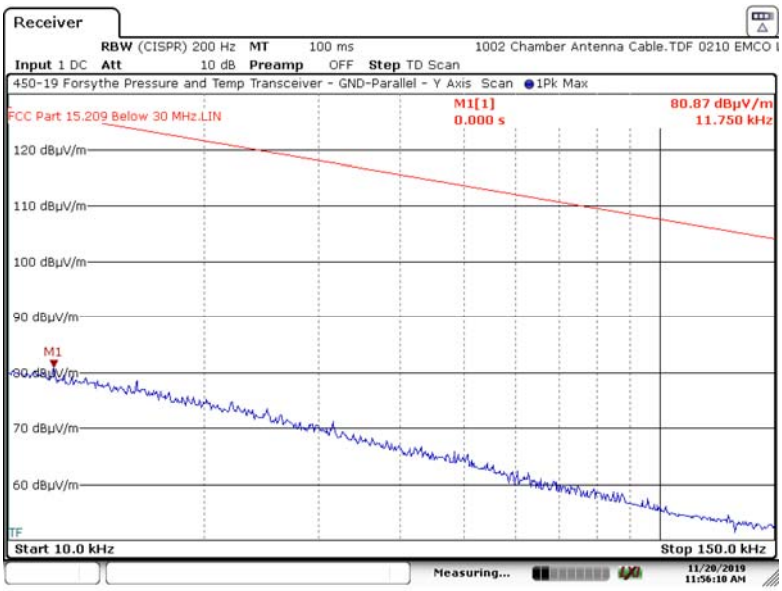
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.2. Device Orientation Y-Axis

A.2.1. Spurious Radiated Emissions (10 kHz to 150 kHz)

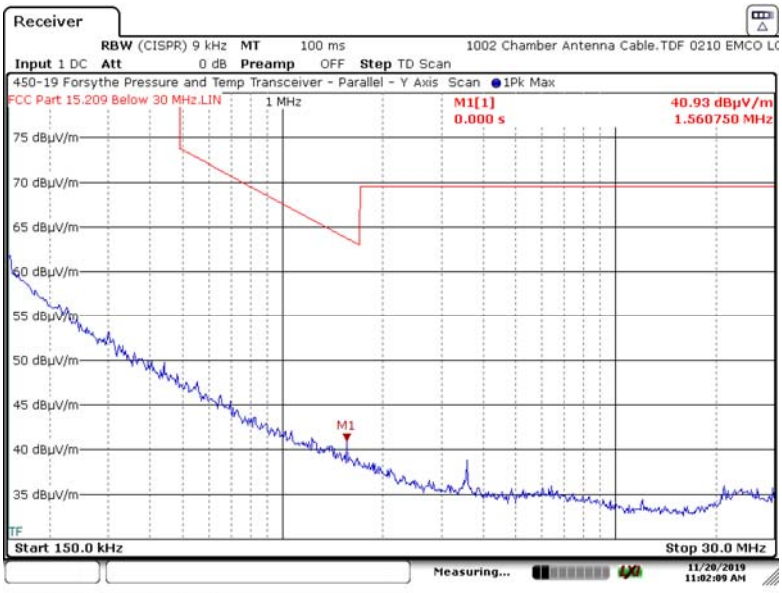
A.2.1.3. Measurement Results – Ground Parallel Antenna




Date: 20.NOV.2019 11:56:10

A.2.2. Spurious Radiated Emissions (150 kHz to 30 MHz)

