

Honeywell

FCC / ISED Test Report

For

SiXOCC

Report #: 47216

FCC ID: CFS8DL6OCC

IC ID: 573F-6OCC

Report Completion Date: 2018-03-06

Revised: 2018-03-21

Prepared by and for:

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Testing

NVLAP Lab Code: 600110

Document Introduction

Honeywell tested the above equipment in accordance with the requirements set forth in the listed standards. All indications of Pass/Fail in the report are opinions expressed by Honeywell based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

This document is a record of the FCC/ISED Test Report for Honeywell products. It demonstrates the data required to be analyzed to certify a product according to the requirements of the FCC & ISED.

The results in the report reflect only the model of the items under test unless noted otherwise. This document may not be altered or revised in any way unless done so by Honeywell and all revisions are duly noted in the revisions section. Any alterations of this document not carried out by Honeywell will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

| Test Report Revision History | | | | |
|-------------------------------------|--------------------|--------------------|---|---------------------|
| Revision | Prepared By | Reviewed By | Revision Detail | Release Date |
| --- | M. Antola | A. Roussin | Original Release | 2018-03-06 |
| A | M. Antola | A. Roussin | Updated 6dB bandwidth and Spurious Emissions test section for editorial corrections | 2018-03-06 |
| B | M. Antola | A. Roussin | Updated note in Duty Cycle test section | 2018-03-21 |

Report Authorization

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Honeywell International Inc.

Reviewed & Approved By:



Andrew Roussin
Hardware Engineer II
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Honeywell International Inc.

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| Applicable Test Standards/Limits | | |
|--|---------------|---------------------|
| Test Standards/Limits | Result | Dates Tested |
| ANSI C63.4: 2014 | Compliant | 2/8/18 – 3/6/18 |
| ANSI C63.10: 2013 | Compliant | 2/8/18 – 3/6/18 |
| ICES-003 Issue 6: 2016 | Compliant | 2/8/18 – 3/6/18 |
| RSS-247, Issue 2, Section 5 | Compliant | 2/8/18 – 3/6/18 |
| RSS-GEN, Issue 4 | Compliant | 2/8/18 – 3/6/18 |
| CFR 47 Pt 15 Subpart B, Section 15.107/109 | Compliant | 2/8/18 – 3/6/18 |
| CFR 47 Pt 15 Subpart C, Section 15.207/209 | Compliant | 2/8/18 – 3/6/18 |
| CFR 47 Pt 15 Subpart C, Section 15.247 | Compliant | 2/8/18 – 3/6/18 |

| Deviations from Test Methods | |
|-------------------------------------|------------------------------|
| # | Deviation Description |
| 0 | None |

| Facilities and Accreditation |
|---|
| The test site and measurement facility used to collect data are located at 2 Corporate Center Dr., Melville, NY 11747, USA. Honeywell International is accredited by NVLAP, Laboratory Code 600110-0. The full scope of accreditation can be viewed at the NVLAP website. |

| Test Item Description |
|--|
| <p>The SiXOCC wireless occupancy module is a battery powered 2.4 GHz IEEE 802.15.4-compliant transceiver, intended for use with Honeywell controls that support SiX™ series devices. It provides an ambient light sensor, vibration sensor, thermal sensor, and IR temperature sensor (pyro). It also has tamper detection.</p> <p>The module uses the Honeywell SiX™ RF protocol to send alert messages to the Honeywell control in the event of change in lighting, vibration, temperature change, excessive heat, low battery, or a tamper condition.</p> <p>In addition, the SiXOCC sends a regular supervision or check-in RF message, no more often than once per hour.</p> <p>The device contains two (2) F-type printed inverted antennas, each having a gain of 2dBi.</p> |

Worse-Case Configuration & Mode

Radiated emissions was performed with the EUT set to transmit at the channel with the highest output power as worst-case scenario. The EUT was tested in all three orthogonal planes in order to determine the worst-case emissions. It was determined that the Y axis orientation was the worst-case orientation. Therefore, all final radiated test was performed with the EUT in the Y axis orientation.

Test Sample Identification

| Sample ID Number | Sample Serial Number | Date Received |
|-------------------------|--------------------------------|----------------------|
| MEL-428 | Non-serialized production unit | 01/31/18 |
| MEL-429 | Non-serialized production unit | 02/07/18 |
| | | |
| | | |
| | | |
| | | |

Calibration & Measurement Uncertainty

- Measuring Instrument Calibration – The measuring equipment utilized to perform the tests documented in this report have been calibrated in accordance with the manufacturer’s recommendations and is traceable to recognized national standards.
- Sample Calculation – Where relevant, the following sample calculation is provided:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamp Gain (dB)}$$

[i.e.] $37 \text{ dBuV/m} = 30 \text{ dBuV} + 18.5 \text{ dB/m} + 0.5 \text{ dB} - 12 \text{ dB}$

- Uncertainty - Figures are valid to a confidence level of 95%.

| Test | Standard Uncertainty |
|---|----------------------|
| Radiated Emissions (30-200MHz Horizontal) | +/- 5.05 dB |
| Radiated Emissions (30-200MHz Vertical) | +/- 5.28 dB |
| Radiated Emissions (200-1000MHz Horizontal) | +/- 10.21 dB |
| Radiated Emissions (200-1000MHz Vertical) | +/- 10.36 dB |
| Radiated Emissions (Above 1GHz) | +/- 9.70 dB |
| Conducted Emissions (150KHz-30MHz) | +/- 4.36 dB |

Opinions / Interpretations

None

Test Summary

All tests described below are required, unless otherwise noted. Notes should be described in detail in the "Additional notes" section.

| # | Test Description | Status |
|---|--|--------|
| 1 | 99% Bandwidth | PASS |
| 2 | 6 dB Occupied Bandwidth | PASS |
| 3 | Maximum Conducted Output Power | PASS |
| 4 | Maximum Power Spectral Density | PASS |
| 5 | Band Edge / Conducted Spurious Emissions | PASS |
| 6 | Radiated Emissions (Unintentional) | PASS |
| 7 | Radiated Emissions (Intentional) | PASS |

On Time and Duty Cycle

Test Description

Refer to KDB 558074 Zero-Span Analyzer Method.

Test Criteria

| Reference | Limit |
|-----------------------|--------------------------|
| KDB 558074, Section 6 | None, for reporting only |

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|---------------|----------|------------------|----------------|-----------------|---------------|
| MA | RF Lab | 03/01/18 | 21.2 | 28.2 | 1008 | P |

Equipment List

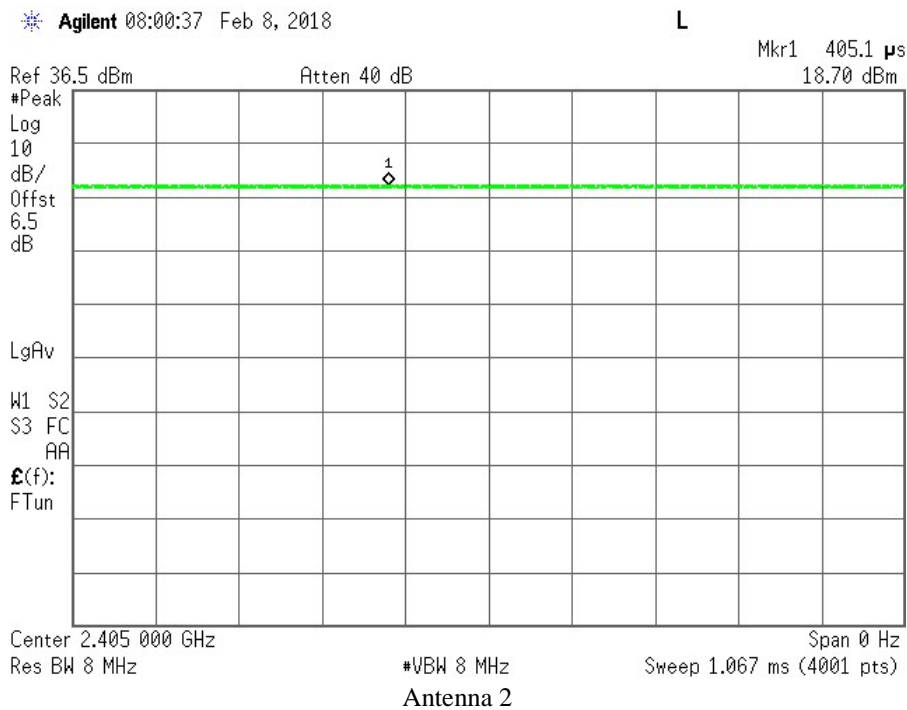
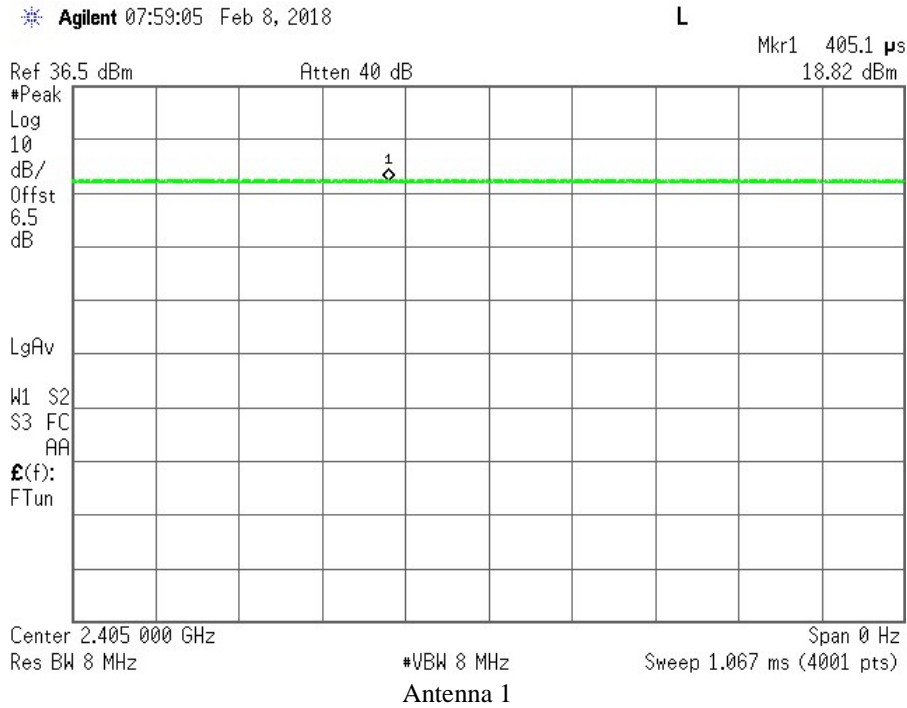
| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|---------------------|-------|------------|--------------------|--------|----------|--------------|
| Spectrum Analyzer | 11549 | MY46187211 | Agilent | E4440A | 06/06/17 | 06/06/19 |
| Environmental Meter | 11548 | A078188 | Extech Instruments | SD700 | 04/24/17 | 04/24/18 |

Test Results

| Antenna | On Time (usec) | Period (usec) | Duty Cycle | Duty Cycle (%) |
|---------|----------------|---------------|------------|----------------|
| 1 | 405 | 405 | 1 | 100 |
| 2 | 405 | 405 | 1 | 100 |

Note: The duty cycle used for testing was 100%. In normal operation, the device is limited by the protocol to a maximum operational duty factor of 6.976% (refer to additional exhibits in this filing) and this value is used to determine the average level of radiated spurious emissions related to the fundamental from the measured peak level of the spurious emission using the 20log(d) factor allowed under section 12.5.2.2 (4) of KDB 558074.

Duty Cycle Plots



6dB Occupied Bandwidth (DTS Bandwidth)

Test Description

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission. Refer to KDB 558074 D01 DTS Meas Guidance v04.

Test Criteria

| Reference | Limit |
|---|----------|
| CFR 47 Subpart C 15.247 (a)(2) RSS-247 Section 5.2 (a) | ≥ 500kHz |

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|---------------|----------|------------------|----------------|-----------------|---------------|
| JB | RF Lab | 02/08/18 | 21 | 35 | 1022 | P |

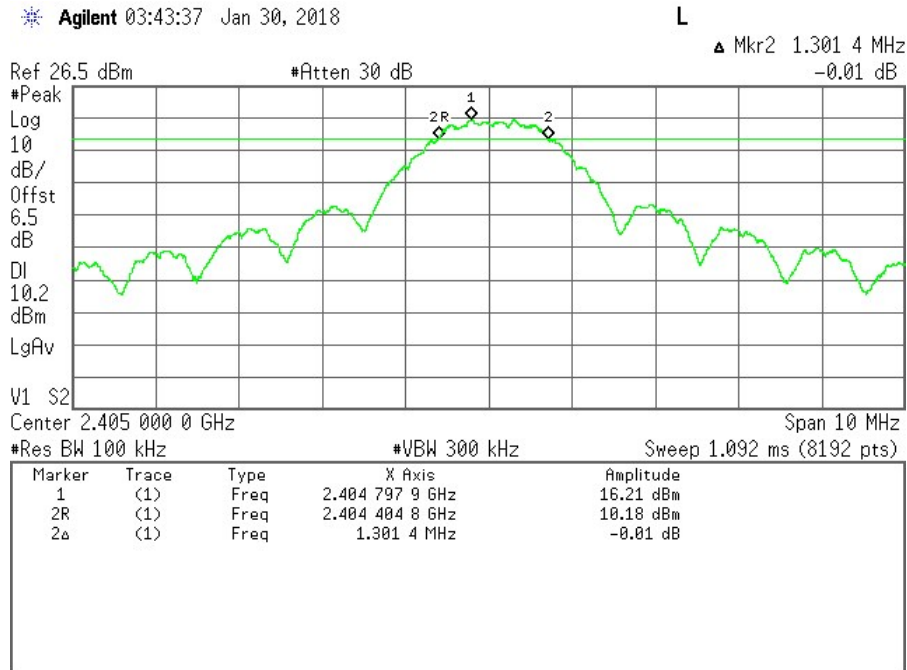
Equipment List

| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|---------------------|-------|------------|--------------------|--------|----------|--------------|
| Spectrum Analyzer | 11549 | MY46187211 | Agilent | E4440A | 06/06/17 | 06/06/19 |
| Environmental Meter | 11548 | A078188 | Extech Instruments | SD700 | 04/24/17 | 04/24/18 |

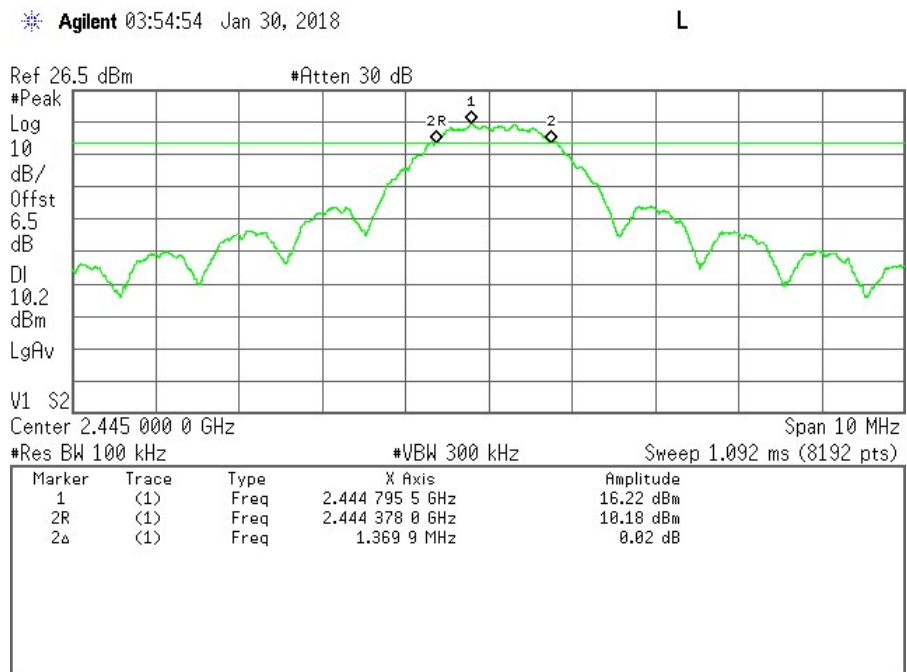
Test Results

| Channel | Frequency (GHz) | 6dB Bandwidth (in MHz) | |
|---------|-----------------|------------------------|-----------|
| | | Antenna 1 | Antenna 2 |
| Low | 2405 | 1.301 | 1.301 |
| Mid | 2445 | 1.370 | 1.337 |
| High | 2475 | 1.482 | 1.482 |

