



# **TEST REPORT**

**Report Number. :** 13310303-E1V2

**Applicant :** Pella Corporation  
102 Main St.  
Pella, IA 50009

**FCC ID :** SO7-209L0000

**ISED :** 11009A-209L0000

**Model Number :** 209L0000

**EUT Description :** Blind/Shade Wireless Sensor Controller

**Test Standard(s) :** FCC 47 CFR PART 15 SUBPART C  
INDUSTRY CANADA RSS 210  
INDUSTRY CANADA RSS-GEN Issue 5

**Date Of Issue:**

July 29, 2020

**Prepared by:**

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	06/3/2020	Initial Issue	-
V2	07/29/2020	Updated Section 1,2,7.1,7.2, 8, 9 and added Section 7.3 & Removed Section 7.4.	K.Kedida

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS .....</b>	<b>4</b>
<b>2. TEST METHODOLOGY .....</b>	<b>5</b>
<b>3. FACILITIES AND ACCREDITATION .....</b>	<b>5</b>
<b>4. CALIBRATION AND UNCERTAINTY .....</b>	<b>6</b>
4.1. <i>MEASURING INSTRUMENT CALIBRATION .....</i>	<i>6</i>
4.2. <i>SAMPLE CALCULATION .....</i>	<i>6</i>
4.3. <i>MEASUREMENT UNCERTAINTY .....</i>	<i>6</i>
<b>5. EQUIPMENT UNDER TEST .....</b>	<b>7</b>
5.1. <i>DESCRIPTION OF EUT .....</i>	<i>7</i>
5.2. <i>MAXIMUM FUNDAMENTAL FIELD STRENGTH.....</i>	<i>7</i>
5.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS .....</i>	<i>7</i>
5.4. <i>SOFTWARE AND FIRMWARE.....</i>	<i>7</i>
5.5. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	<i>7</i>
5.6. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>8</i>
<b>6. TEST AND MEASUREMENT EQUIPMENT .....</b>	<b>9</b>
<b>7. ANTENNA PORT TEST RESULTS.....</b>	<b>10</b>
7.1. <i>20 dB AND 99% BW .....</i>	<i>10</i>
7.2. <i>DUTY CYCLE .....</i>	<i>13</i>
7.3. <i>TRANSMISSION TIME .....</i>	<i>17</i>
<b>8. RADIATED EMISSION TEST RESULTS.....</b>	<b>18</b>
<b>9. SETUP PHOTOS.....</b>	<b>27</b>

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Pella Corporation  
102 Main St.  
Pella, IA 50009

**EUT DESCRIPTION:** Blind/Shade Wireless Sensor Controller

**MODEL:** 209L0000

**SERIAL NUMBER:** 002, 004

**DATE TESTED:** APRIL 20 - MAY 18, 2020 2020

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Pass
INDUSTRY CANADA RSS-210 Issue 10, Annex A	Pass
INDUSTRY CANADA RSS-GEN Issue 5	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 the U.S. government.

Approved & Released For  
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Reviewed By:



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UL Verification Services Inc.

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Senior Project Engineer  
Consumer Technology Division  
UL Verification Services Inc.

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 5, and RSS-210 Issue 10.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd
<input type="checkbox"/> Chamber A (ISED:2324B-1)	<input type="checkbox"/> Chamber D (ISED:22541-1)	<input type="checkbox"/> Chamber I (ISED:2324A-5)
<input type="checkbox"/> Chamber B (ISED:2324B-2)	<input type="checkbox"/> Chamber E (ISED:22541-2)	<input type="checkbox"/> Chamber J (ISED:2324A-6)
<input type="checkbox"/> Chamber C (ISED:2324B-3)	<input type="checkbox"/> Chamber F (ISED:22541-3)	<input checked="" type="checkbox"/> Chamber K (ISED:2324A-1)
	<input type="checkbox"/> Chamber G (ISED:22541-4)	<input checked="" type="checkbox"/> Chamber L (ISED:2324A-3)
	<input type="checkbox"/> Chamber H (ISED:22541-5)	

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code. UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamplifier Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a battery powered wireless transmitter for home automation/security application.