A.2.2.1. Measurement Results – Parallel Antenna




Date: 20.NOV.2019 11:02:10



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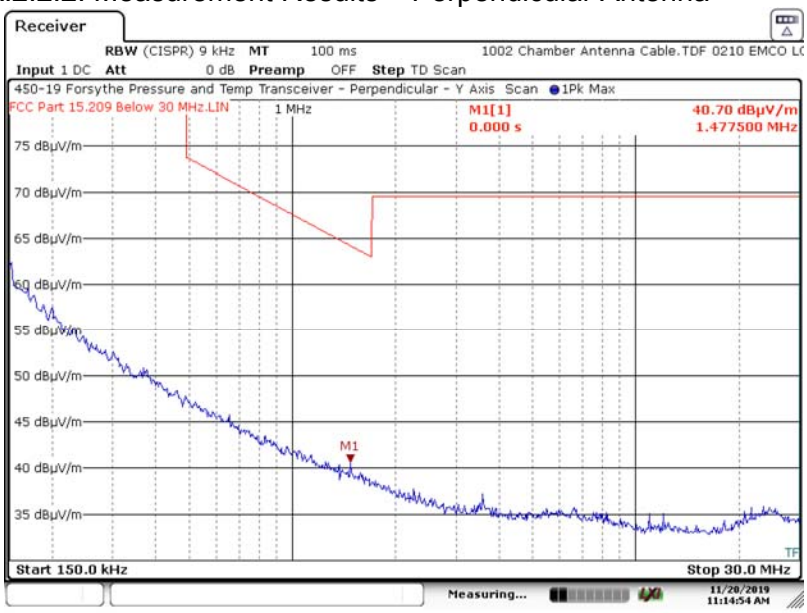
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.2. Device Orientation Y-Axis

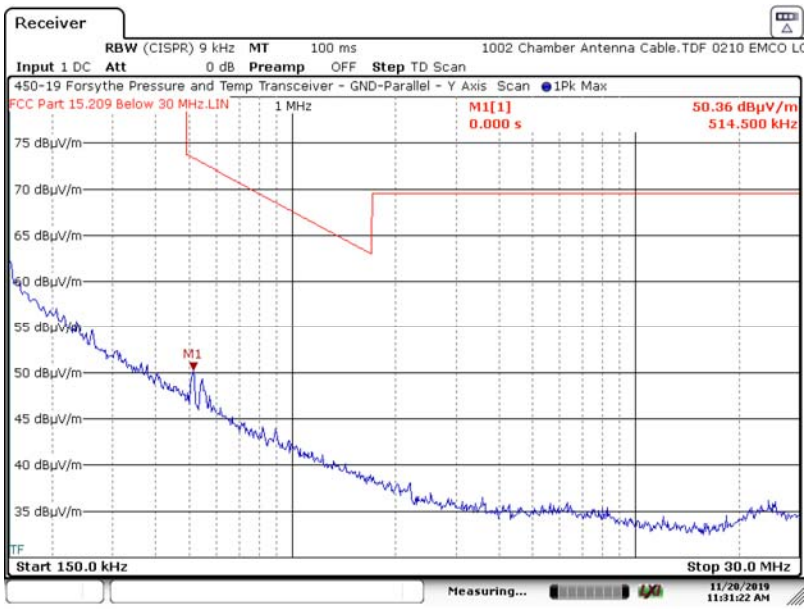
A.2.2. Spurious Radiated Emissions (150 kHz to 30 MHz)

A.2.2.2. Measurement Results – Perpendicular Antenna




Date: 20.NOV.2019 11:14:54

A.2.2.3. Measurement Results – Ground Parallel Antenna




Date: 20.NOV.2019 11:31:22



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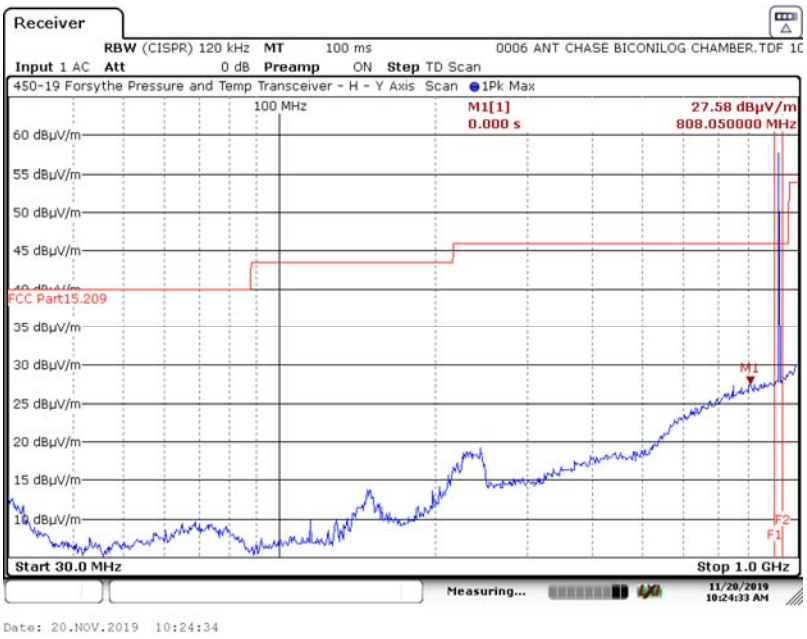
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.2. Device Orientation Y-Axis