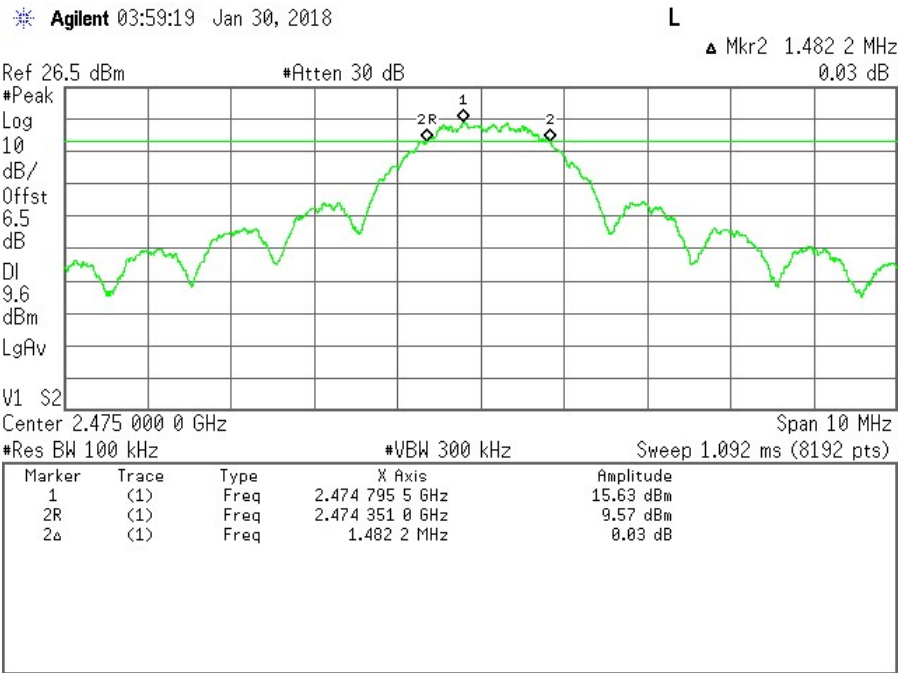
6dB Bandwidth



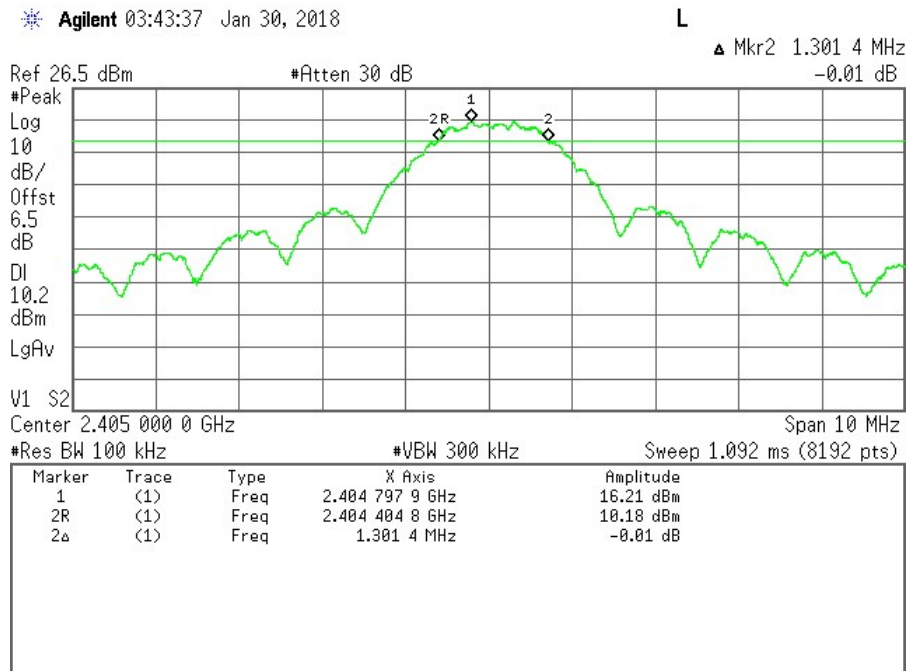
Antenna 1: Low Channel - Plot



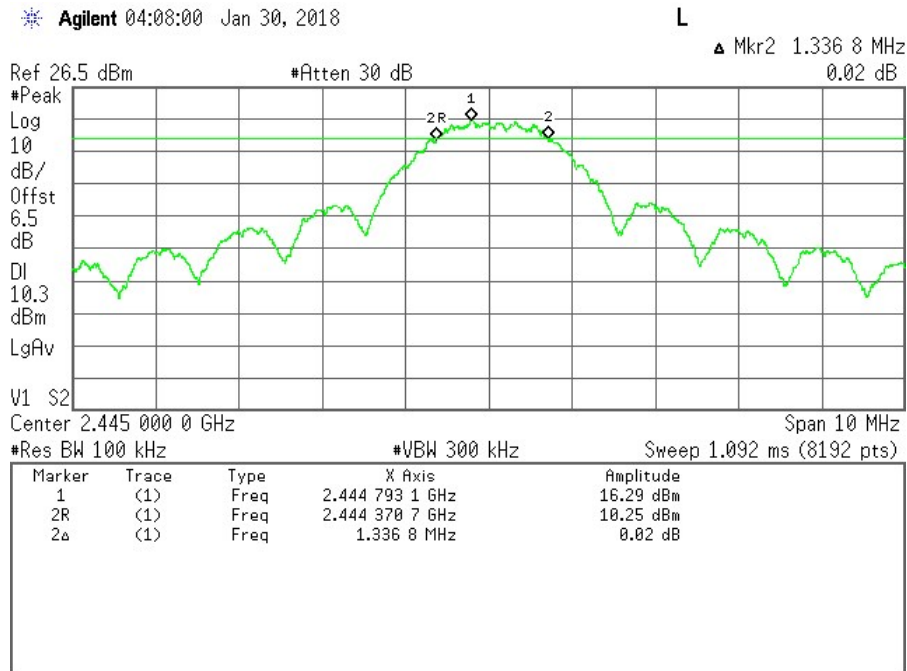
Antenna 1: Mid Channel - Plot



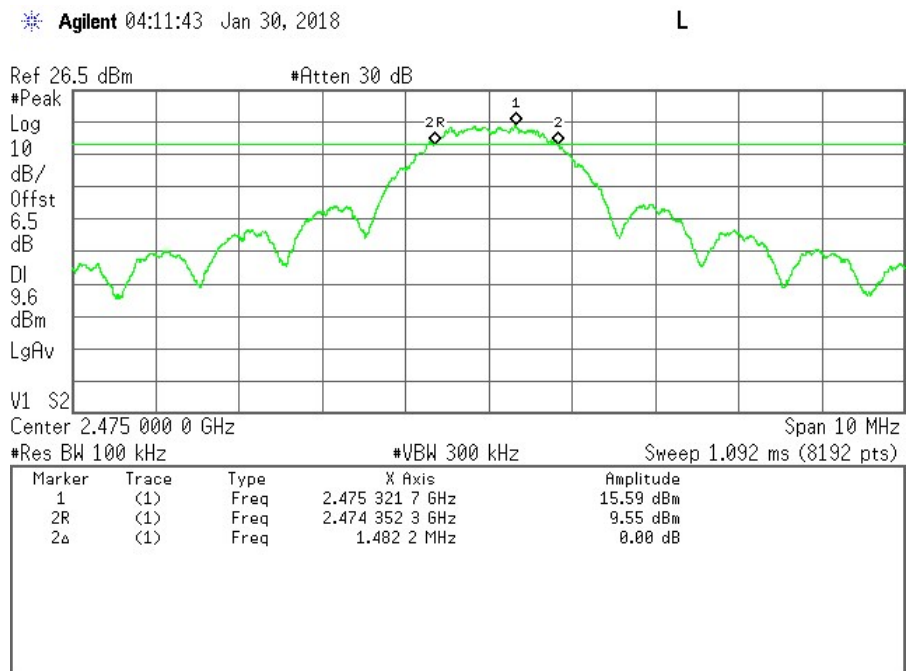
Antenna 1: High Channel – Plot



Antenna 2: Low Channel - Plot



Antenna 2: Mid Channel – Plot



Antenna 2: High Channel - Plot

99% Bandwidth

Test Description

The emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth.

When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured.

Test Criteria

| Reference | Limit |
|----------------------|-------|
| RSS-GEN, Section 6.6 | N/A |

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|---------------|----------|------------------|----------------|-----------------|---------------|
| JB | RF Lab | 02/08/18 | 21 | 35 | 1022 | P |

Equipment List

| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|---------------------|-------|------------|--------------------|--------|----------|--------------|
| Spectrum Analyzer | 11549 | MY46187211 | Agilent | E4440A | 06/06/17 | 06/06/19 |
| Environmental Meter | 11548 | A078188 | Extech Instruments | SD700 | 04/24/17 | 04/24/18 |

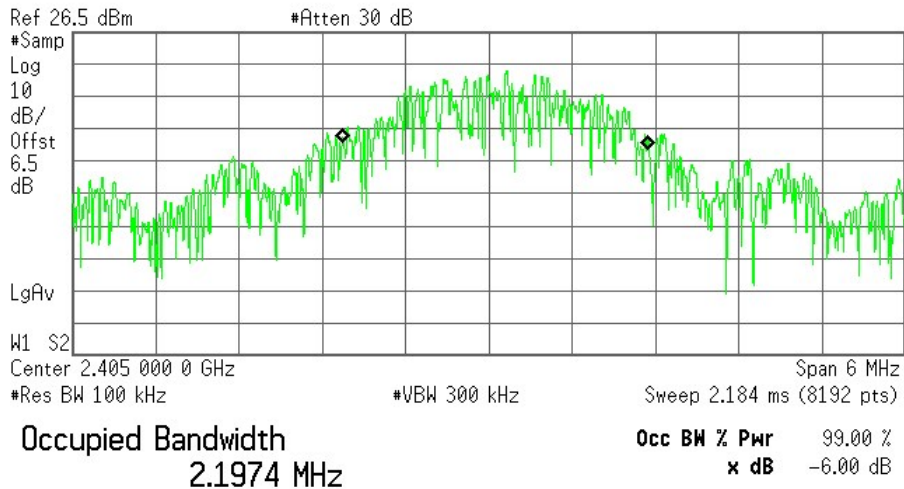
Test Results

| Channel | Frequency (GHz) | 99% Bandwidth (in MHz) | |
|---------|-----------------|------------------------|-----------|
| | | Antenna 1 | Antenna 2 |
| Low | 2045 | 2.197 | 2.267 |
| Mid | 2445 | 2.229 | 2.242 |
| High | 2475 | 2.298 | 2.284 |

99% Bandwidth

Agilent 04:57:05 Jan 30, 2018

L

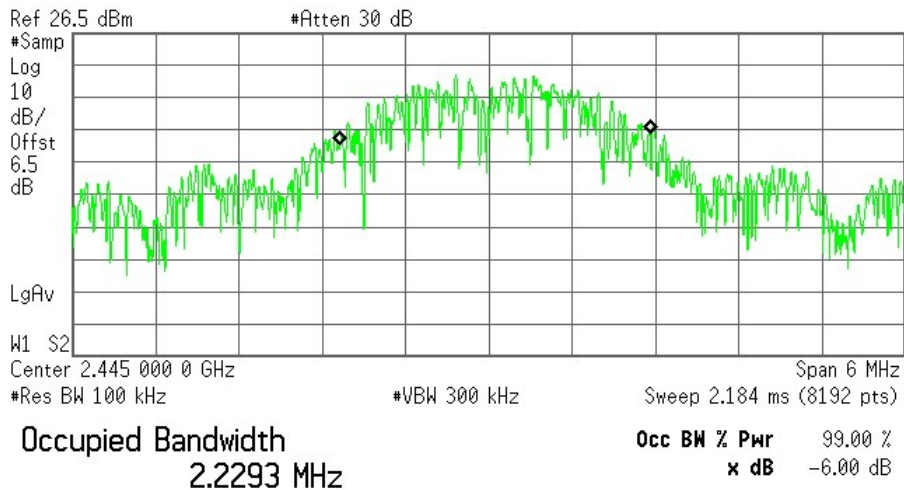


Transmit Freq Error 41.204 kHz
x dB Bandwidth 1.006 MHz*

Antenna 1: Low Channel - Plot

Agilent 06:59:55 Jan 30, 2018

L

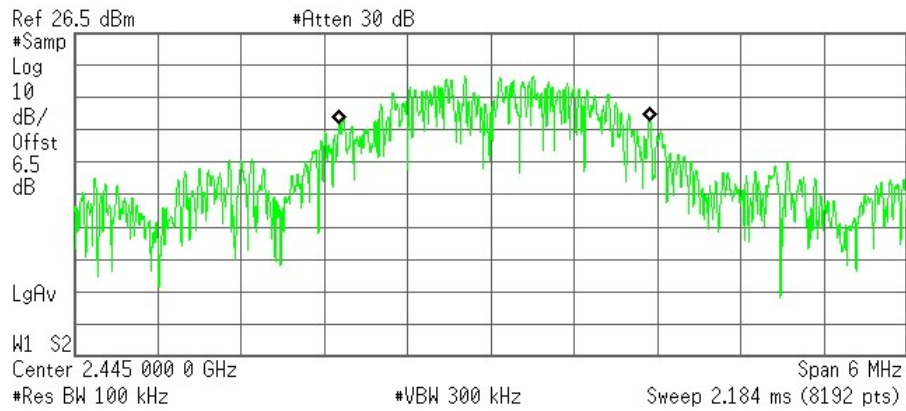


Transmit Freq Error 45.363 kHz
x dB Bandwidth 1.345 MHz*

Antenna 1: Mid Channel - Plot

Agilent 07:05:31 Jan 30, 2018

L



Occupied Bandwidth
2.2415 MHz

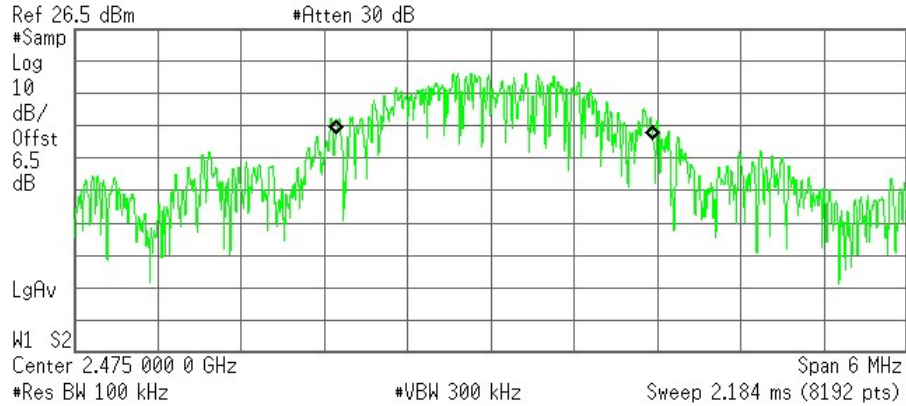
Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error 28.351 kHz
x dB Bandwidth 1.556 MHz*

Antenna 2: Mid Channel - Plot

Agilent 07:07:02 Jan 30, 2018

L



Occupied Bandwidth
2.2842 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error 26.777 kHz
x dB Bandwidth 1.413 MHz*

Antenna 2: High Channel - Plot

Maximum Conducted Output Power

Test Description

For systems using digital modulation in the 902-928MHz, 2400-2483,5MHz and 5725-5850MHz bands, the conducted output power limit (specified below) is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Maximum conducted (average) output power was the method employed to determine fundamental emission output power.

Method AVGSA-1 per C63.10 and KDB 558074 was utilized for this test program.

Test Criteria

| Reference | Limit |
|---|------------|
| CFR 47 Subpart C 15.247 (b)(3) RSS-247 Section 5.4 (d) | 1W (30dBm) |

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|---------------|----------|------------------|----------------|-----------------|---------------|
| JB | RF Lab | 02/12/18 | 21 | 35 | 1022 | P |

Equipment List

| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|---------------------|-------|------------|--------------------|--------|----------|--------------|
| Spectrum Analyzer | 11549 | MY46187211 | Agilent | E4440A | 06/06/17 | 06/06/19 |
| Environmental Meter | 11548 | A078188 | Extech Instruments | SD700 | 04/24/17 | 04/24/18 |

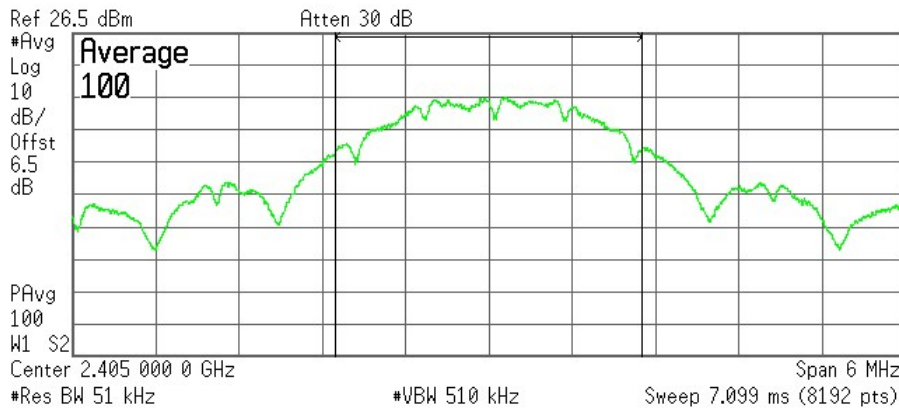
Test Results

| Channel | Frequency (GHz) | Tx Channel BW Power (dBm) | |
|---------|-----------------|---------------------------|-----------|
| | | Antenna 1 | Antenna 2 |
| Low | 2405 | 18.29 | 18.24 |
| Mid | 2445 | 18.50 | 18.53 |
| High | 2475 | 18.46 | 18.52 |

Output Power

Agilent 03:01:09 Feb 3, 2018

L



Channel Power

18.29 dBm /2.1974 MHz

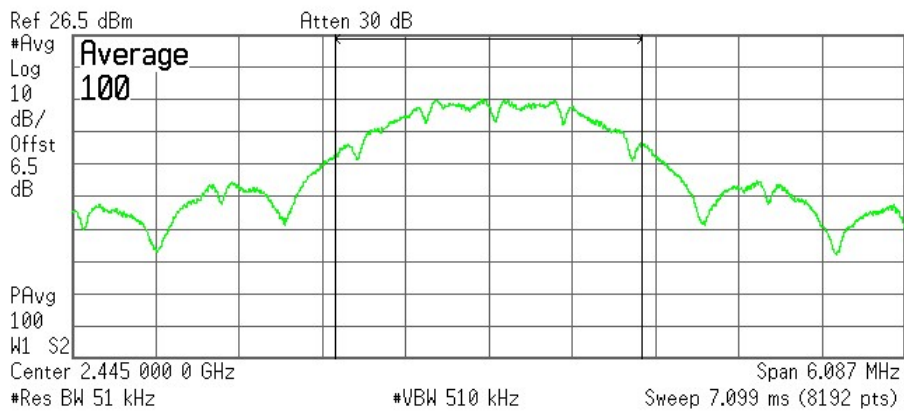
Power Spectral Density

-45.13 dBm/Hz

Antenna 1: Low Channel - Plot

Agilent 03:03:51 Feb 3, 2018

L



Channel Power

18.50 dBm /2.2293 MHz

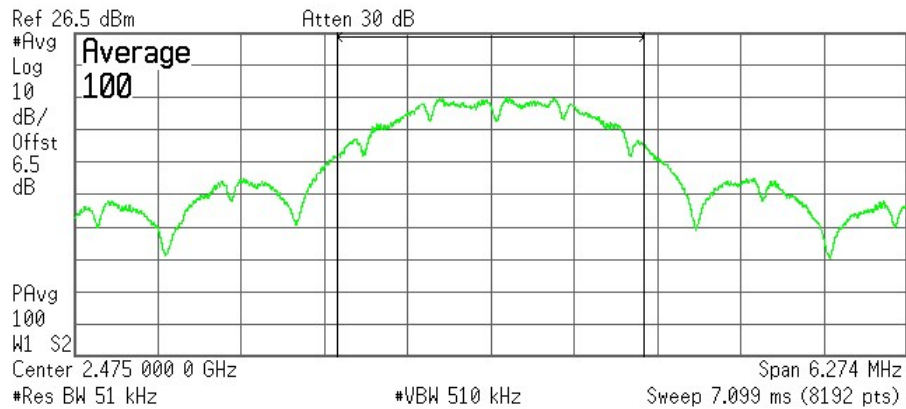
Power Spectral Density

-44.98 dBm/Hz

Antenna 1: Mid Channel - Plot

Agilent 03:06:04 Feb 3, 2018

L



Channel Power

18.46 dBm /2.2977 MHz

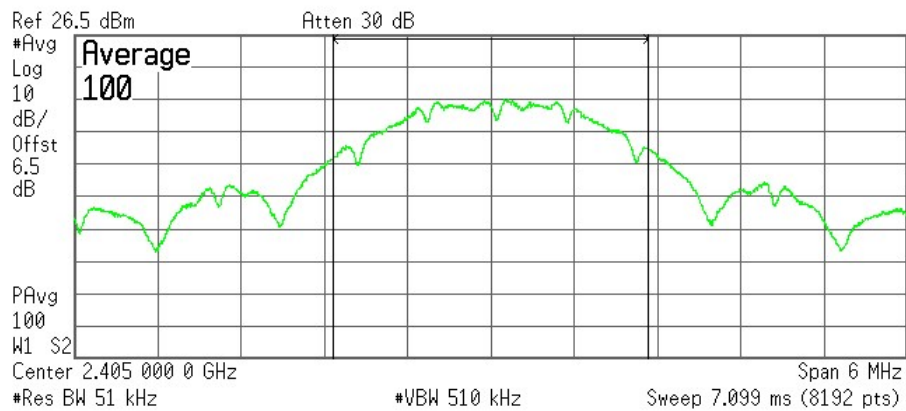
Power Spectral Density

-45.15 dBm/Hz

Antenna 1: High Channel - Plot

Agilent 03:13:45 Feb 3, 2018

L



Channel Power

18.24 dBm /2.2668 MHz

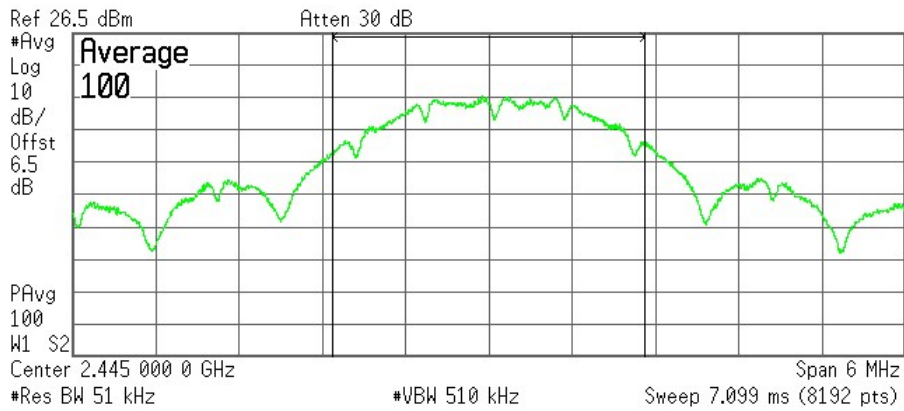
Power Spectral Density

-45.31 dBm/Hz

Antenna 2: Low Channel - Plot

Agilent 03:16:08 Feb 3, 2018

L



Channel Power

18.53 dBm /2.2415 MHz

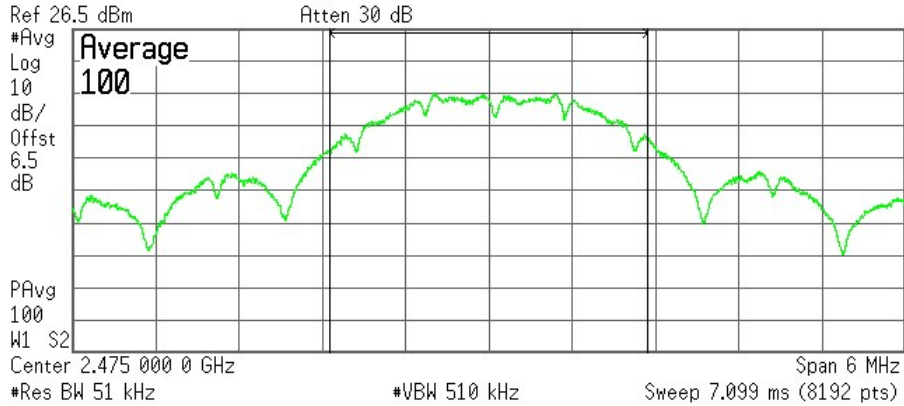
Power Spectral Density

-44.98 dBm/Hz

Antenna 2: Mid Channel - Plot

Agilent 03:17:38 Feb 3, 2018

L



Channel Power

18.52 dBm /2.2842 MHz

Power Spectral Density

-45.06 dBm/Hz

Antenna 2: High Channel - Plot

Maximum Power Spectral Density

Test Description

The DTS rules specify a conducted PSD limit within the *DTS bandwidth* during any time interval of continuous transmission. Such specifications require that the same method as used to determine the conducted output power shall also be used to determine the power spectral density. Therefore, if maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used.

Since maximum conducted (average) output power was the method employed to determine fundamental emission output power, then the peak / average power spectral density method was utilized.

Method AVGPS-1 per C63.10 and KDB 558074 was utilized for this test program.

Test Criteria

| Reference | Limit |
|--|---------------------------|
| CFR 47 Subpart C 15.247 (e) RSS-247 Section 5.2 (b) | < 8 dBm in any 3 kHz Band |

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|---------------|----------|------------------|----------------|-----------------|---------------|
| MA | RF Lab | 03/01/18 | 21 | 35 | 1022 | P |

Equipment List

| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|---------------------|-------|------------|--------------------|--------|----------|--------------|
| Spectrum Analyzer | 11549 | MY46187211 | Agilent | E4440A | 06/06/17 | 06/06/19 |
| Environmental Meter | 11548 | A078188 | Extech Instruments | SD700 | 04/24/17 | 04/24/18 |

Test Results

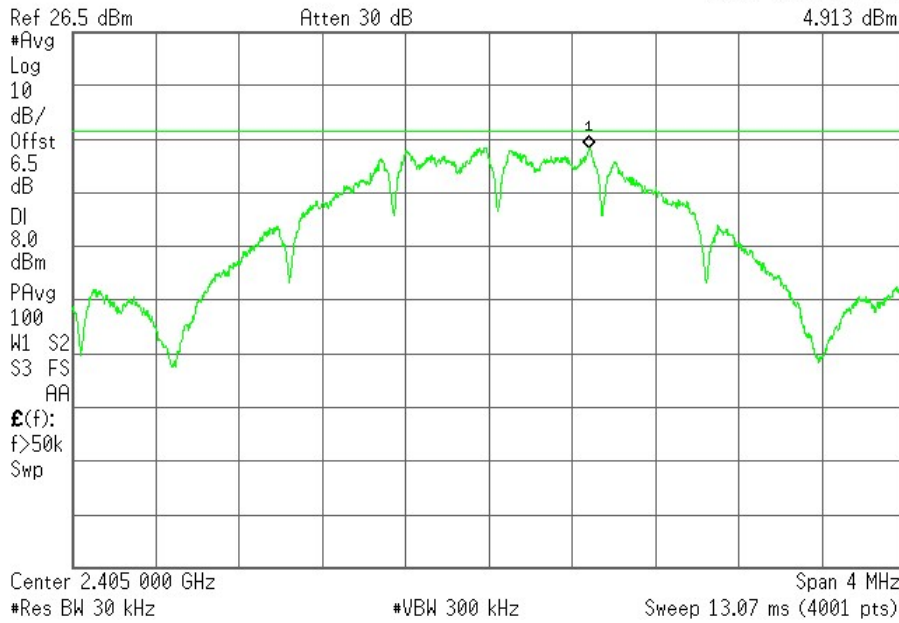
| Channel | Frequency (GHz) | Max Power (dBm) | |
|---------|-----------------|-----------------|-----------|
| | | Antenna 1 | Antenna 2 |
| Low | 2405 | 4.91 | 4.63 |
| Mid | 2445 | 4.90 | 4.80 |
| High | 2475 | 4.86 | 4.74 |

PSD

Agilent 08:05:53 Feb 8, 2018

L

Mkr1 2.405 483 GHz
4.913 dBm

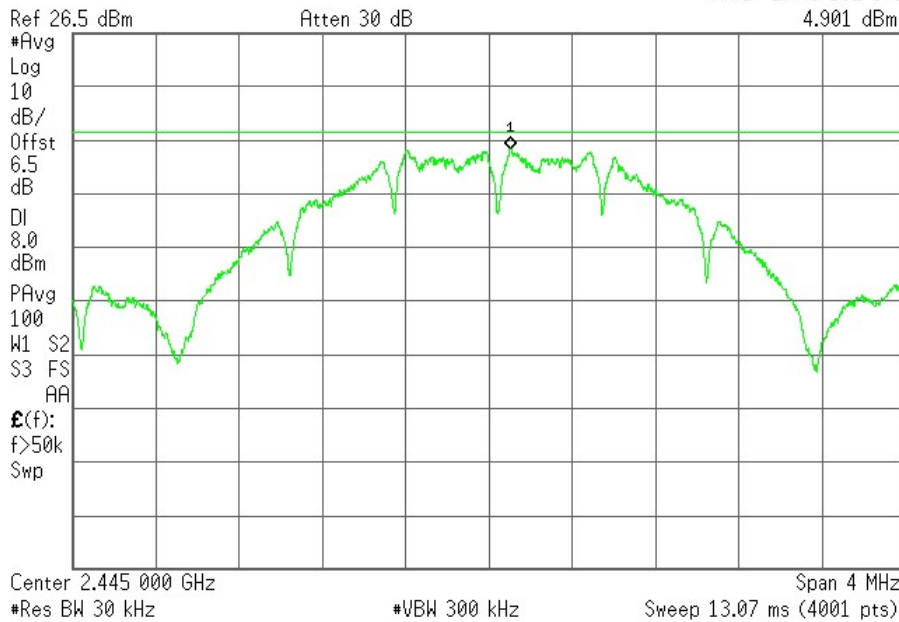


Antenna 1: Low Channel - Plot

Agilent 08:06:38 Feb 8, 2018

L

Mkr1 2.445 102 GHz
4.901 dBm

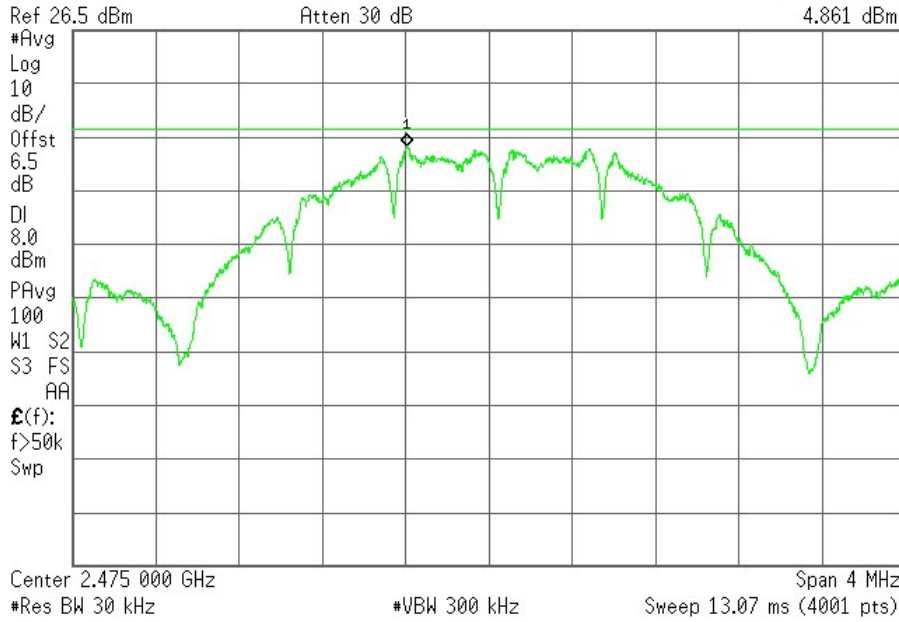


Antenna 1: Mid Channel - Plot

Agilent 08:07:20 Feb 8, 2018

L

Mkr1 2.474 607 GHz
4.861 dBm

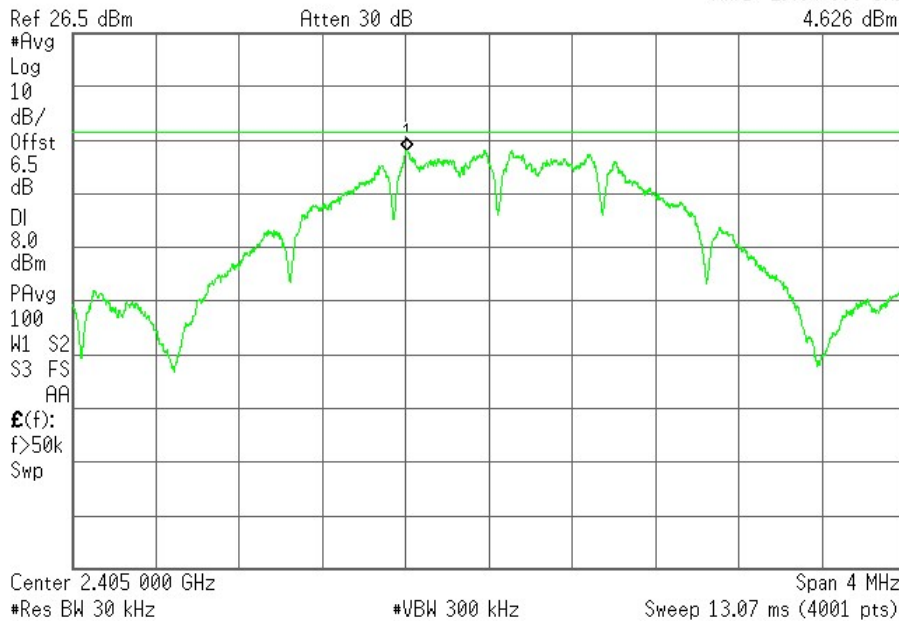


Antenna 1: High Channel - Plot

Agilent 08:02:30 Feb 8, 2018

L

Mkr1 2.404 606 GHz
4.626 dBm

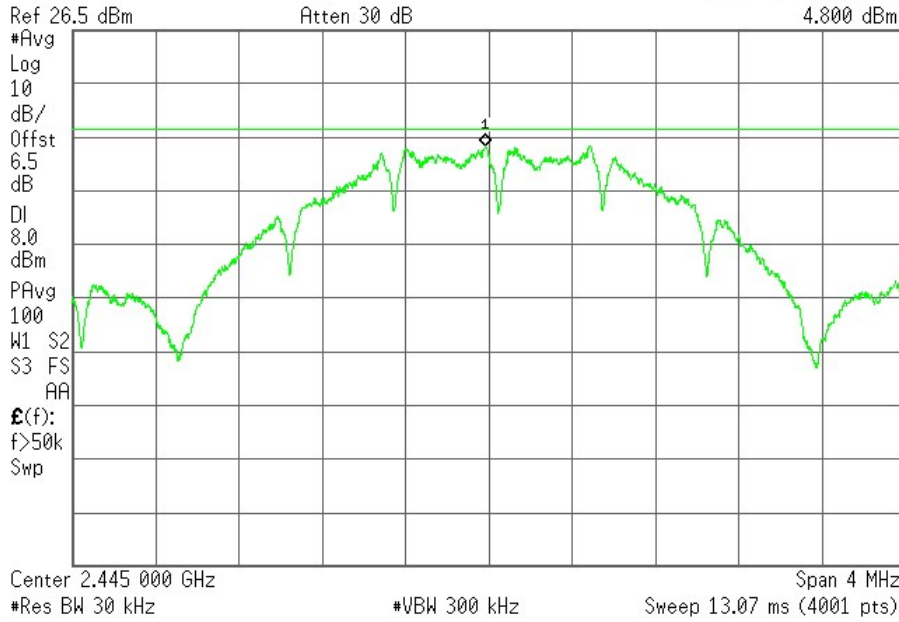


Antenna 2: Low Channel - Plot

Agilent 08:03:31 Feb 8, 2018

L

Mkr1 2.444 982 GHz
4.800 dBm

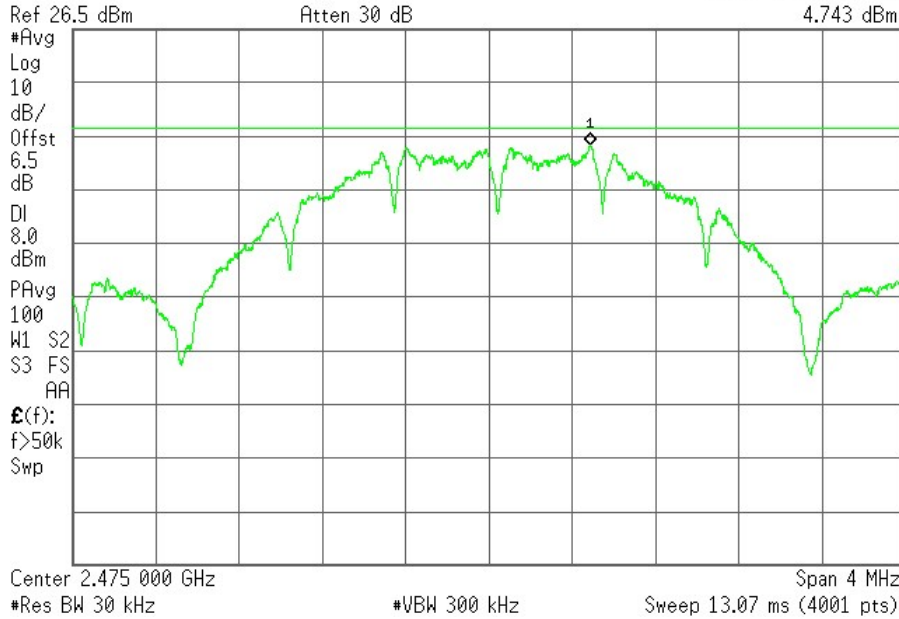


Antenna 2: Mid Channel - Plot

Agilent 08:04:49 Feb 8, 2018

L

Mkr1 2.475 487 GHz
4.743 dBm



Antenna 2: High Channel - Plot

Authorized Band Edge / Conducted Spurious Emissions

Test Description

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Test Criteria

| Reference | Limit |
|---|----------------------------|
| CFR 47 Subpart C 15.247 (d) RSS-247, Section 5.5 | 30dB Below the Fundamental |

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|---------------|----------|------------------|----------------|-----------------|---------------|
| JB | RF Lab | 02/08/18 | 21 | 35 | 1022 | P |

Equipment List

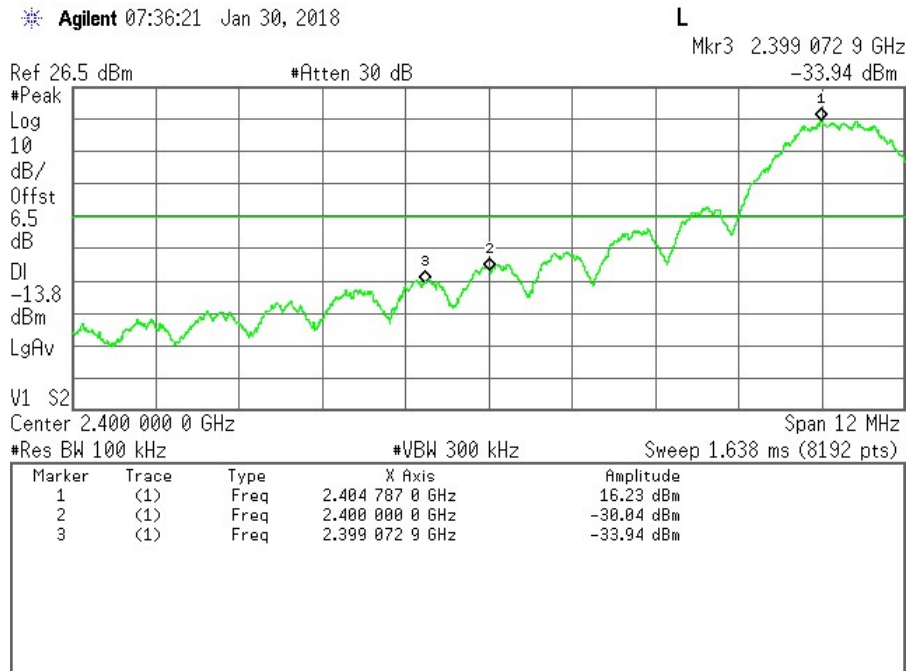
| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|---------------------|-------|------------|--------------------|--------|----------|--------------|
| Spectrum Analyzer | 11549 | MY46187211 | Agilent | E4440A | 06/06/17 | 06/06/19 |
| Environmental Meter | 11548 | A078188 | Extech Instruments | SD700 | 04/24/17 | 04/24/18 |

Test Results

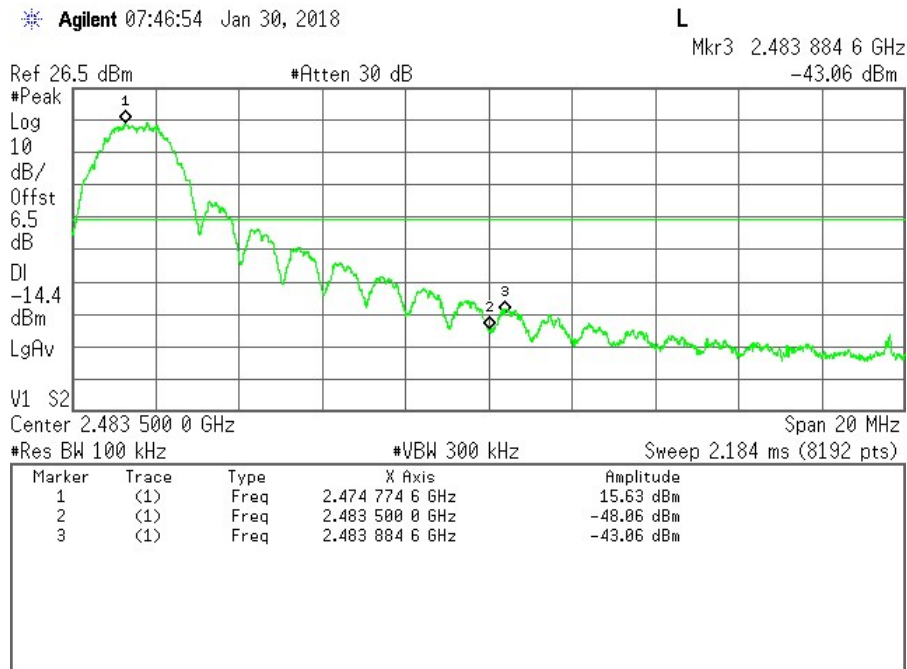
| Authorized Band Edge | | | |
|----------------------|-----------------|---------------------------|-----------|
| Channel | Frequency (GHz) | Delta from Band edge (dB) | |
| | | Antenna 1 | Antenna 2 |
| Low | 2405 | -16.24 | -10.85 |
| High | 2475 | -33.66 | -33.14 |

| Conducted Spurious | | | |
|--------------------|-----------------|---|-----------|
| Channel | Frequency (GHz) | Highest Spurious Emission Delta from Limit (dB) | |
| | | Antenna 1 | Antenna 2 |
| Low | 2405 | -34.87 | -35.22 |
| Mid | 2445 | -33.91 | -36.71 |
| High | 2475 | -35.9 | -34.8 |