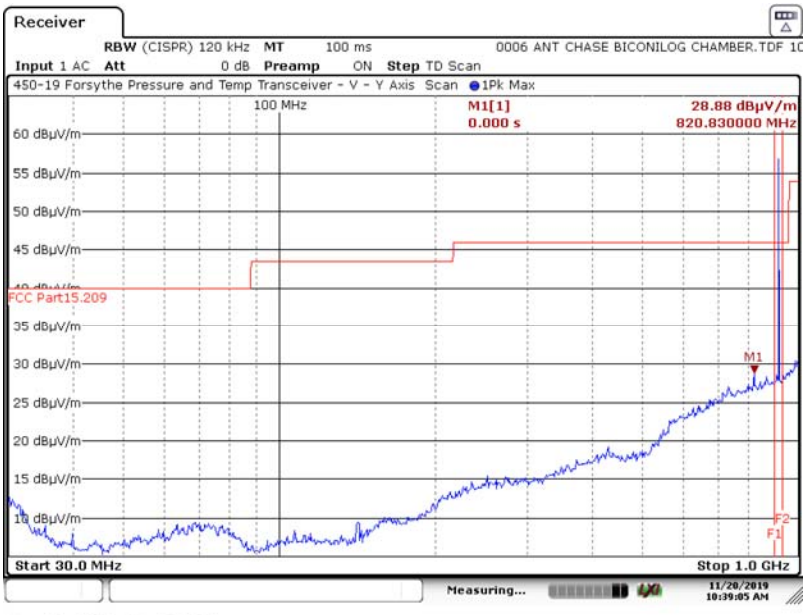
A.2.3. Spurious Radiated Emissions (30 MHz to 1 GHz)

A.2.3.1. Measurement Results – Horizontal Antenna




Date: 20.NOV.2019 10:24:34

A.2.3.2. Measurement Results – Vertical Antenna




Date: 20.NOV.2019 10:39:06



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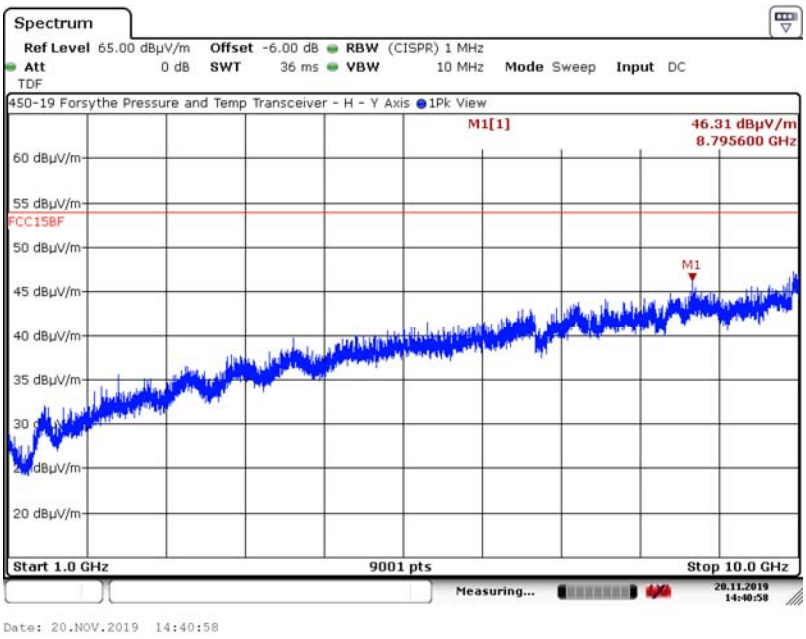
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.2. Device Orientation Y-Axis