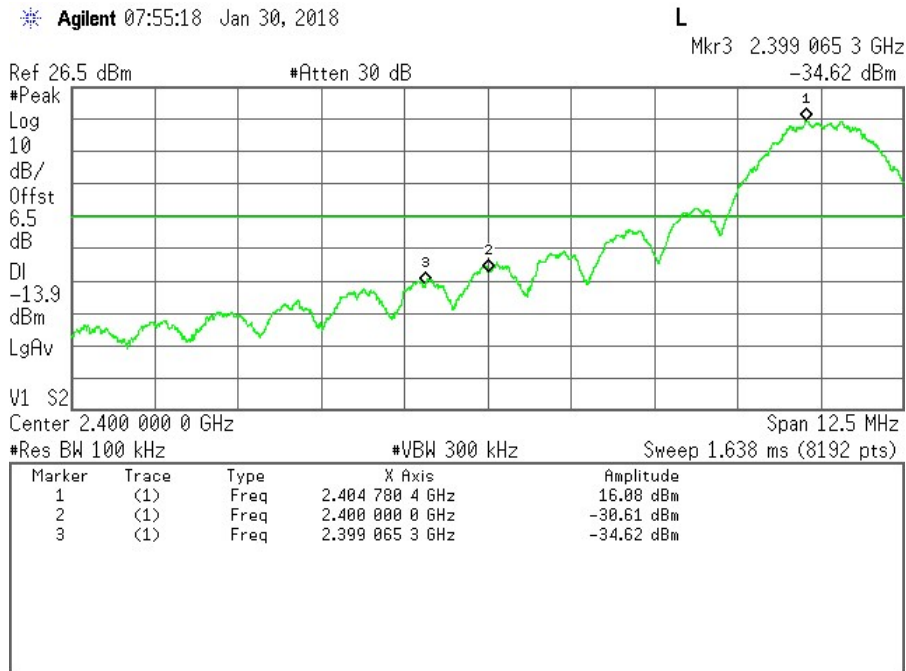
Band Edge



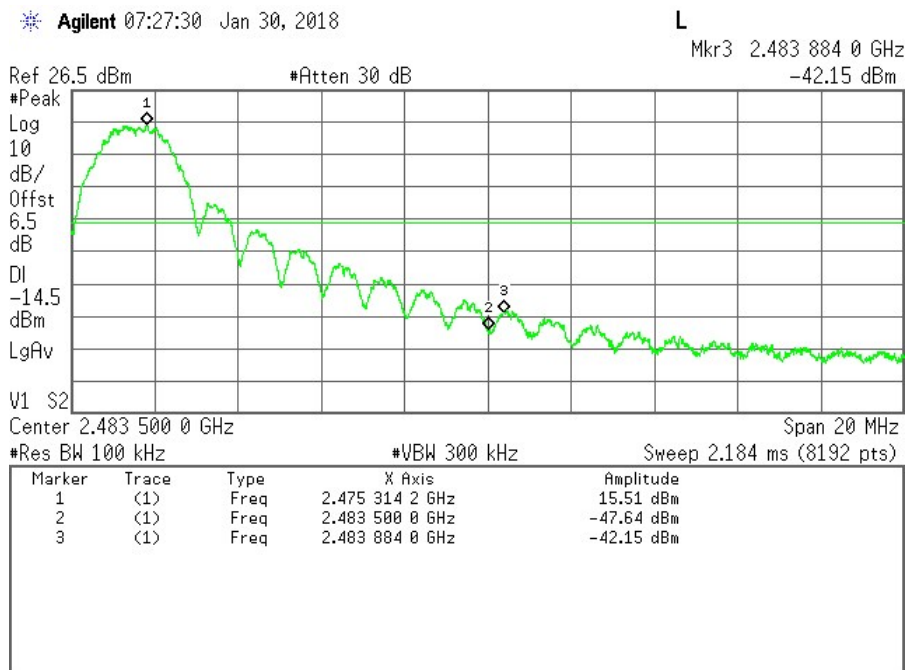
Antenna 1: Low Channel - Plot



Antenna 1: High Channel - Plot

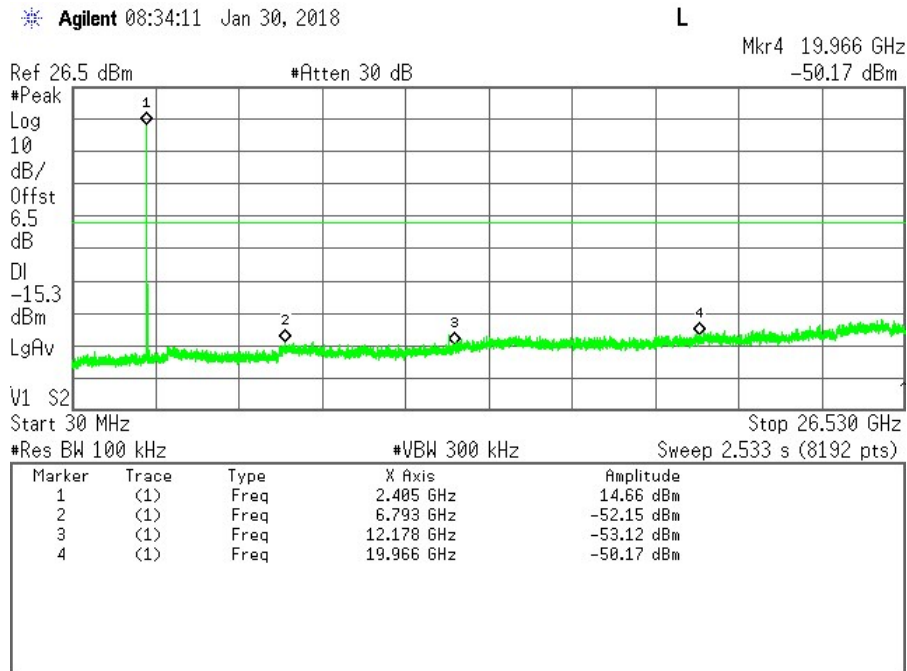


Antenna 2: Low Channel - Plot

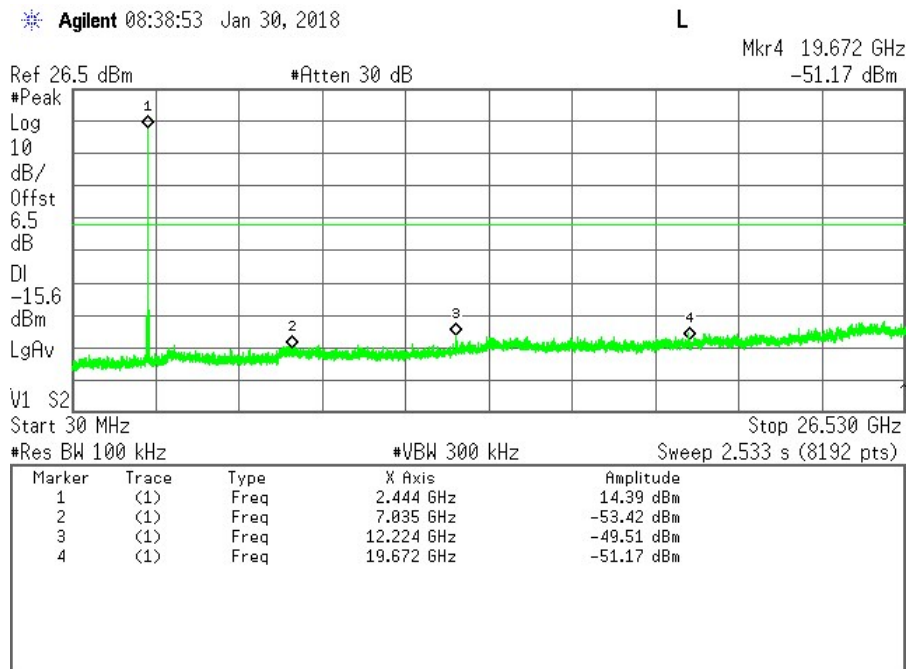


Antenna 2: High Channel - Plot

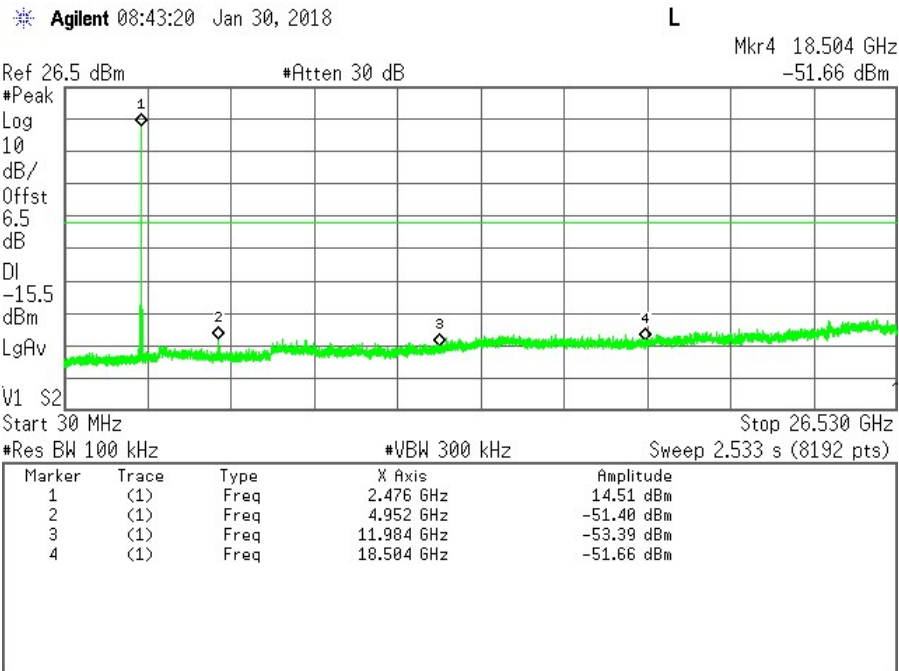
Conducted Spurious



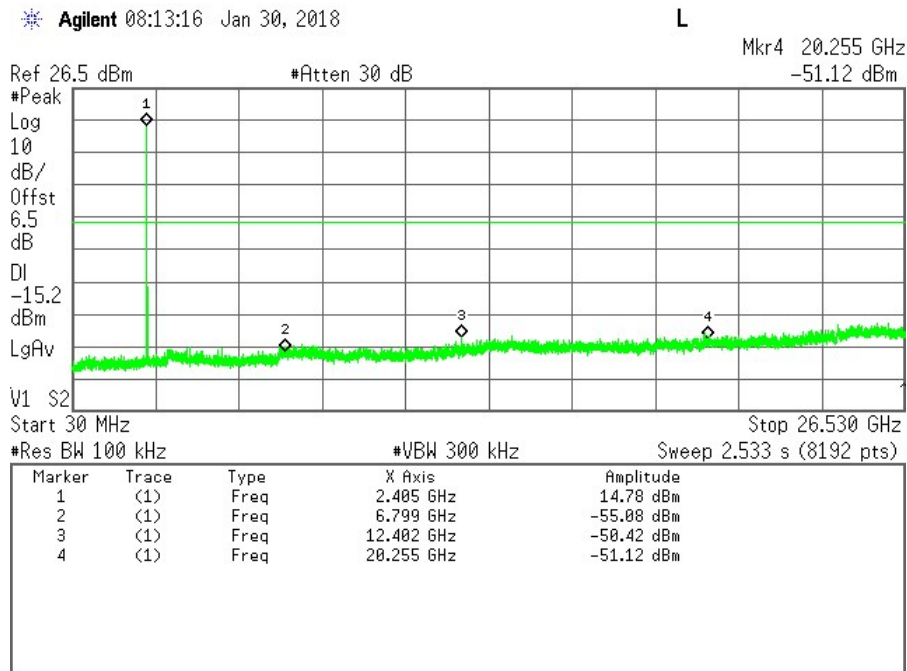
Antenna 1: Low Channel - Plot



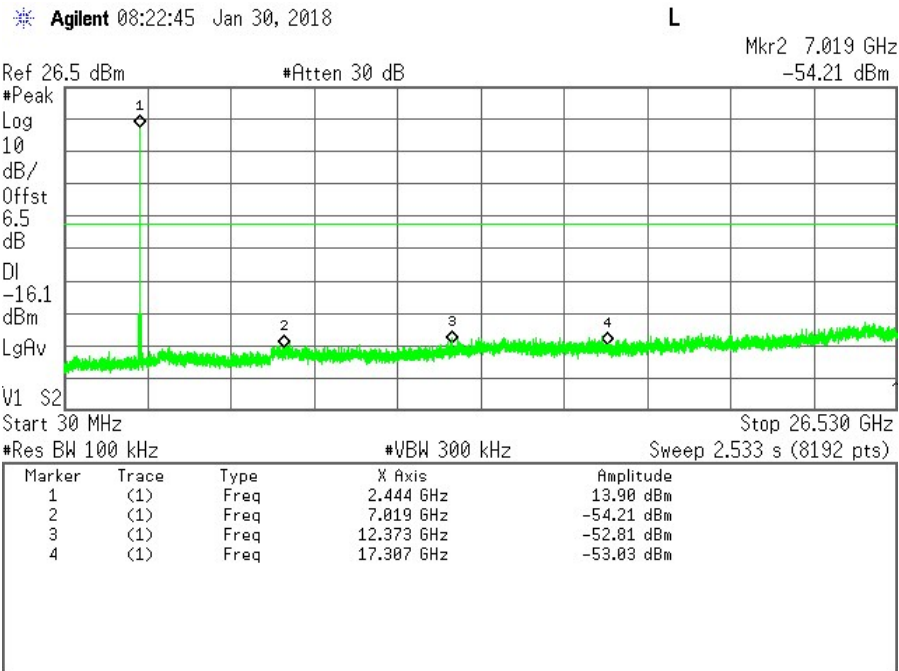
Antenna 1: Mid Channel - Plot



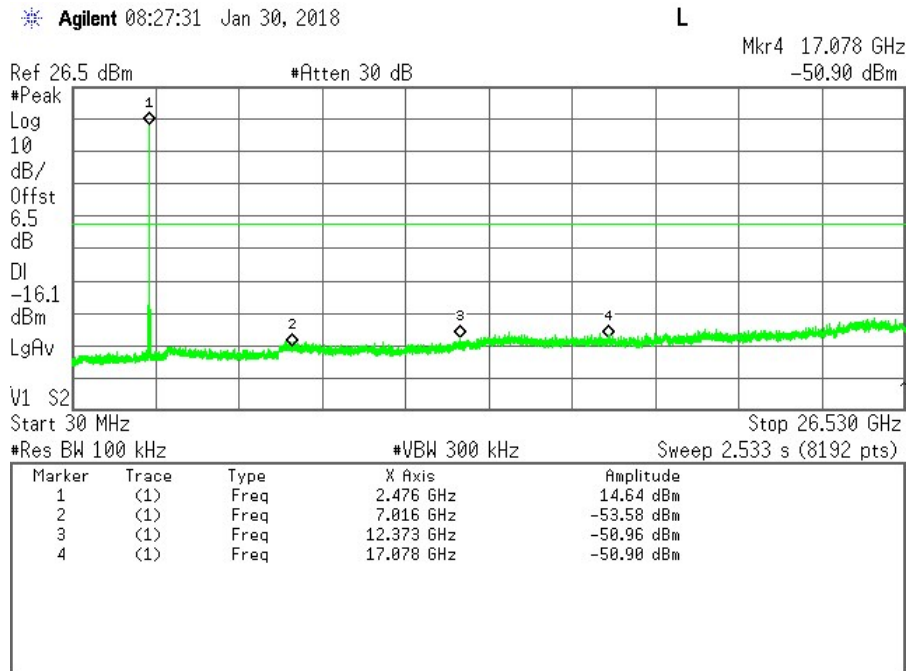
Antenna 1: High Channel - Plot



Antenna 2: Low Channel - Plot



Antenna 2: Mid Channel - Plot



Antenna 2: High Channel - Plot

Radiated Emissions (Intentional)

Test Description

Intentional Radiator Radiated Emissions are a test of the emissions, and harmonics on the EUT. The EUT is positioned to get the maximum emissions after a series of prescan measurements. The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1 GHz measurements and 1.5 m above the ground plane for above 1 GHz measurements. The antenna to EUT distance is 3 meters. For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements. The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Test Criteria

| Reference | Limit | | |
|---|-----------------------|-----------------------------|-------------------------------|
| | Frequency Range (MHz) | Field Strength Limit (uV/m) | Measurement distance (meters) |
| CFR 47 Subpart C, 15.205 CFR 47 Subpart C, 15.209 RSS-GEN | 0.009-0.490 | 2400/F(kHz) | 300 |
| | 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 |

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

Test Information

| Tester | Test Location | Date | Temperature (°C) | Humidity (%RH) | Pressure (mbar) | Results (P/F) |
|--------|-----------------|----------------|------------------|----------------|-----------------|---------------|
| CL/JB | RF Chamber/OATS | 2/5/18-2/27/18 | 12.2 | 65 | 1027 | P |

NOTE: Below 30MHz, pretesting showed that no emissions as a product of the EUT were detected within 20dB of the regulatory limit. Worse-case plot/data reported from 30MHz - 1GHz, per antenna. Worse-case plots reported per antenna above 1GHz, however, all required numerical data is provided for each channel/antenna. Prescans performed in an anechoic chamber, final measurements performed on an OATS.

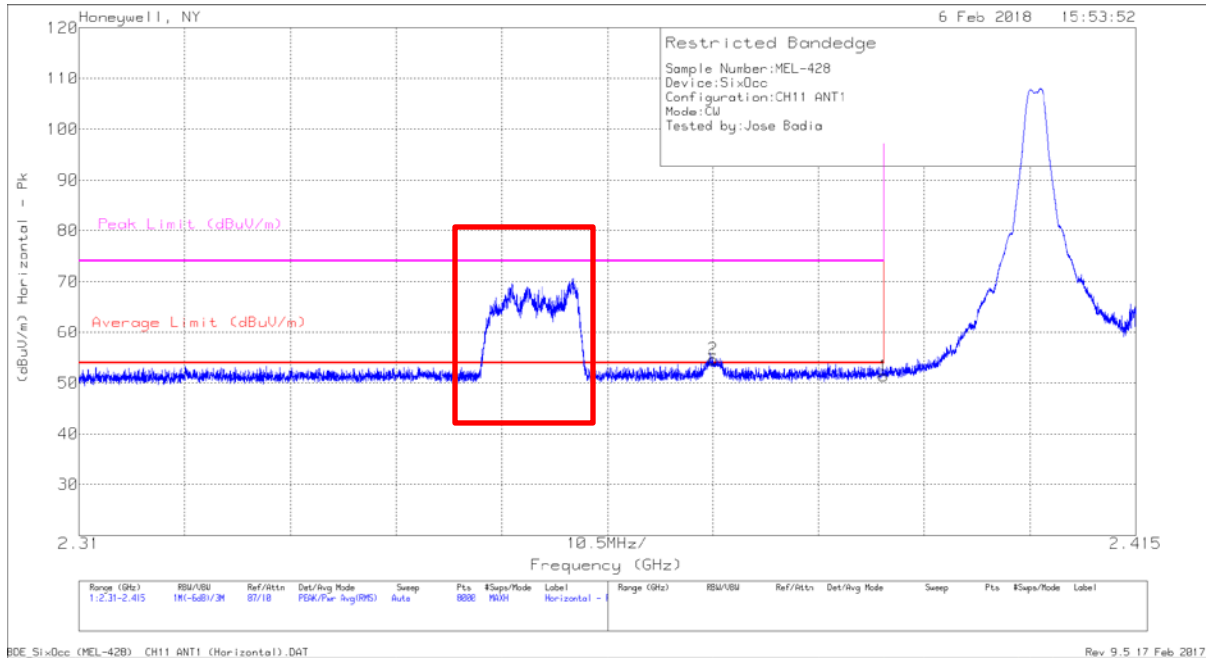
Equipment List

| Instrument Type | ID # | Serial # | Manufacturer | Model | Cal Date | Cal Due Date |
|----------------------------|-------------|-----------------|---------------------|--------------|-----------------|---------------------|
| RF Chamber | | | | | | |
| Spectrum Analyzer | 11496 | 100303 | Rohde & Schwarz | FSU26 | 04/10/17 | 04/10/18 |
| Loop Antenna (9kHz-30MHz) | 11535 | 121080 | Com-Power | AL-130R | 10/17/17 | 10/17/18 |
| Bilog Antenna (30MHz-6GHz) | 11534 | A012816 | Sunol | JB6 | 03/09/17 | 03/09/18 |
| Horn Antenna (1-18GHz) | 2319 | 2317 | EMCO | 3115 | 01/10/18 | 01/10/19 |
| Horn Antenna (18-40GHz) | 11472 | 151 | EMCO | EM-6963 | 02/14/18 | 02/14/19 |
| Preamp (1-18GHz) | 11539 | 160362 | Amplical | AMP1G18-35 | N/A | N/A |
| Preamp (18-40GHz) | 11541 | 160911 | Amplical | AMP18G40-35 | N/A | N/A |
| Band Reject Filter | 11553 | G041 | Micro-tronics | BRM50702-01 | N/A | N/A |
| Measurement Software | 11543 | Version 9.5 | UL | UL EMC | N/A | N/A |
| Environmental Meter | 11548 | A.078188 | Extech Instruments | SD700 | 04/24/17 | 04/14/18 |
| OATS | | | | | | |
| Spectrum Analyzer | 11545 | 103125 | Rohde & Schwarz | FSW26 | 02/14/17 | 02/14/18 |
| Bilog Antenna (30MHz-6GHz) | 11534 | A012816 | Sunol | JB6 | 03/09/17 | 03/09/18 |
| Horn Antenna (1-18GHz) | 2973 | 3127 | EMCO | RGA-60 | 01/22/18 | 01/22/19 |
| Horn Antenna (18-40GHz) | 11472 | 151 | EMCO | EM-6963 | 02/14/18 | 02/14/19 |
| Preamp (1-18GHz) | 11539 | 160362 | Amplical | AMP1G18-35 | N/A | N/A |
| Preamp (18-40GHz) | 11541 | 160911 | Amplical | AMP18G40-35 | N/A | N/A |
| High Pass Filter | 11552 | G018 | Micro-tronics | HPM50111-01 | N/A | N/A |
| Measurement Software | 11543 | Version 9.5 | UL | UL EMC | N/A | N/A |
| Environmental Meter | 11533 | A070144 | Extech Instruments | SD700 | 08/21/17 | 08/21/20 |

Note: Testing above 18GHz was performed using the horn antenna after calibration was performed.

Test Results

Restricted Band Edge



Antenna 1: Low Channel Horizontal – Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.39 | 17.02 | Pk | 28.5 | .7 | 2.6 | 2.5 | - | 51.32 | 74 | -22.68 | 0 | 126 | H |
| 2 | * 2.373 | 20.54 | Pk | 28.4 | .7 | 2.6 | 2.5 | - | 54.74 | 74 | -19.26 | 0 | 126 | H |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.39 | 17.02 | Av | 28.5 | .7 | 2.6 | 2.5 | -23.1 | 28.22 | 54 | -25.78 | 0 | 126 | H |
| 2 | * 2.373 | 20.54 | Av | 28.4 | .7 | 2.6 | 2.5 | -23.1 | 31.64 | 54 | -22.36 | 0 | 126 | H |

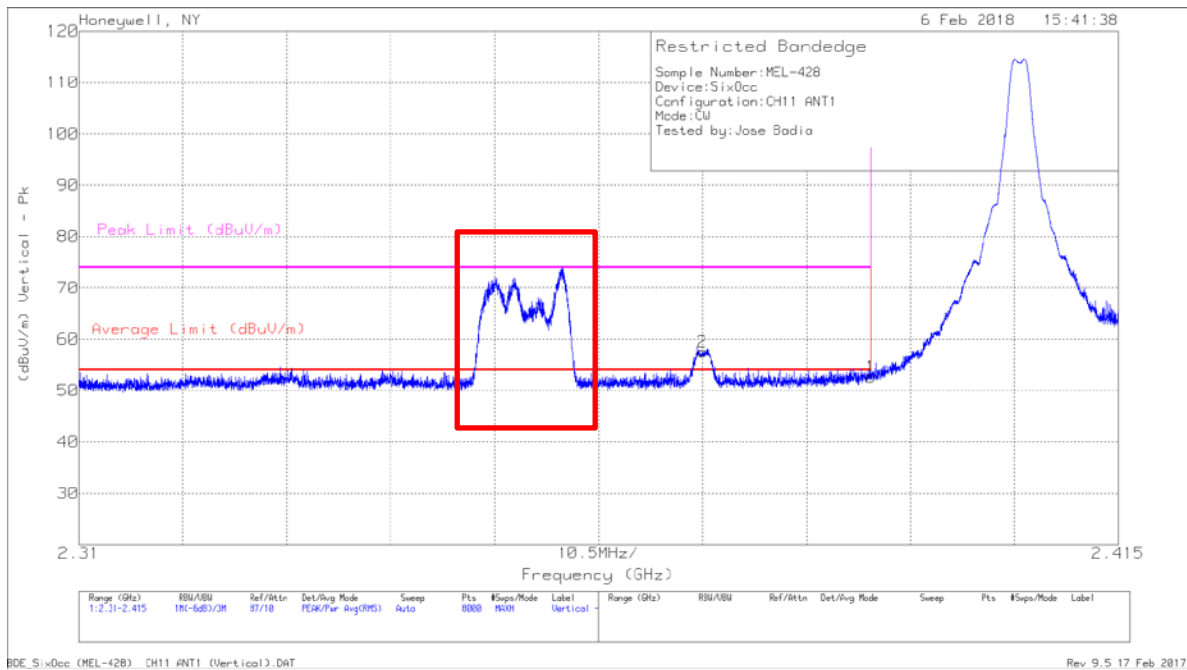
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 1: Low Channel Horizontal – Data

NOTE: Emissions highlighted in the plot above is OATS ambient and not a product of the transmitter



Antenna 1: Low Channel Vertical – Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.39 | 18.35 | Pk | 28.5 | .7 | 2.6 | 2.5 | - | 52.65 | 74 | -21.35 | 274 | 133 | V |
| 2 | * 2.373 | 23.35 | Pk | 28.4 | .7 | 2.6 | 2.5 | - | 57.55 | 74 | -16.45 | 274 | 133 | V |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.39 | 18.35 | Av | 28.5 | .7 | 2.6 | 2.5 | -23.1 | 29.55 | 54 | -24.45 | 274 | 133 | V |
| 2 | * 2.373 | 23.35 | Av | 28.4 | .7 | 2.6 | 2.5 | -23.1 | 34.45 | 54 | -19.55 | 274 | 133 | V |

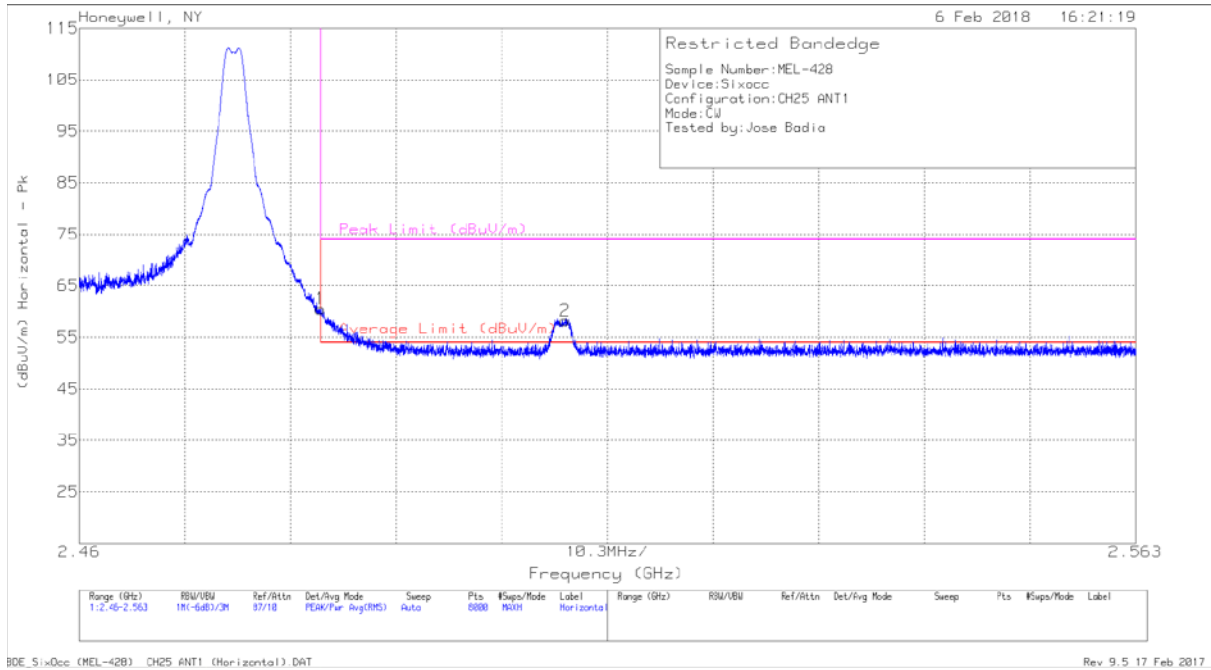
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 1: Low Channel Vertical – Data

NOTE: Emissions highlighted in the plot above is OATS ambient and not a product of the transmitter



Antenna 1: High Channel Horizontal - Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.484 | 25.96 | Pk | 28.7 | .7 | 2.6 | 2.6 | - | 60.56 | 74 | -13.44 | 0 | 120 | H |
| 2 | 2.507 | 23.42 | Pk | 28.8 | .7 | 2.7 | 2.6 | - | 58.22 | 74 | -15.78 | 0 | 120 | H |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.484 | 25.96 | Av | 28.7 | .7 | 2.6 | 2.6 | -23.1 | 37.46 | 54 | -16.54 | 0 | 120 | H |
| 2 | 2.507 | 23.42 | Av | 28.8 | .7 | 2.7 | 2.6 | -23.1 | 35.12 | 54 | -18.88 | 0 | 120 | H |

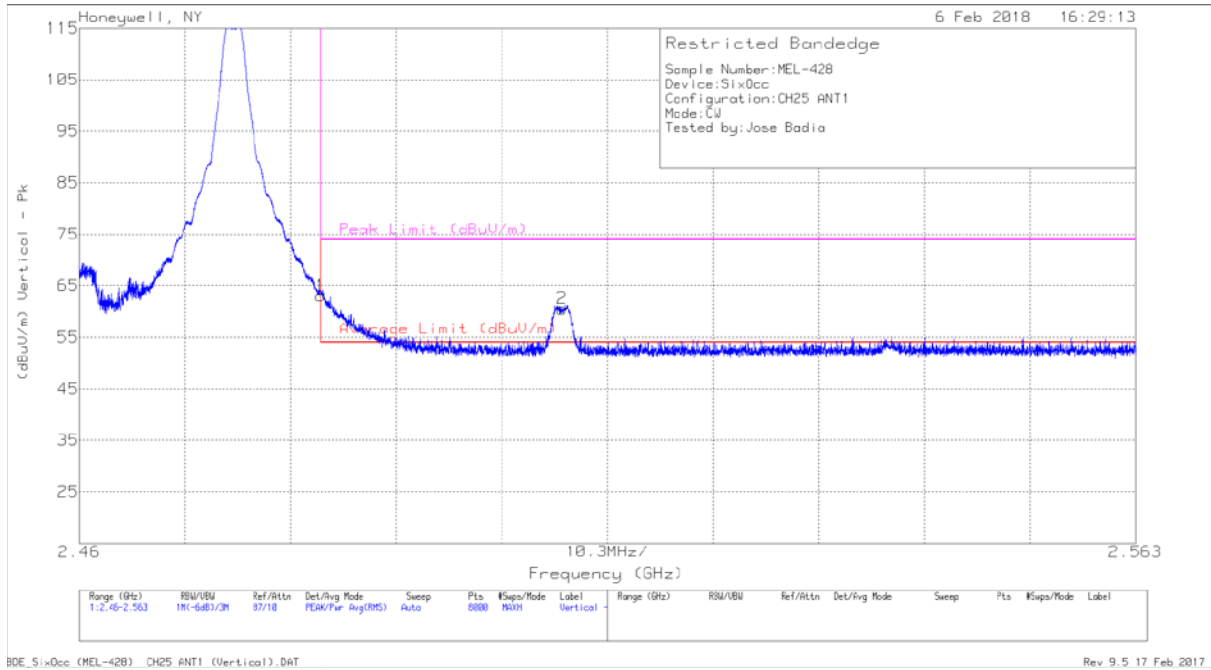
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 1: High Channel Horizontal – Data

Note: Based on the peak levels and level of the DC Corr, all peak emissions in the restricted band will be below the average limit after the correction for duty cycle.



Antenna 1: High Channel Vertical - Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.484 | 28.46 | Pk | 28.7 | .7 | 2.6 | 2.6 | - | 63.06 | 74 | -10.94 | 274 | 106 | V |
| 2 | 2.507 | 25.79 | Pk | 28.8 | .7 | 2.7 | 2.6 | - | 60.59 | 74 | -13.41 | 274 | 106 | V |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.484 | 28.46 | Av | 28.7 | .7 | 2.6 | 2.6 | -23.1 | 39.96 | 54 | -14.04 | 274 | 106 | V |
| 2 | 2.507 | 25.79 | Av | 28.8 | .7 | 2.7 | 2.6 | -23.1 | 37.49 | 54 | -16.51 | 274 | 106 | V |

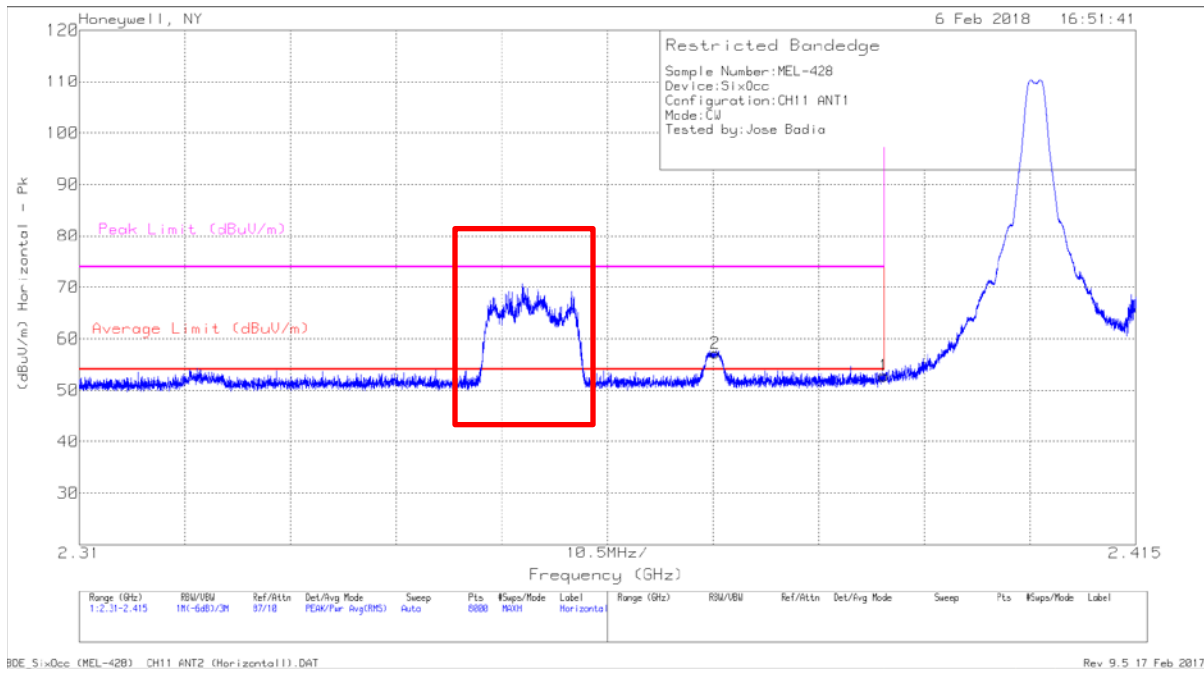
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 1: High Channel Vertical – Data

Note: Based on the peak levels and level of the DC Corr, all peak emissions in the restricted band will be below the average limit after the correction for duty cycle.



Antenna 2: Low Channel Horizontal – Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.39 | 18.48 | Pk | 28.5 | .7 | 2.6 | 2.5 | - | 52.78 | 74 | -21.22 | 334 | 182 | H |
| 2 | * 2.373 | 22.99 | Pk | 28.4 | .7 | 2.6 | 2.5 | - | 57.19 | 74 | -16.81 | 334 | 182 | H |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.39 | 18.48 | Av | 28.5 | .7 | 2.6 | 2.5 | -23.1 | 29.68 | 54 | -24.32 | 334 | 182 | H |
| 2 | * 2.373 | 22.99 | Av | 28.4 | .7 | 2.6 | 2.5 | -23.1 | 34.09 | 54 | -19.91 | 334 | 182 | H |

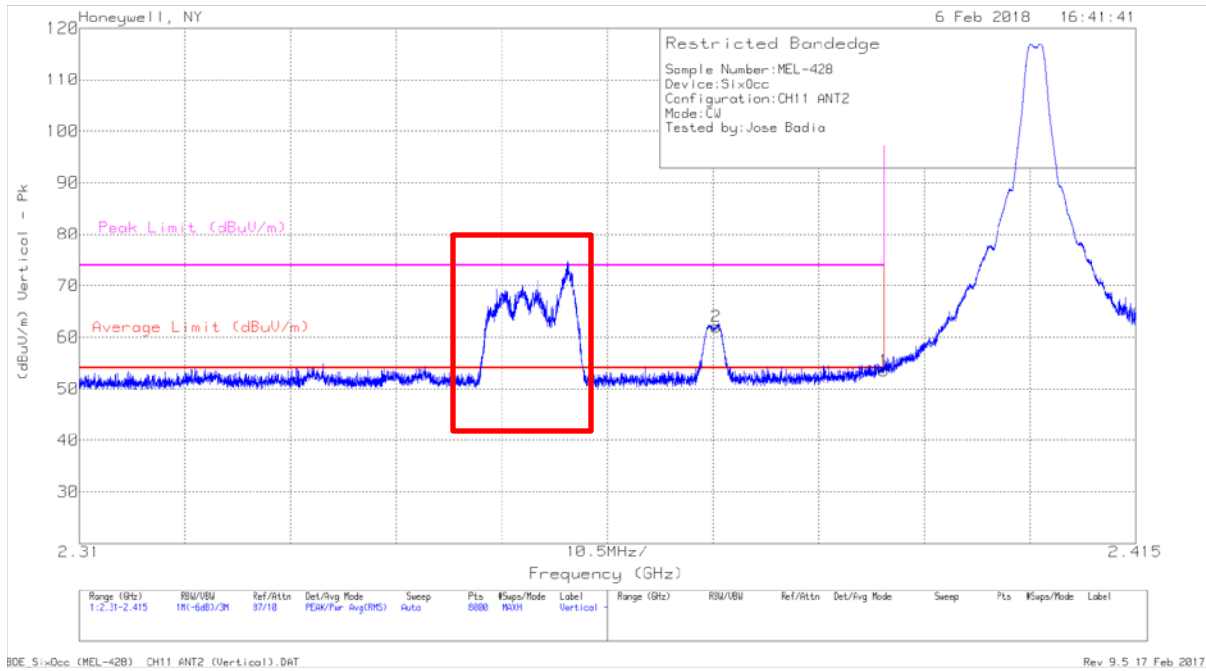
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 2: Low Channel Horizontal – Data

NOTE: Emissions highlighted in the plot above is OATS ambient and not a product of the transmitter