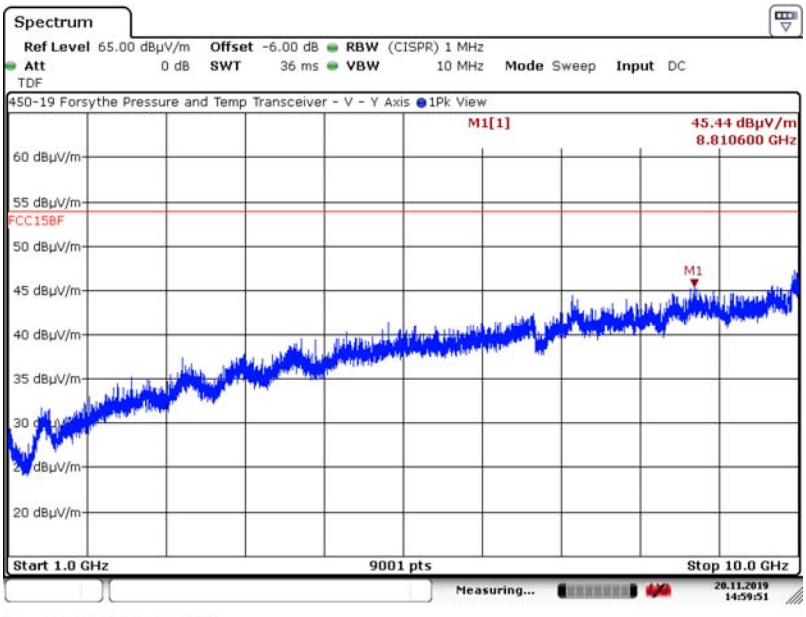
A.2.4. Spurious Radiated Emissions (1 GHz to 10 GHz)

A.2.4.1. Measurement Results – Horizontal Antenna




Date: 20.NOV.2019 14:40:58

A.2.4.2. Measurement Results – Vertical Antenna




Date: 20.NOV.2019 14:59:51



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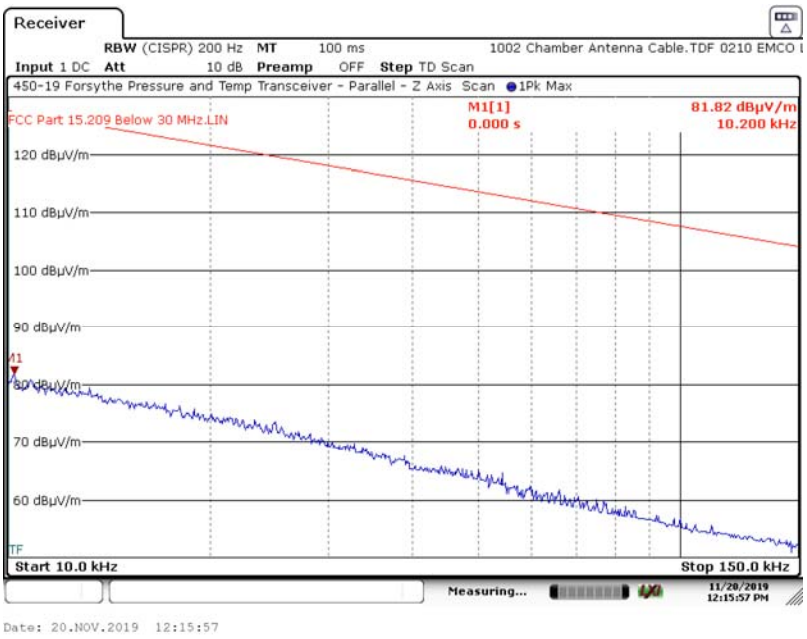
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