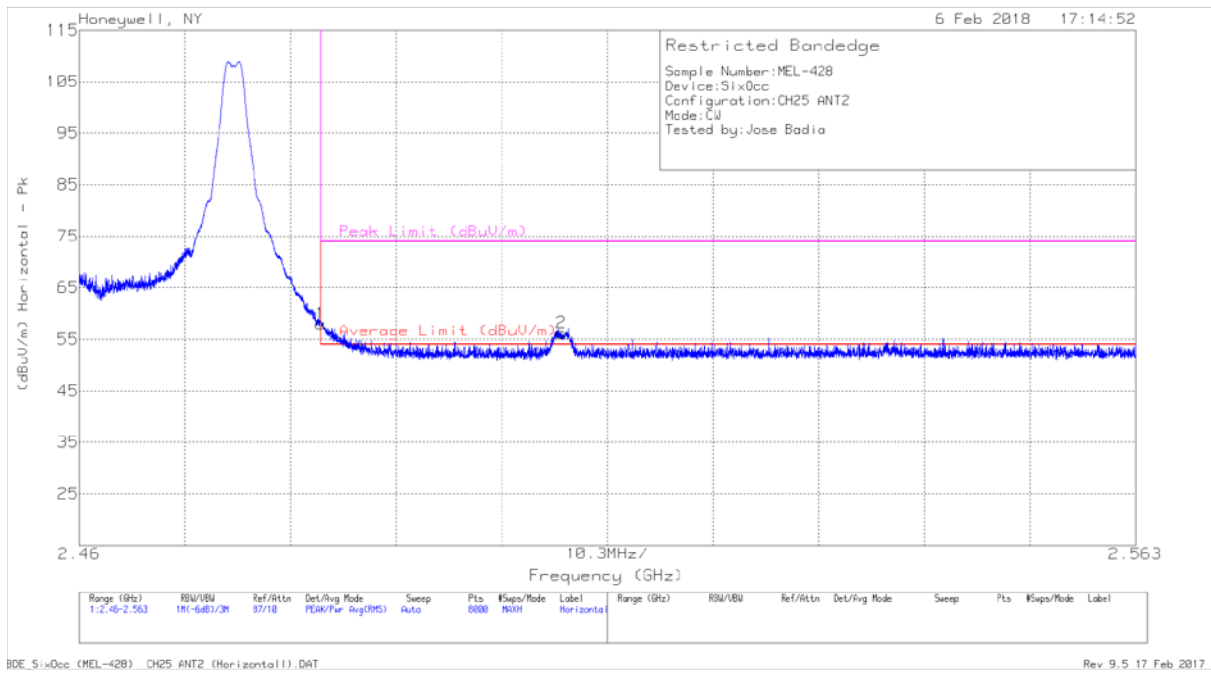
Antenna 2: Low Channel Vertical - Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.39 | 19.2 | Pk | 28.5 | .7 | 2.6 | 2.5 | - | 53.5 | 74 | -20.5 | 276 | 118 | V |
| 2 | * 2.373 | 27.84 | Pk | 28.4 | .7 | 2.6 | 2.5 | - | 62.04 | 74 | -11.96 | 276 | 118 | V |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.39 | 19.2 | Av | 28.5 | .7 | 2.6 | 2.5 | -23.1 | 30.4 | 54 | -23.6 | 276 | 118 | V |
| 2 | * 2.373 | 27.84 | Av | 28.4 | .7 | 2.6 | 2.5 | -23.1 | 38.94 | 54 | -15.06 | 276 | 118 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 2: Low Channel Vertical – Data

NOTE: Emissions highlighted in the plot above is OATS ambient and not a product of the transmitter



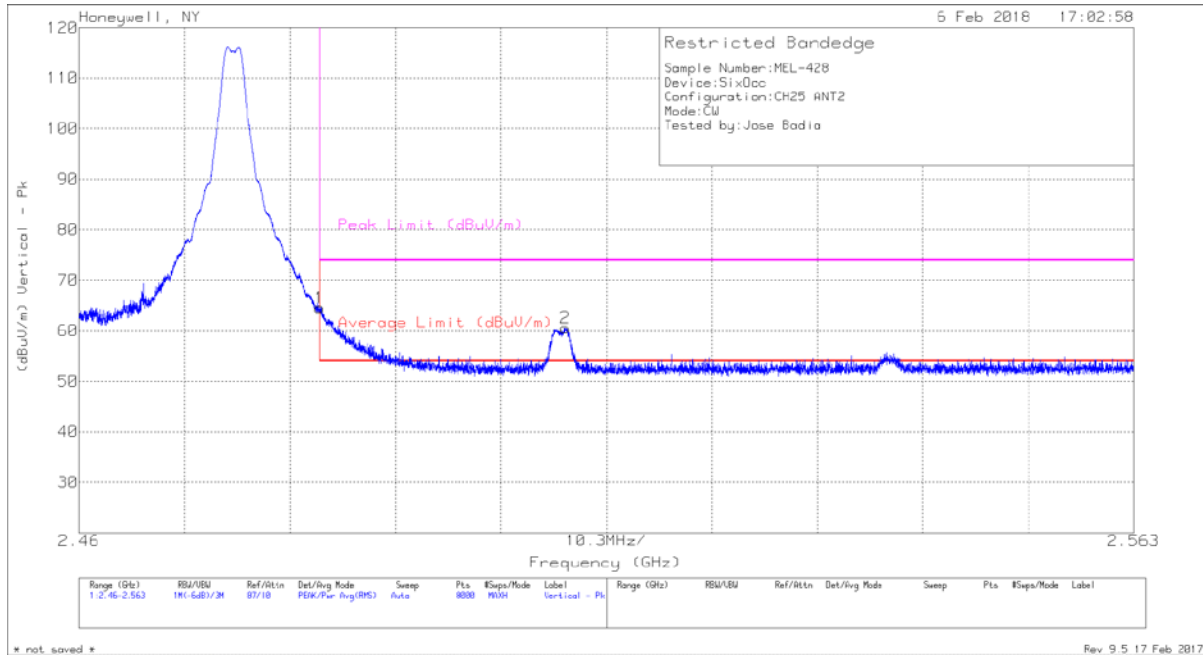
Antenna 2: High Channel Horizontal - Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.484 | 23.37 | Pk | 28.7 | .7 | 2.6 | 2.6 | - | 57.97 | 74 | -16.03 | 333 | 171 | H |
| 2 | 2.507 | 21.44 | Pk | 28.8 | .7 | 2.7 | 2.6 | - | 56.24 | 74 | -17.76 | 333 | 171 | H |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.484 | 23.37 | Av | 28.7 | .7 | 2.6 | 2.6 | -23.1 | 34.87 | 54 | -19.13 | 333 | 171 | H |
| 2 | 2.507 | 21.44 | Av | 28.8 | .7 | 2.7 | 2.6 | -23.1 | 33.14 | 54 | -20.86 | 333 | 171 | H |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector
 Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 2: High Channel Horizontal – Data

Note: Based on the peak levels and level of the DC Corr, all peak emissions in the restricted band will be below the average limit after the correction for duty cycle.



Antenna 2: High Channel Vertical - Plot

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| 1 | * 2.484 | 29.91 | Pk | 28.7 | .7 | 2.6 | 2.6 | - | 64.51 | 74 | -9.49 | 92 | 179 | V |
| 2 | 2.507 | 25.8 | Pk | 28.8 | .7 | 2.7 | 2.6 | - | 60.6 | 74 | -13.4 | 92 | 179 | V |
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX3 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 1 | * 2.484 | 29.91 | Av | 28.7 | .7 | 2.6 | 2.6 | -23.1 | 41.41 | 54 | -12.59 | 92 | 179 | V |
| 2 | 2.507 | 25.8 | Av | 28.8 | .7 | 2.7 | 2.6 | -23.1 | 37.5 | 54 | -16.5 | 92 | 179 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

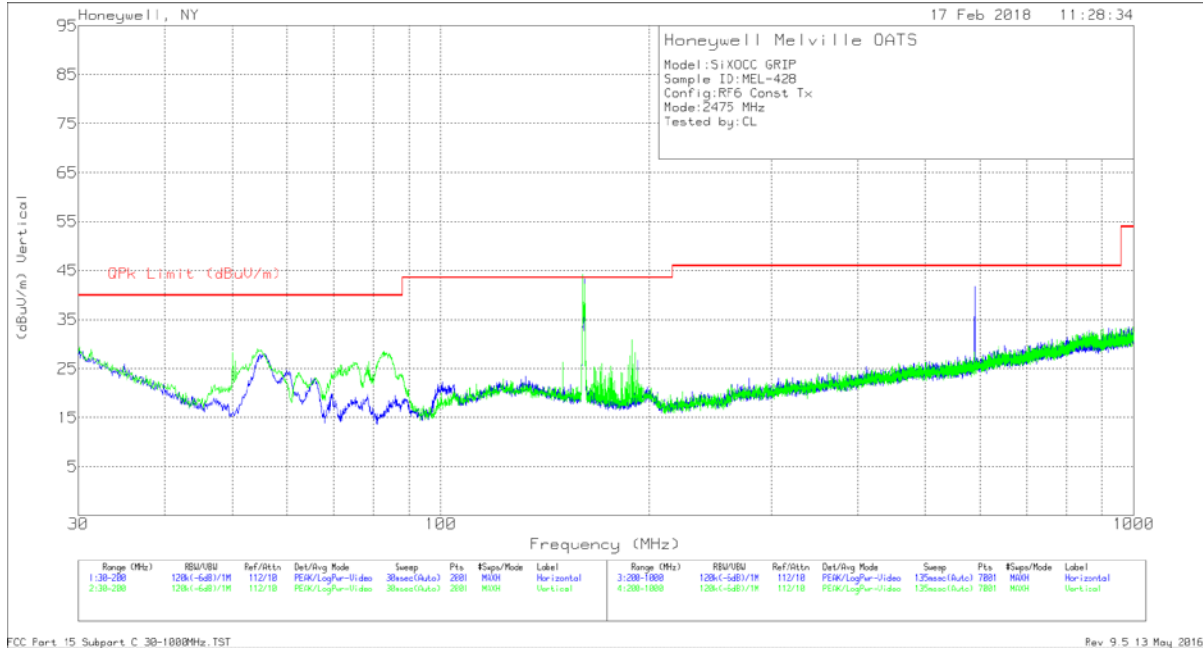
Av - Peak + DC Corr (Duty Cycle Correction Factor)

Antenna 2: High Channel Vertical – Data

Note: Based on the peak levels and level of the DC Corr, all peak emissions in the restricted band will be below the average limit after the correction for duty cycle.

Spurious Emissions

Below 1GHz (Worse-case)

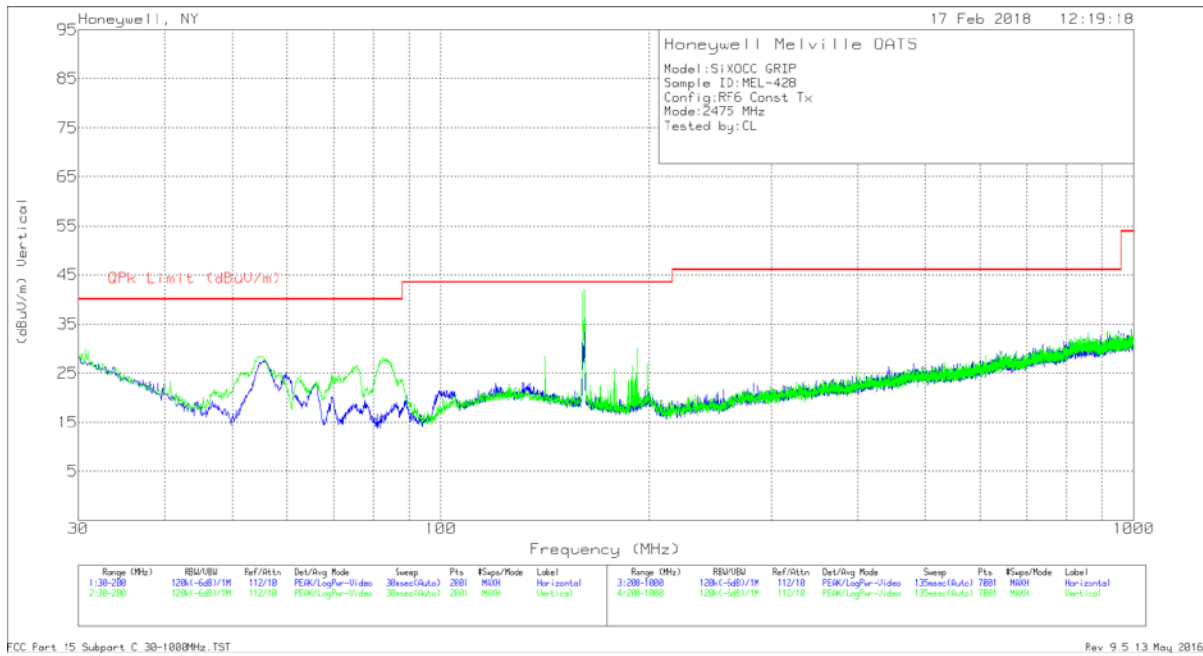


Antenna 1: High Channel - Plot

| Frequency (MHz) | Meter Reading (dBuV) | Det | AF [dB/m] | Cable 1 [dB] | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| 54.3055 | 20.34 | Qp | 12 | 1.1 | 33.44 | 40 | -6.56 | 183 | 400 | H |
| 159.0964 | 5.18 | Qp | 17.1 | 2 | 24.28 | 43.52 | -19.24 | 45 | 203 | H |
| 51.5004 | 17.3 | Qp | 12.3 | 1.1 | 30.7 | 40 | -9.3 | 323 | 231 | V |
| 159.2523 | 5.41 | Qp | 17.1 | 2 | 24.51 | 43.52 | -19.01 | 9 | 278 | V |
| 587.9095 | 10.35 | Qp | 23.6 | 5.9 | 39.85 | 46.02 | -6.17 | 106 | 137 | H |
| 896.52 | 4.1 | Qp | 27.1 | 8.5 | 39.7 | 46.02 | -6.32 | 141 | 320 | V |

Qp - Quasi-Peak detector

Antenna 1: High Channel – Data



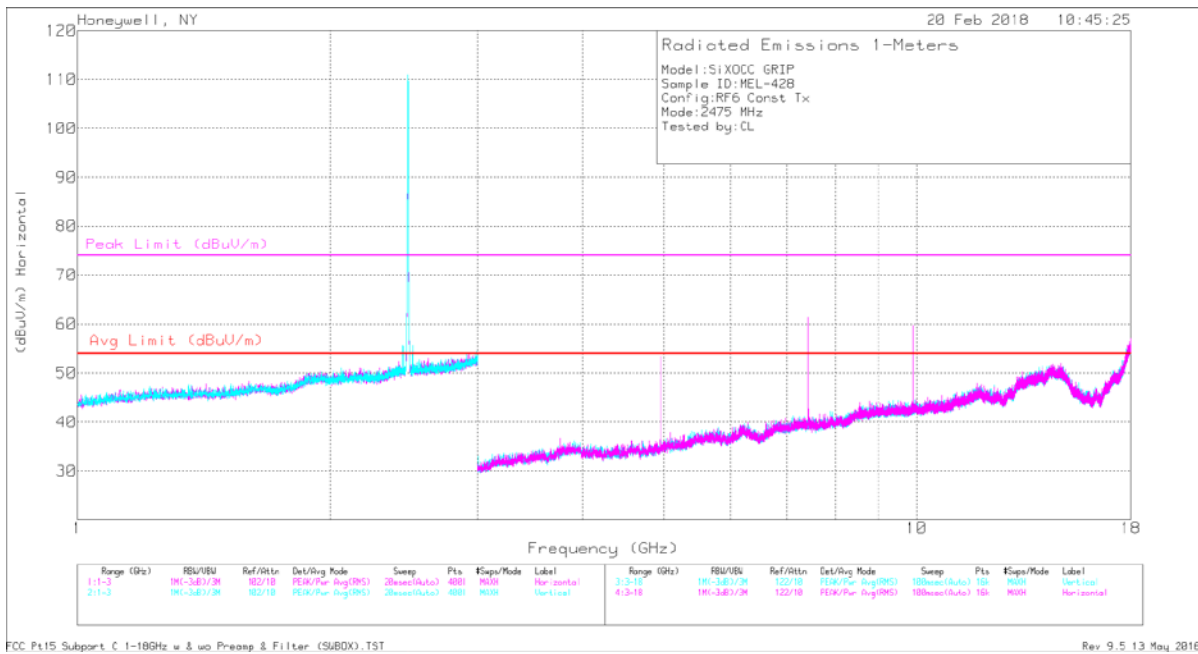
Antenna 2: High Channel - Plot

| Frequency (MHz) | Meter Reading (dBuV) | Det | AF [dB/m] | Cable 1 [dB] | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| 51.7912 | 9.62 | Qp | 12.3 | 1.1 | 23.02 | 40 | -16.98 | 119 | 386 | H |
| 159.652 | 5.36 | Qp | 17 | 2.1 | 24.46 | 43.52 | -19.06 | 337 | 390 | H |
| 52.3051 | 19.04 | Qp | 12.2 | 1.1 | 32.34 | 40 | -7.66 | 25 | 147 | V |
| 159.2827 | 5.32 | Qp | 17.1 | 2 | 24.42 | 43.52 | -19.1 | 131 | 366 | V |
| 951.7913 | 4.09 | Qp | 27.4 | 9.2 | 40.69 | 46.02 | -5.33 | 9 | 239 | H |
| 929.1912 | 4.36 | Qp | 27.3 | 8.6 | 40.26 | 46.02 | -5.76 | 129 | 398 | V |

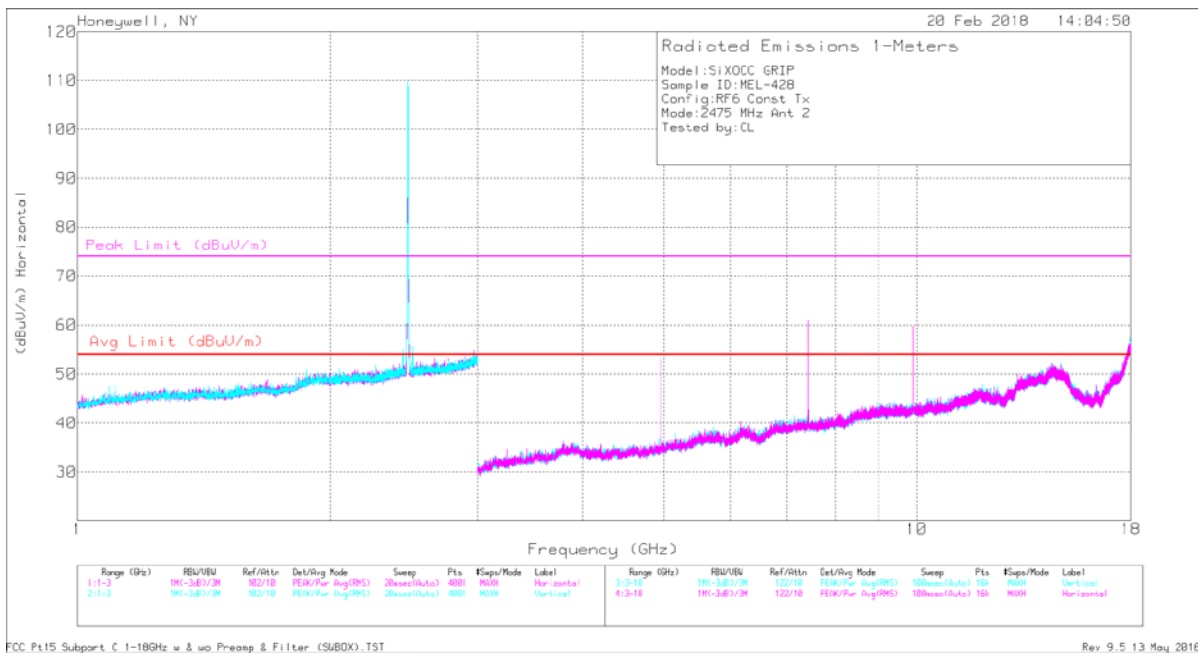
Qp - Quasi-Peak detector

Antenna 2: High Channel - Data

1-18GHz



Antenna 1: High Channel – Plot



Antenna 2: High Channel - Plot

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 4.811 | 57.76 | PK | 33.1 | -41.2 | 3.7 | 3.7 | 57.06 | 74 | -16.94 | 301 | 124 | H |
| 7.214 | 51.49 | PK | 36.2 | -39.5 | 4.7 | 4.5 | 57.39 | 74 | -16.61 | 291 | 202 | H |
| 9.622 | 52.78 | PK | 38 | -39 | 5.6 | 5.2 | 62.58 | 74 | -11.42 | 247 | 213 | H |
| * 12.028 | 45.88 | PK | 39.4 | -37.3 | 6.5 | 5.6 | 60.08 | 74 | -13.92 | 227 | 253 | H |
| 14.433 | 43.7 | PK | 42.1 | -36.9 | 6.8 | 6.4 | 62.1 | 74 | -11.9 | 83 | 238 | H |
| 16.834 | 38.84 | PK | 39.6 | -38.1 | 7.4 | 7.1 | 54.84 | 74 | -19.16 | 195 | 187 | H |
| * 4.809 | 56.33 | PK | 33.1 | -41.2 | 3.7 | 3.7 | 55.63 | 74 | -18.37 | 247 | 179 | V |
| 7.217 | 48.14 | PK | 36.2 | -39.5 | 4.7 | 4.5 | 54.04 | 74 | -19.96 | 339 | 181 | V |
| 9.622 | 51.37 | PK | 38 | -39 | 5.6 | 5.2 | 61.17 | 74 | -12.83 | 328 | 204 | V |
| * 12.022 | 43.01 | PK | 39.4 | -37.3 | 6.5 | 5.6 | 57.21 | 74 | -16.79 | 59 | 220 | V |
| 14.427 | 39.04 | PK | 42.1 | -36.9 | 6.8 | 6.4 | 57.44 | 74 | -16.56 | 7 | 227 | V |
| 16.838 | 38.13 | PK | 39.6 | -38.1 | 7.5 | 7.1 | 54.23 | 74 | -19.77 | 36 | 308 | V |

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| * 4.811 | 57.76 | Av | 33.1 | -41.2 | 3.7 | 3.7 | -23.1 | 33.96 | 54 | -20.04 | 301 | 124 | H |
| 7.214 | 51.49 | Av | 36.2 | -39.5 | 4.7 | 4.5 | -23.1 | 34.29 | 54 | -19.71 | 291 | 202 | H |
| 9.622 | 52.78 | Av | 38 | -39 | 5.6 | 5.2 | -23.1 | 39.48 | 54 | -14.52 | 247 | 213 | H |
| * 12.028 | 45.88 | Av | 39.4 | -37.3 | 6.5 | 5.6 | -23.1 | 36.98 | 54 | -17.02 | 227 | 253 | H |
| 14.433 | 43.7 | Av | 42.1 | -36.9 | 6.8 | 6.4 | -23.1 | 39 | 54 | -15 | 83 | 238 | H |
| 16.834 | 38.84 | Av | 39.6 | -38.1 | 7.4 | 7.1 | -23.1 | 31.74 | 54 | -22.26 | 195 | 187 | H |
| * 4.809 | 56.33 | Av | 33.1 | -41.2 | 3.7 | 3.7 | -23.1 | 32.53 | 54 | -21.47 | 247 | 179 | V |
| 7.217 | 48.14 | Av | 36.2 | -39.5 | 4.7 | 4.5 | -23.1 | 30.94 | 54 | -23.06 | 339 | 181 | V |
| 9.622 | 51.37 | Av | 38 | -39 | 5.6 | 5.2 | -23.1 | 38.07 | 54 | -15.93 | 328 | 204 | V |
| * 12.022 | 43.01 | Av | 39.4 | -37.3 | 6.5 | 5.6 | -23.1 | 34.11 | 54 | -19.89 | 59 | 220 | V |
| 14.427 | 39.04 | Av | 42.1 | -36.9 | 6.8 | 6.4 | -23.1 | 34.34 | 54 | -19.66 | 7 | 227 | V |
| 16.838 | 38.13 | Av | 39.6 | -38.1 | 7.5 | 7.1 | -23.1 | 31.13 | 54 | -22.87 | 36 | 308 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - KDB558074 Method: Maximum Peak

Av - KDB558074 Method: PK + DC Corr (Duty Cycle Correction Factor)

Duty Cycle = 6.976%, thus DC Corr = 20log(0.06976) = -23.1dB

Antenna 1: Low Channel - Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 4.891 | 60.58 | PK | 33.2 | -41.4 | 3.7 | 3.6 | 59.68 | 74 | -14.32 | 189 | 271 | H |
| * 7.337 | 56.51 | PK | 36.6 | -39.7 | 4.6 | 4.5 | 62.51 | 74 | -11.49 | 253 | 272 | H |
| 9.782 | 54.38 | PK | 38.1 | -39.1 | 5.5 | 5.3 | 64.18 | 74 | -9.82 | 247 | 250 | H |
| * 12.228 | 45.8 | PK | 39.2 | -37.2 | 6.5 | 5.9 | 60.2 | 74 | -13.8 | 284 | 243 | H |
| 14.667 | 41.33 | PK | 42.6 | -36.9 | 6.7 | 6.4 | 60.13 | 74 | -13.87 | 308 | 245 | H |
| 17.112 | 39.98 | PK | 41.1 | -38.1 | 7.5 | 7 | 57.48 | 74 | -16.52 | 249 | 307 | H |
| * 4.889 | 59.22 | PK | 33.2 | -41.4 | 3.7 | 3.6 | 58.32 | 74 | -15.68 | 197 | 256 | V |
| * 7.337 | 53.09 | PK | 36.6 | -39.7 | 4.6 | 4.5 | 59.09 | 74 | -14.91 | 338 | 168 | V |
| 9.782 | 53.01 | PK | 38.1 | -39.1 | 5.5 | 5.3 | 62.81 | 74 | -11.19 | 178 | 162 | V |
| * 12.228 | 46.68 | PK | 39.2 | -37.2 | 6.5 | 5.9 | 61.08 | 74 | -12.92 | 164 | 311 | V |
| 14.673 | 38.58 | PK | 42.6 | -36.9 | 6.6 | 6.4 | 57.28 | 74 | -16.72 | 164 | 311 | V |
| 17.115 | 38.32 | PK | 41.1 | -38.1 | 7.5 | 7 | 55.82 | 74 | -18.18 | 66 | 118 | V |

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| * 4.891 | 60.58 | Av | 33.2 | -41.4 | 3.7 | 3.6 | -23.1 | 36.58 | 54 | -17.42 | 189 | 271 | H |
| * 7.337 | 56.51 | Av | 36.6 | -39.7 | 4.6 | 4.5 | -23.1 | 39.41 | 54 | -14.59 | 253 | 272 | H |
| 9.782 | 54.38 | Av | 38.1 | -39.1 | 5.5 | 5.3 | -23.1 | 41.08 | 54 | -12.92 | 247 | 250 | H |
| * 12.228 | 45.8 | Av | 39.2 | -37.2 | 6.5 | 5.9 | -23.1 | 37.1 | 54 | -16.9 | 284 | 243 | H |
| 14.667 | 41.33 | Av | 42.6 | -36.9 | 6.7 | 6.4 | -23.1 | 37.03 | 54 | -16.97 | 308 | 245 | H |
| 17.112 | 39.98 | Av | 41.1 | -38.1 | 7.5 | 7 | -23.1 | 34.38 | 54 | -19.62 | 249 | 307 | H |
| * 4.889 | 59.22 | Av | 33.2 | -41.4 | 3.7 | 3.6 | -23.1 | 35.22 | 54 | -18.78 | 197 | 256 | V |
| * 7.337 | 53.09 | Av | 36.6 | -39.7 | 4.6 | 4.5 | -23.1 | 35.99 | 54 | -18.01 | 338 | 168 | V |
| 9.782 | 53.01 | Av | 38.1 | -39.1 | 5.5 | 5.3 | -23.1 | 39.71 | 54 | -14.29 | 178 | 162 | V |
| * 12.228 | 46.68 | Av | 39.2 | -37.2 | 6.5 | 5.9 | -23.1 | 37.98 | 54 | -16.02 | 164 | 311 | V |
| 14.673 | 38.58 | Av | 42.6 | -36.9 | 6.6 | 6.4 | -23.1 | 34.18 | 54 | -19.82 | 164 | 311 | V |
| 17.115 | 38.32 | Av | 41.1 | -38.1 | 7.5 | 7 | -23.1 | 32.72 | 54 | -21.28 | 66 | 118 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - KDB558074 Method: Maximum Peak

Av - KDB558074 Method: PK + DC Corr (Duty Cycle Correction Factor)

Duty Cycle = 6.976%, thus DC Corr = $20\log(0.06976) = -23.1\text{dB}$

Antenna 1: Mid Channel - Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 4.951 | 60.69 | PK | 33.2 | -41.5 | 3.8 | 3.7 | 59.89 | 74 | -14.11 | 162 | 242 | H |
| * 7.424 | 57.84 | PK | 36.7 | -39.7 | 4.7 | 4.6 | 64.14 | 74 | -9.86 | 240 | 242 | H |
| 9.902 | 54.19 | PK | 38.2 | -39.2 | 5.5 | 5.3 | 63.99 | 74 | -10.01 | 232 | 240 | H |
| * 12.378 | 46.02 | PK | 38.9 | -37.1 | 6.5 | 5.9 | 60.22 | 74 | -13.78 | 283 | 253 | H |
| 14.854 | 38.59 | PK | 42 | -36.9 | 6.8 | 6.5 | 56.99 | 74 | -17.01 | 295 | 228 | H |
| 17.322 | 38.7 | PK | 42.4 | -38.2 | 7.5 | 7.1 | 57.5 | 74 | -16.5 | 11 | 306 | H |
| * 4.951 | 58.7 | PK | 33.2 | -41.5 | 3.8 | 3.7 | 57.9 | 74 | -16.1 | 204 | 264 | V |
| * 7.427 | 57.86 | PK | 36.7 | -39.7 | 4.7 | 4.6 | 64.16 | 74 | -9.84 | 237 | 176 | V |
| 9.902 | 53.02 | PK | 38.2 | -39.2 | 5.5 | 5.3 | 62.82 | 74 | -11.18 | 170 | 141 | V |
| * 12.373 | 45.11 | PK | 38.9 | -37.1 | 6.5 | 5.9 | 59.31 | 74 | -14.69 | 175 | 253 | V |
| 14.853 | 38.14 | PK | 42 | -36.9 | 6.8 | 6.5 | 56.54 | 74 | -17.46 | 143 | 219 | V |
| 17.323 | 38.8 | PK | 42.4 | -38.2 | 7.5 | 7.1 | 57.6 | 74 | -16.4 | 59 | 126 | V |

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| * 4.951 | 60.69 | Av | 33.2 | -41.5 | 3.8 | 3.7 | -23.1 | 36.79 | 54 | -17.21 | 162 | 242 | H |
| * 7.424 | 57.84 | Av | 36.7 | -39.7 | 4.7 | 4.6 | -23.1 | 41.04 | 54 | -12.96 | 240 | 242 | H |
| 9.902 | 54.19 | Av | 38.2 | -39.2 | 5.5 | 5.3 | -23.1 | 40.89 | 54 | -13.11 | 232 | 240 | H |
| * 12.378 | 46.02 | Av | 38.9 | -37.1 | 6.5 | 5.9 | -23.1 | 37.12 | 54 | -16.88 | 283 | 253 | H |
| 14.854 | 38.59 | Av | 42 | -36.9 | 6.8 | 6.5 | -23.1 | 33.89 | 54 | -20.11 | 295 | 228 | H |
| 17.322 | 38.7 | Av | 42.4 | -38.2 | 7.5 | 7.1 | -23.1 | 34.4 | 54 | -19.6 | 11 | 306 | H |
| * 4.951 | 58.7 | Av | 33.2 | -41.5 | 3.8 | 3.7 | -23.1 | 34.8 | 54 | -19.2 | 204 | 264 | V |
| * 7.427 | 57.86 | Av | 36.7 | -39.7 | 4.7 | 4.6 | -23.1 | 41.06 | 54 | -12.94 | 237 | 176 | V |
| 9.902 | 53.02 | Av | 38.2 | -39.2 | 5.5 | 5.3 | -23.1 | 39.72 | 54 | -14.28 | 170 | 141 | V |
| * 12.373 | 45.11 | Av | 38.9 | -37.1 | 6.5 | 5.9 | -23.1 | 36.21 | 54 | -17.79 | 175 | 253 | V |
| 14.853 | 38.14 | Av | 42 | -36.9 | 6.8 | 6.5 | -23.1 | 33.44 | 54 | -20.56 | 143 | 219 | V |
| 17.323 | 38.8 | Av | 42.4 | -38.2 | 7.5 | 7.1 | -23.1 | 34.5 | 54 | -19.5 | 59 | 126 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK - KDB558074 Method: Maximum Peak
 Av - KDB558074 Method: PK + DC Corr (Duty Cycle Correction Factor)

Duty Cycle = 6.976%, thus DC Corr = 20log(0.06976) = -23.1dB

Antenna 1: High Channel – Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 4.811 | 56.09 | PK | 33.1 | -41.2 | 3.7 | 3.7 | 55.39 | 74 | -18.61 | 192 | 263 | H |
| 7.217 | 43.03 | PK | 36.2 | -39.5 | 4.7 | 4.5 | 48.93 | 74 | -25.07 | 192 | 263 | H |
| 9.622 | 53.36 | PK | 38 | -39 | 5.6 | 5.2 | 63.16 | 74 | -10.84 | 91 | 258 | H |
| * 12.028 | 46.59 | PK | 39.4 | -37.3 | 6.5 | 5.6 | 60.79 | 74 | -13.21 | 273 | 224 | H |
| 14.433 | 40.46 | PK | 42.1 | -36.9 | 6.8 | 6.4 | 58.86 | 74 | -15.14 | 79 | 244 | H |
| 16.839 | 38.25 | PK | 39.6 | -38.1 | 7.5 | 7.1 | 54.35 | 74 | -19.65 | 271 | 190 | H |
| * 4.809 | 56.63 | PK | 33.1 | -41.2 | 3.7 | 3.7 | 55.93 | 74 | -18.07 | 223 | 222 | V |
| 7.217 | 51.57 | PK | 36.2 | -39.5 | 4.7 | 4.5 | 57.47 | 74 | -16.53 | 217 | 250 | V |
| 9.622 | 53.32 | PK | 38 | -39 | 5.6 | 5.2 | 63.12 | 74 | -10.88 | 164 | 194 | V |
| * 12.028 | 45.25 | PK | 39.4 | -37.3 | 6.5 | 5.6 | 59.45 | 74 | -14.55 | 176 | 208 | V |
| 14.431 | 38.1 | PK | 42.1 | -36.9 | 6.8 | 6.4 | 56.5 | 74 | -17.5 | 301 | 166 | V |
| 16.831 | 38.31 | PK | 39.6 | -38.1 | 7.4 | 7.1 | 54.31 | 74 | -19.69 | 358 | 388 | V |

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| * 4.811 | 56.09 | Av | 33.1 | -41.2 | 3.7 | 3.7 | -23.1 | 32.29 | 54 | -21.71 | 192 | 263 | H |
| 7.217 | 43.03 | Av | 36.2 | -39.5 | 4.7 | 4.5 | -23.1 | 25.83 | 54 | -28.17 | 192 | 263 | H |
| 9.622 | 53.36 | Av | 38 | -39 | 5.6 | 5.2 | -23.1 | 40.06 | 54 | -13.94 | 91 | 258 | H |
| * 12.028 | 46.59 | Av | 39.4 | -37.3 | 6.5 | 5.6 | -23.1 | 37.69 | 54 | -16.31 | 273 | 224 | H |
| 14.433 | 40.46 | Av | 42.1 | -36.9 | 6.8 | 6.4 | -23.1 | 35.76 | 54 | -18.24 | 79 | 244 | H |
| 16.839 | 38.25 | Av | 39.6 | -38.1 | 7.5 | 7.1 | -23.1 | 31.25 | 54 | -22.75 | 271 | 190 | H |
| * 4.809 | 56.63 | Av | 33.1 | -41.2 | 3.7 | 3.7 | -23.1 | 32.83 | 54 | -21.17 | 223 | 222 | V |
| 7.217 | 51.57 | Av | 36.2 | -39.5 | 4.7 | 4.5 | -23.1 | 34.37 | 54 | -19.63 | 217 | 250 | V |
| 9.622 | 53.32 | Av | 38 | -39 | 5.6 | 5.2 | -23.1 | 40.02 | 54 | -13.98 | 164 | 194 | V |
| * 12.028 | 45.25 | Av | 39.4 | -37.3 | 6.5 | 5.6 | -23.1 | 36.35 | 54 | -17.65 | 176 | 208 | V |
| 14.431 | 38.1 | Av | 42.1 | -36.9 | 6.8 | 6.4 | -23.1 | 33.4 | 54 | -20.6 | 301 | 166 | V |
| 16.831 | 38.31 | Av | 39.6 | -38.1 | 7.4 | 7.1 | -23.1 | 31.21 | 54 | -22.79 | 358 | 388 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - KDB558074 Method: Maximum Peak

Av - KDB558074 Method: PK + DC Corr (Duty Cycle Correction Factor)

Duty Cycle = 6.976%, thus DC Corr = $20\log(0.06976) = -23.1\text{dB}$

Antenna 2: Low Channel - Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 4.891 | 58.75 | PK | 33.2 | -41.4 | 3.7 | 3.6 | 57.85 | 74 | -16.15 | 174 | 289 | H |
| * 7.334 | 55.17 | PK | 36.6 | -39.7 | 4.6 | 4.5 | 61.17 | 74 | -12.83 | 262 | 280 | H |
| 9.782 | 54.36 | PK | 38.1 | -39.1 | 5.5 | 5.3 | 64.16 | 74 | -9.84 | 268 | 386 | H |
| * 12.228 | 43.84 | PK | 39.2 | -37.2 | 6.5 | 5.9 | 58.24 | 74 | -15.76 | 228 | 383 | H |
| 14.668 | 39.24 | PK | 42.6 | -36.9 | 6.7 | 6.4 | 58.04 | 74 | -15.96 | 208 | 135 | H |
| 17.116 | 38.53 | PK | 41.1 | -38.1 | 7.5 | 7 | 56.03 | 74 | -17.97 | 206 | 171 | H |
| * 4.891 | 58.1 | PK | 33.2 | -41.4 | 3.7 | 3.6 | 57.2 | 74 | -16.8 | 224 | 209 | V |
| * 7.337 | 52.73 | PK | 36.6 | -39.7 | 4.6 | 4.5 | 58.73 | 74 | -15.27 | 220 | 195 | V |
| 9.782 | 53.69 | PK | 38.1 | -39.1 | 5.5 | 5.3 | 63.49 | 74 | -10.51 | 167 | 197 | V |
| * 12.228 | 44.47 | PK | 39.2 | -37.2 | 6.5 | 5.9 | 58.87 | 74 | -15.13 | 171 | 105 | V |
| 14.673 | 37.6 | PK | 42.6 | -36.9 | 6.6 | 6.4 | 56.3 | 74 | -17.7 | 90 | 119 | V |
| 17.113 | 37.92 | PK | 41.1 | -38.1 | 7.5 | 7 | 55.42 | 74 | -18.58 | 90 | 343 | V |