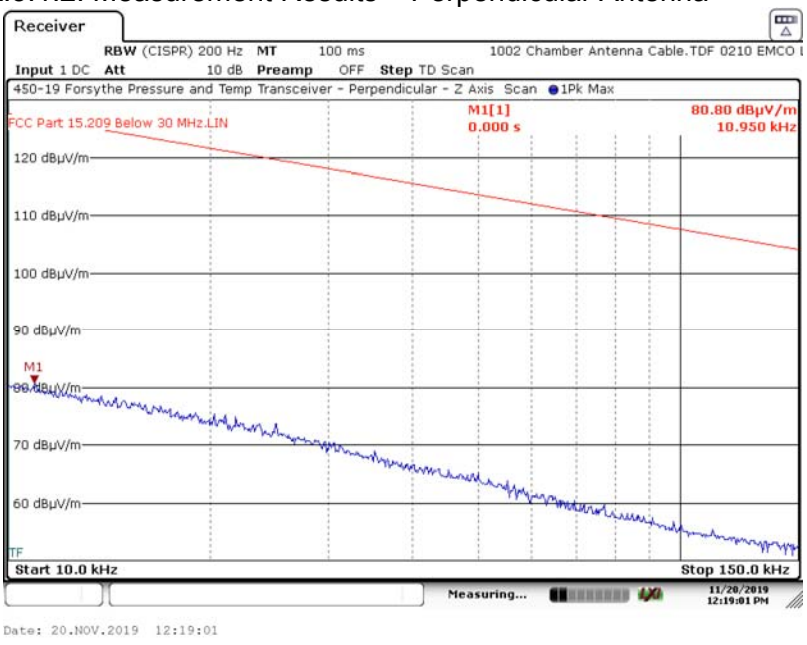
A.3. Device Orientation Z-Axis

A.3.1. Spurious Radiated Emissions (10 kHz to 150 kHz)

A.3.1.1. Measurement Results – Parallel Antenna




A.3.1.2. Measurement Results – Perpendicular Antenna



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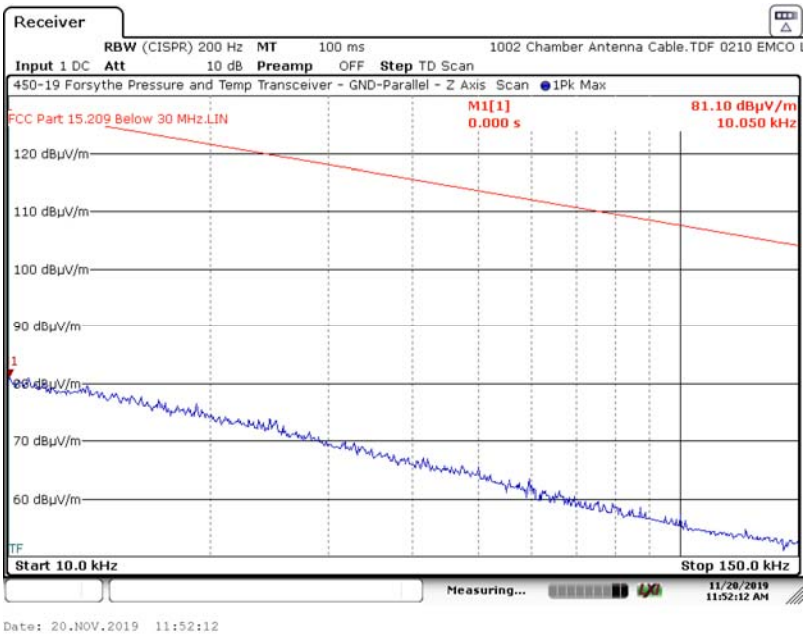
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.3. Device Orientation Z-Axis

A.3.1. Spurious Radiated Emissions (10 kHz to 150 kHz)