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| * 4.891 | 58.75 | Av | 33.2 | -41.4 | 3.7 | 3.6 | -23.1 | 34.75 | 54 | -19.25 | 174 | 289 | H |
| * 7.334 | 55.17 | Av | 36.6 | -39.7 | 4.6 | 4.5 | -23.1 | 38.07 | 54 | -15.93 | 262 | 280 | H |
| 9.782 | 54.36 | Av | 38.1 | -39.1 | 5.5 | 5.3 | -23.1 | 41.06 | 54 | -12.94 | 268 | 386 | H |
| * 12.228 | 43.84 | Av | 39.2 | -37.2 | 6.5 | 5.9 | -23.1 | 35.14 | 54 | -18.86 | 228 | 383 | H |
| 14.668 | 39.24 | Av | 42.6 | -36.9 | 6.7 | 6.4 | -23.1 | 34.94 | 54 | -19.06 | 208 | 135 | H |
| 17.116 | 38.53 | Av | 41.1 | -38.1 | 7.5 | 7 | -23.1 | 32.93 | 54 | -21.07 | 206 | 171 | H |
| * 4.891 | 58.1 | Av | 33.2 | -41.4 | 3.7 | 3.6 | -23.1 | 34.1 | 54 | -19.9 | 224 | 209 | V |
| * 7.337 | 52.73 | Av | 36.6 | -39.7 | 4.6 | 4.5 | -23.1 | 35.63 | 54 | -18.37 | 220 | 195 | V |
| 9.782 | 53.69 | Av | 38.1 | -39.1 | 5.5 | 5.3 | -23.1 | 40.39 | 54 | -13.61 | 167 | 197 | V |
| * 12.228 | 44.47 | Av | 39.2 | -37.2 | 6.5 | 5.9 | -23.1 | 35.77 | 54 | -18.23 | 171 | 105 | V |
| 14.673 | 37.6 | Av | 42.6 | -36.9 | 6.6 | 6.4 | -23.1 | 33.2 | 54 | -20.8 | 90 | 119 | V |
| 17.113 | 37.92 | Av | 41.1 | -38.1 | 7.5 | 7 | -23.1 | 32.32 | 54 | -21.68 | 90 | 343 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK - KDB558074 Method: Maximum Peak

Av - KDB558074 Method: PK + DC Corr (Duty Cycle Correction Factor)

Duty Cycle = 6.976%, thus DC Corr = 20log(0.06976) = -23.1dB

Antenna 2: Mid Channel - Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 4.951 | 59.51 | PK | 33.2 | -41.5 | 3.8 | 3.7 | 58.71 | 74 | -15.29 | 183 | 286 | H |
| * 7.424 | 57.31 | PK | 36.7 | -39.7 | 4.7 | 4.6 | 63.61 | 74 | -10.39 | 292 | 275 | H |
| 9.902 | 53.04 | PK | 38.2 | -39.2 | 5.5 | 5.3 | 62.84 | 74 | -11.16 | 256 | 320 | H |
| * 12.373 | 41.62 | PK | 38.9 | -37.1 | 6.5 | 5.9 | 55.82 | 74 | -18.18 | 240 | 368 | H |
| 14.847 | 38.68 | PK | 42 | -36.9 | 6.8 | 6.5 | 57.08 | 74 | -16.92 | 202 | 322 | H |
| 17.323 | 39.48 | PK | 42.4 | -38.2 | 7.5 | 7.1 | 58.28 | 74 | -15.72 | 119 | 207 | H |
| * 4.949 | 58.13 | PK | 33.2 | -41.5 | 3.8 | 3.7 | 57.33 | 74 | -16.67 | 191 | 272 | V |
| * 7.427 | 54.22 | PK | 36.7 | -39.7 | 4.7 | 4.6 | 60.52 | 74 | -13.48 | 287 | 284 | V |
| 9.902 | 51.86 | PK | 38.2 | -39.2 | 5.5 | 5.3 | 61.66 | 74 | -12.34 | 175 | 204 | V |
| * 12.373 | 43.13 | PK | 38.9 | -37.1 | 6.5 | 5.9 | 57.33 | 74 | -16.67 | 171 | 198 | V |
| 14.85 | 38.18 | PK | 42 | -36.9 | 6.8 | 6.5 | 56.58 | 74 | -17.42 | 297 | 282 | V |
| 17.321 | 38.69 | PK | 42.4 | -38.2 | 7.5 | 7.1 | 57.49 | 74 | -16.51 | 238 | 274 | V |

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | SWBOX2 [dB] | SMA7 [dB] | SMA5 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Av Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|-----------|--------------|----------------------------|------------------------|----------------|----------------|-------------|----------|
| * 4.951 | 59.51 | Av | 33.2 | -41.5 | 3.8 | 3.7 | -23.1 | 35.61 | 54 | -18.39 | 183 | 286 | H |
| * 7.424 | 57.31 | Av | 36.7 | -39.7 | 4.7 | 4.6 | -23.1 | 40.51 | 54 | -13.49 | 292 | 275 | H |
| 9.902 | 53.04 | Av | 38.2 | -39.2 | 5.5 | 5.3 | -23.1 | 39.74 | 54 | -14.26 | 256 | 320 | H |
| * 12.373 | 41.62 | Av | 38.9 | -37.1 | 6.5 | 5.9 | -23.1 | 32.72 | 54 | -21.28 | 240 | 368 | H |
| 14.847 | 38.68 | Av | 42 | -36.9 | 6.8 | 6.5 | -23.1 | 33.98 | 54 | -20.02 | 202 | 322 | H |
| 17.323 | 39.48 | Av | 42.4 | -38.2 | 7.5 | 7.1 | -23.1 | 35.18 | 54 | -18.82 | 119 | 207 | H |
| * 4.949 | 58.13 | Av | 33.2 | -41.5 | 3.8 | 3.7 | -23.1 | 34.23 | 54 | -19.77 | 191 | 272 | V |
| * 7.427 | 54.22 | Av | 36.7 | -39.7 | 4.7 | 4.6 | -23.1 | 37.42 | 54 | -16.58 | 287 | 284 | V |
| 9.902 | 51.86 | Av | 38.2 | -39.2 | 5.5 | 5.3 | -23.1 | 38.56 | 54 | -15.44 | 175 | 204 | V |
| * 12.373 | 43.13 | Av | 38.9 | -37.1 | 6.5 | 5.9 | -23.1 | 34.23 | 54 | -19.77 | 171 | 198 | V |
| 14.85 | 38.18 | Av | 42 | -36.9 | 6.8 | 6.5 | -23.1 | 33.48 | 54 | -20.52 | 297 | 282 | V |
| 17.321 | 38.69 | Av | 42.4 | -38.2 | 7.5 | 7.1 | -23.1 | 34.39 | 54 | -19.61 | 238 | 274 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

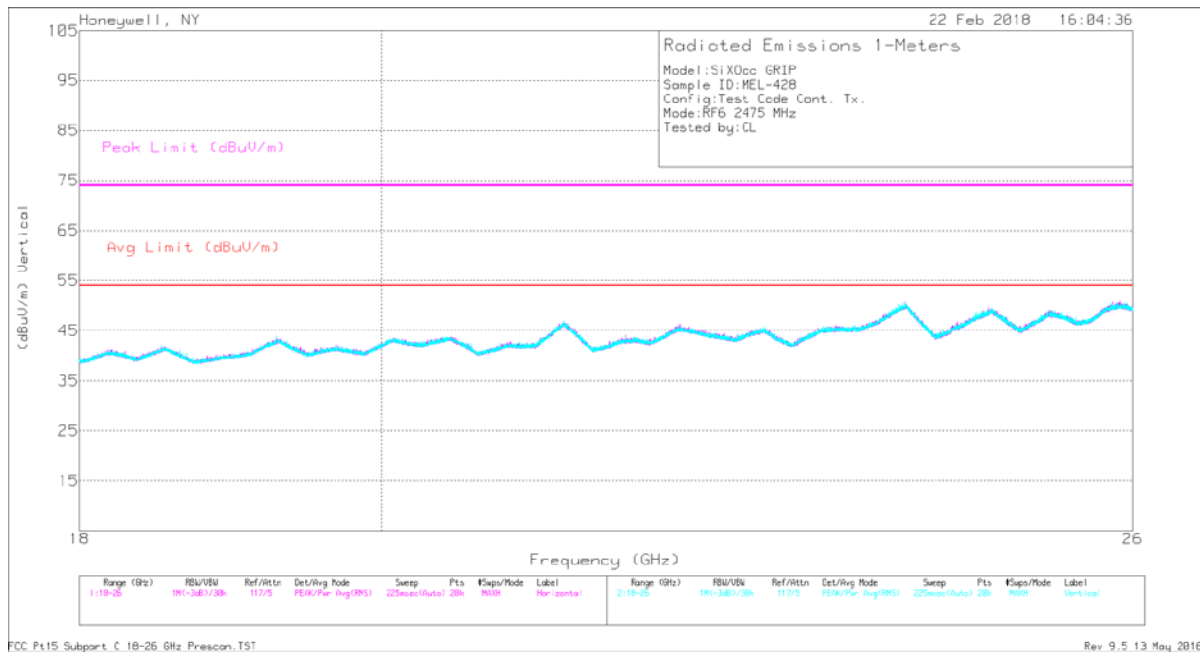
PK - KDB558074 Method: Maximum Peak

Av - KDB558074 Method: PK + DC Corr (Duty Cycle Correction Factor)

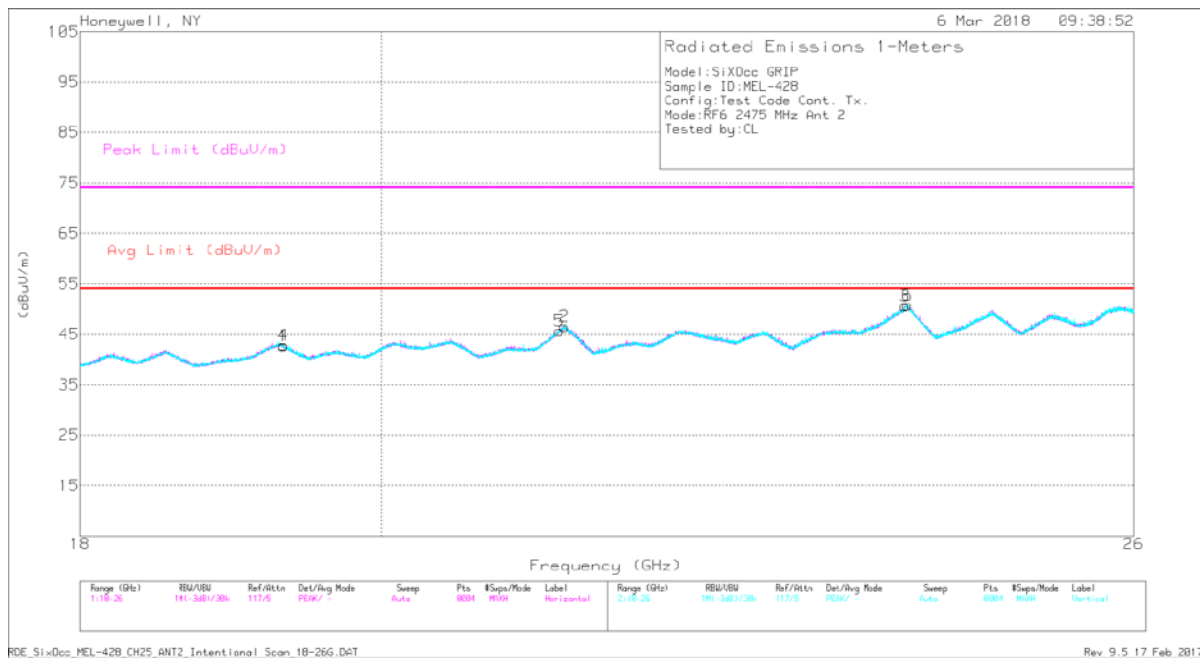
Duty Cycle = 6.976%, thus DC Corr = 20log(0.06976) = -23.1dB

Antenna 2: High Channel – Data

18-26GHz



Antenna 1: High Channel – Plot



Antenna 2: High Channel - Plot

| Frequency (GHz) | Meter Reading (dBuV) | Det | Horn ACF [dB] | SMA5 [dB] | 18-26G Preamp [dB] | Distance Corr Factor [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Polarity |
|-----------------|----------------------|-----|---------------|-----------|--------------------|---------------------------|----------------------------|--------------------|-------------|---------------------|----------------|----------------|----------|
| * 19.295 | 34.67 | Pk | 44.3 | 8 | -34.2 | -9.5 | 43.27 | 54 | -10.73 | 74 | -30.73 | 0-360 | H |
| * 21.323 | 35.13 | Pk | 44.9 | 8.1 | -32 | -9.5 | 46.63 | 54 | -7.37 | 74 | -27.37 | 0-360 | H |
| * 23.993 | 35.36 | Pk | 46.3 | 8.4 | -30.6 | -9.5 | 49.96 | 54 | -4.04 | 74 | -24.04 | 0-360 | H |
| * 20.477 | 34.81 | Pk | 44.4 | 8.3 | -34.1 | -9.5 | 43.91 | 54 | -10.09 | 74 | -30.09 | 0-360 | V |
| * 22.2 | 35.95 | Pk | 45.6 | 8.4 | -34.1 | -9.5 | 46.35 | 54 | -7.65 | 74 | -27.65 | 0-360 | V |
| 24.736 | 37.42 | Pk | 46 | 8.7 | -32.6 | -9.5 | 50.02 | 54 | -3.98 | 74 | -23.98 | 0-360 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

Antenna 1: Low Channel – Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | Horn ACF [dB] | SMA5 [dB] | 18-26G Preamp [dB] | Distance Corr Factor [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Polarity |
|-----------------|----------------------|-----|---------------|-----------|--------------------|---------------------------|----------------------------|--------------------|-------------|---------------------|----------------|----------------|----------|
| * 19.294 | 34.68 | Pk | 44.3 | 8 | -34.2 | -9.5 | 43.28 | 54 | -10.72 | 74 | -30.72 | 0-360 | H |
| * 21.329 | 35.39 | Pk | 44.9 | 8.1 | -32.1 | -9.5 | 46.79 | 54 | -7.21 | 74 | -27.21 | 0-360 | H |
| 24.014 | 35.96 | Pk | 46.3 | 8.4 | -30.4 | -9.5 | 50.76 | 54 | -3.24 | 74 | -23.24 | 0-360 | H |
| * 20.099 | 35.18 | Pk | 44.2 | 8.3 | -34.3 | -9.5 | 43.88 | 54 | -10.12 | 74 | -30.12 | 0-360 | V |
| * 22.19 | 35.4 | Pk | 45.6 | 8.4 | -34 | -9.5 | 45.9 | 54 | -8.1 | 74 | -28.1 | 0-360 | V |
| 24.738 | 36.58 | Pk | 46 | 8.7 | -32.5 | -9.5 | 49.28 | 54 | -4.72 | 74 | -24.72 | 0-360 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

Antenna 1: Mid Channel – Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | Horn ACF [dB] | SMA5 [dB] | 18-26G Preamp [dB] | Distance Corr Factor [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Polarity |
|-----------------|----------------------|-----|---------------|-----------|--------------------|---------------------------|----------------------------|--------------------|-------------|---------------------|----------------|----------------|----------|
| * 19.287 | 34.96 | Pk | 44.3 | 8 | -34.3 | -9.5 | 43.46 | 54 | -10.54 | 74 | -30.54 | 0-360 | H |
| * 21.33 | 35.11 | Pk | 44.9 | 8.1 | -32.2 | -9.5 | 46.41 | 54 | -7.59 | 74 | -27.59 | 0-360 | H |
| 24.01 | 35.91 | Pk | 46.3 | 8.4 | -30.4 | -9.5 | 50.71 | 54 | -3.29 | 74 | -23.29 | 0-360 | H |
| * 20.083 | 34.52 | Pk | 44.2 | 8.3 | -34.2 | -9.5 | 43.32 | 54 | -10.68 | 74 | -30.68 | 0-360 | V |
| * 22.192 | 35.09 | Pk | 45.6 | 8.4 | -34 | -9.5 | 45.59 | 54 | -8.41 | 74 | -28.41 | 0-360 | V |
| 24.78 | 36.55 | Pk | 46.1 | 8.7 | -32.9 | -9.5 | 48.95 | 54 | -5.05 | 74 | -25.05 | 0-360 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

Antenna 1: High Channel – Data

Note: No emissions detected from the EUT above the system noise floor

| Frequency (GHz) | Meter Reading (dBuV) | Det | Horn ACF [dB] | SMA5 [dB] | 18-26G Preamp [dB] | Distance Corr Factor [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Polarity |
|-----------------|----------------------|-----|---------------|-----------|--------------------|---------------------------|----------------------------|--------------------|-------------|---------------------|----------------|----------------|----------|
| * 19.259 | 34.52 | Pk | 44.3 | 8.1 | -34.7 | -9.5 | 42.72 | 54 | -11.28 | 74 | -31.28 | 0-360 | H |
| * 21.363 | 34.95 | Pk | 44.9 | 8.1 | -32.9 | -9.5 | 45.55 | 54 | -8.45 | 74 | -28.45 | 0-360 | H |
| 24.043 | 35.91 | Pk | 46.3 | 8.4 | -30.8 | -9.5 | 50.31 | 54 | -3.69 | 74 | -23.69 | 0-360 | H |
| * 20.067 | 34.39 | Pk | 44.1 | 8.4 | -34.4 | -9.5 | 42.99 | 54 | -11.01 | 74 | -31.01 | 0-360 | V |
| * 22.811 | 35.46 | Pk | 45.7 | 8.3 | -34.7 | -9.5 | 45.26 | 54 | -8.74 | 74 | -28.74 | 0-360 | V |
| 24.756 | 36.67 | Pk | 46 | 8.7 | -32.5 | -9.5 | 49.37 | 54 | -4.63 | 74 | -24.63 | 0-360 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

Antenna 2: Low Channel – Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | Horn ACF [dB] | SMA5 [dB] | 18-26G Preamp [dB] | Distance Corr Factor [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Polarity |
|-----------------|----------------------|-----|---------------|-----------|--------------------|---------------------------|----------------------------|--------------------|-------------|---------------------|----------------|----------------|----------|
| * 19.296 | 34.44 | Pk | 44.3 | 8 | -34.2 | -9.5 | 43.04 | 54 | -10.96 | 74 | -30.96 | 0-360 | H |
| * 21.304 | 34.9 | Pk | 44.9 | 8.1 | -32.1 | -9.5 | 46.3 | 54 | -7.7 | 74 | -27.7 | 0-360 | H |
| 24.031 | 35.92 | Pk | 46.3 | 8.4 | -30.5 | -9.5 | 50.62 | 54 | -3.38 | 74 | -23.38 | 0-360 | H |
| * 19.335 | 34.68 | Pk | 44.3 | 7.9 | -34.8 | -9.5 | 42.58 | 54 | -11.42 | 74 | -31.42 | 0-360 | V |
| * 21.309 | 34.9 | Pk | 44.9 | 8.1 | -32 | -9.5 | 46.4 | 54 | -7.6 | 74 | -27.6 | 0-360 | V |
| 24.04 | 36.01 | Pk | 46.3 | 8.4 | -30.8 | -9.5 | 50.41 | 54 | -3.59 | 74 | -23.59 | 0-360 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

Antenna 2: Mid Channel – Data

| Frequency (GHz) | Meter Reading (dBuV) | Det | Horn ACF [dB] | SMA5 [dB] | 18-26G Preamp [dB] | Distance Corr Factor [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Polarity |
|-----------------|----------------------|-----|---------------|-----------|--------------------|---------------------------|----------------------------|--------------------|-------------|---------------------|----------------|----------------|----------|
| * 19.324 | 34.55 | Pk | 44.3 | 8 | -34.6 | -9.5 | 42.75 | 54 | -11.25 | 74 | -31.25 | 0-360 | H |
| * 21.315 | 34.93 | Pk | 44.9 | 8.1 | -31.9 | -9.5 | 46.53 | 54 | -7.47 | 74 | -27.47 | 0-360 | H |
| 24.007 | 35.91 | Pk | 46.3 | 8.4 | -30.5 | -9.5 | 50.61 | 54 | -3.39 | 74 | -23.39 | 0-360 | H |
| * 19.325 | 34.68 | Pk | 44.3 | 8 | -34.6 | -9.5 | 42.88 | 54 | -11.12 | 74 | -31.12 | 0-360 | V |
| * 21.281 | 34.83 | Pk | 44.9 | 8.1 | -32.6 | -9.5 | 45.73 | 54 | -8.27 | 74 | -28.27 | 0-360 | V |
| 24.03 | 36.11 | Pk | 46.3 | 8.4 | -30.5 | -9.5 | 50.81 | 54 | -3.19 | 74 | -23.19 | 0-360 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

Antenna 2: High Channel – Data

Note: No emissions detected from the EUT above the system noise floor

END OF REPORT