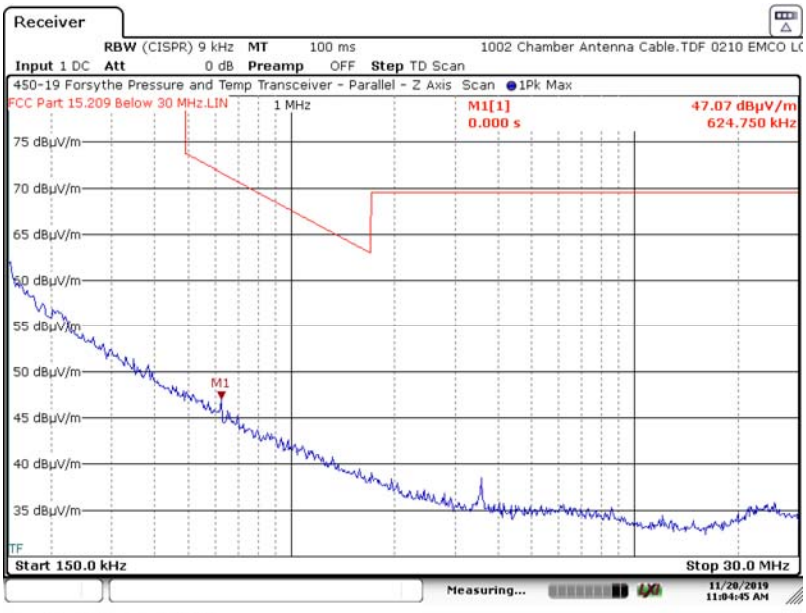
A.3.1.3. Measurement Results – Ground Parallel Antenna




Date: 20.NOV.2019 11:52:12

A.3.2. Spurious Radiated Emissions (150 kHz to 30 MHz)

A.3.2.1. Measurement Results – Parallel Antenna




Date: 20.NOV.2019 11:04:46



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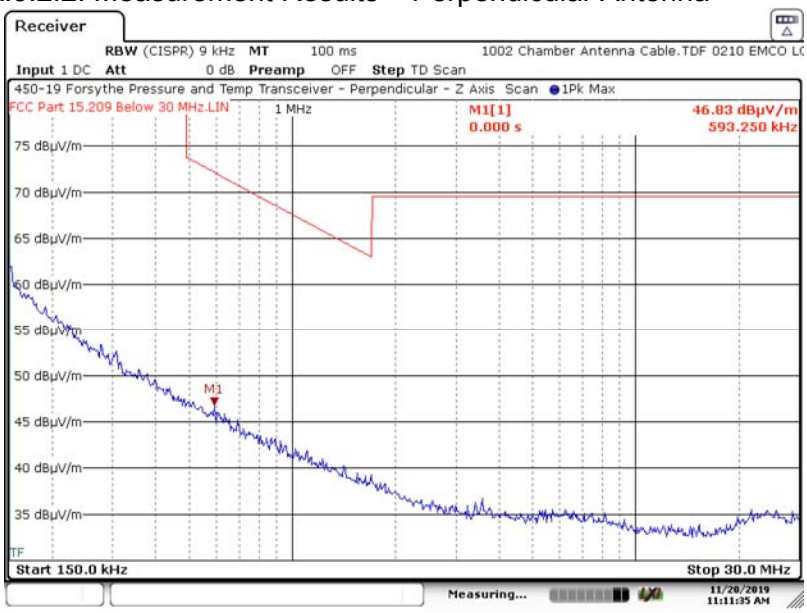
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.3. Device Orientation Z-Axis

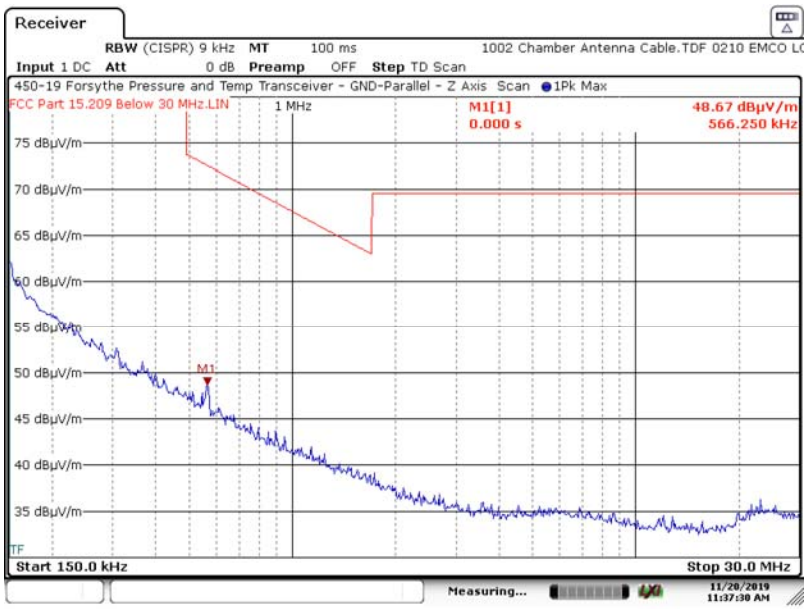
A.3.2. Spurious Radiated Emissions (150 kHz to 30 MHz)

A.3.2.2. Measurement Results – Perpendicular Antenna




Date: 20.NOV.2019 11:11:36

A.2.2.3. Measurement Results – Ground Parallel Antenna




Date: 20.NOV.2019 11:37:29



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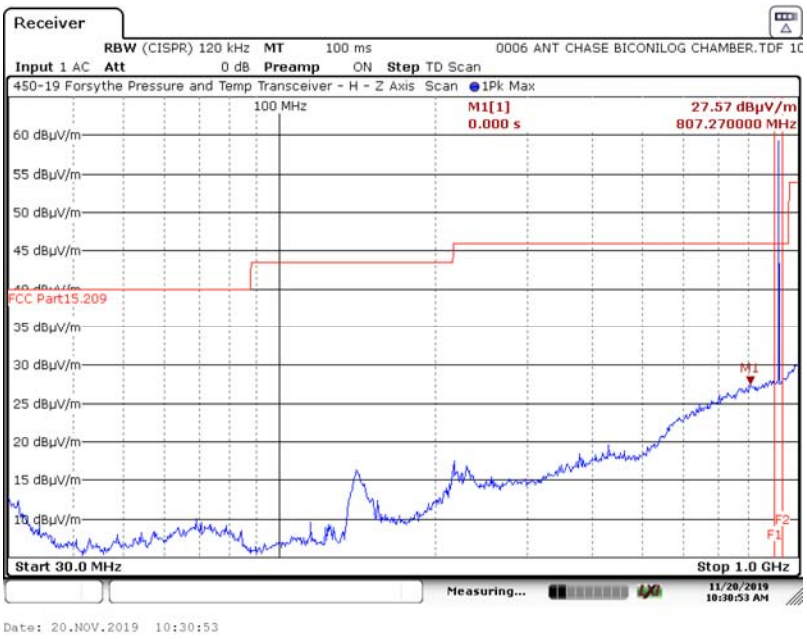
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.3. Device Orientation Y-Axis

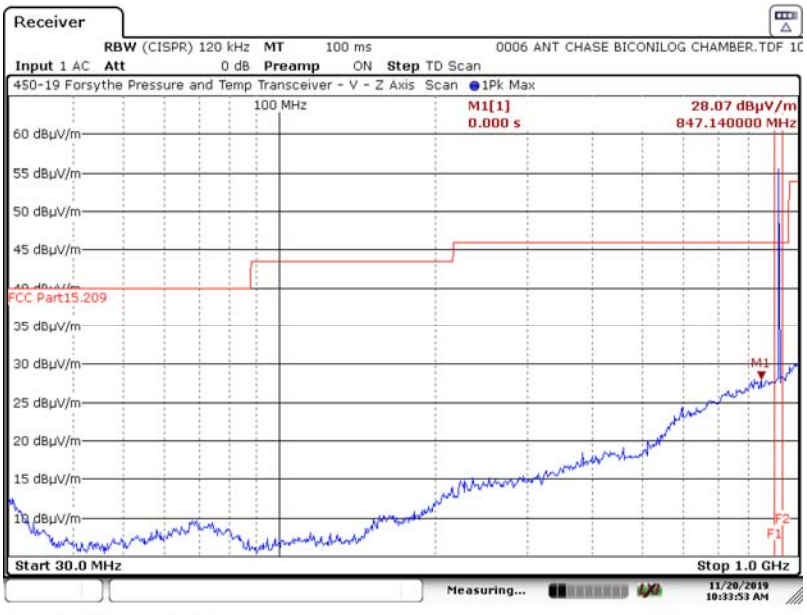
A.3.3. Spurious Radiated Emissions (30 MHz to 1 GHz)

A.3.3.1. Measurement Results – Horizontal Antenna




Date: 20.NOV.2019 10:30:53

A.3.3.2. Measurement Results – Vertical Antenna




Date: 20.NOV.2019 10:33:54



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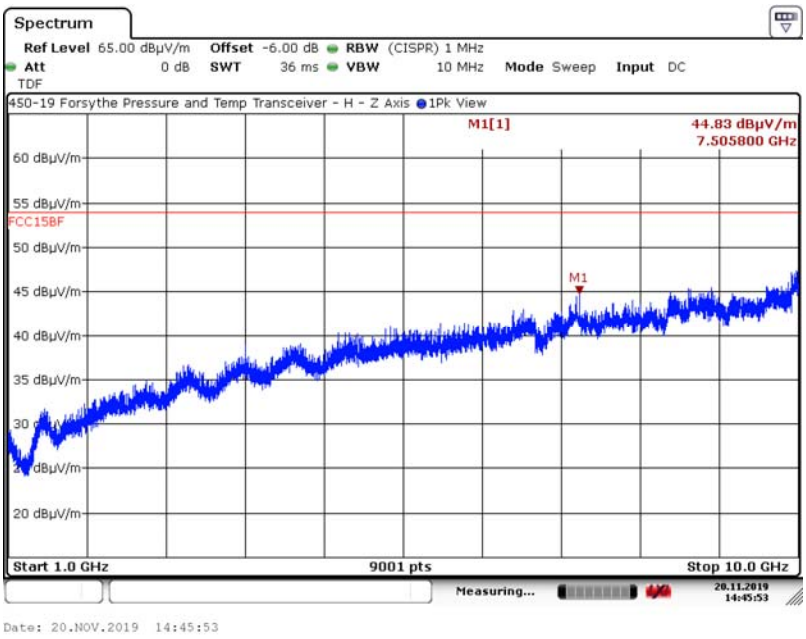
## Appendix A (continued)

### Spurious Radiated Emissions, 30 kHz to EUT 10th Harmonic (15.249, Section (d)), ISED RSS-GEN, Issue 4 (continued)

A.3. Device Orientation Z-Axis

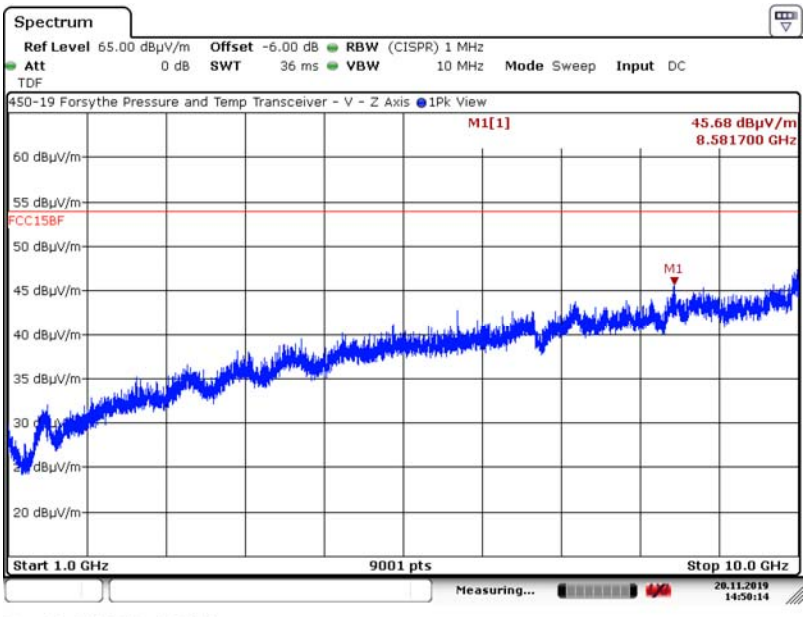
A.3.4. Spurious Radiated Emissions (1 GHz to 10 GHz)

A.3.4.1. Measurement Results – Horizontal Antenna




Date: 20.NOV.2019 14:45:53

A.3.4.2. Measurement Results – Vertical Antenna




Date: 20.NOV.2019 14:50:14



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