### 5.2. MAXIMUM FUNDAMENTAL FIELD STRENGTH

The transmitter has peak fundamental field strengths as follows:

Frequency Range (MHz)	Mode	Field Strength Peak (dBuV/m)	Field Strength Average (dBuV/m)
433.92	Normal	100.58	79.65

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes PCB printed helical antenna, with a maximum peak gain of -1.77dBi.

### 5.4. SOFTWARE AND FIRMWARE

The typical factory firmware installed in the EUT during testing was version 1.16.

### 5.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in each of its three orthogonal axes. All radiated testing was performed in the worse-case axis, which was found to be the "Y-axis". See photos for details.

## 5.6. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

NONE

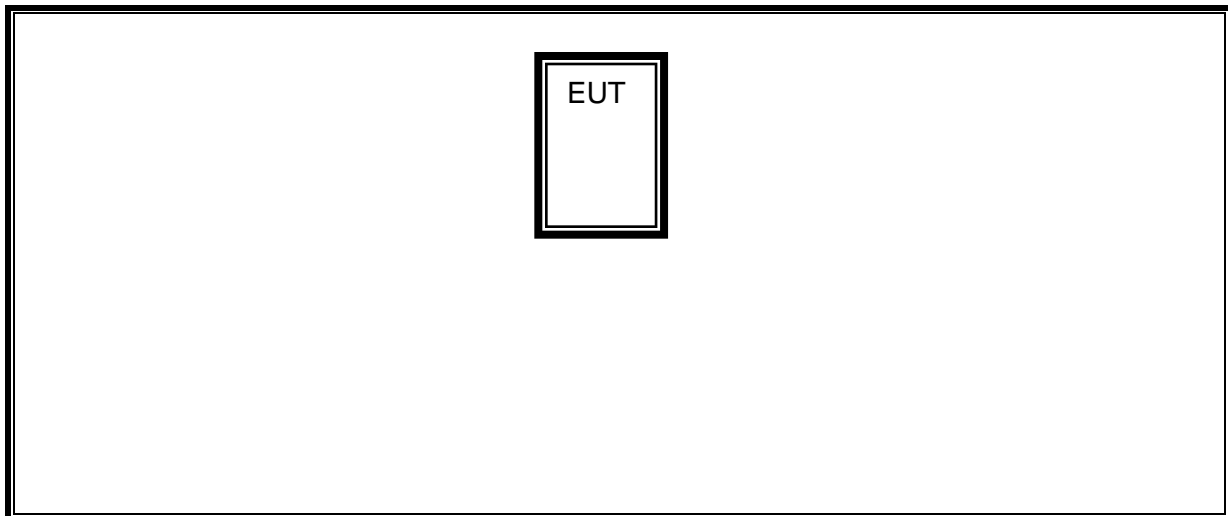
### I/O CABLES

NONE

### TEST SETUP

The EUT was tested as a standalone device.

### SETUP DIAGRAM FOR TESTS





## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Amplifier, 1 to 8GHz, 30dB gain	AMPLICAL	AMP1G18-35	160511	6/3/2020
Antenna, Horn 1-18GHz	ETS-Lindgren	T344	143448	4/30/2021
Amplifier, 9KHz to 1GHz, 32dB	HEWLET PACKARD	8447D	T64	6/25/2020
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179377	5/3/2021
Hybrid Antenna, 30MHz to 3GHz	SunAR rf motion	JB3	PRE0181574	8/1/2020
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1450	01/23/2021
Loop Antenna, 100KHz - 30MHz	ELECTRO METRICS	EM-6872	PRE0179467	05/22/2021
Loop Antenna, 30Hz - 1MHz	ELECTRO METRICS	EM-6871	PRE0179465	05/22/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179522	5/11/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	PRE0180089	6/21/2020
Hybrid Antenna, 30MHz to 3GHz	SunAR rf motion	JB3	PRE0181575	8/1/2020
PSA Spectrum Analyzer	Agilent	E4446A	T146	1/29/21
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Ver 9.5, June 22, 2018	

NOTE: \*testing was completed before equipment calibration expiration date.

## 7. ANTENNA PORT TEST RESULTS

### 7.1. 20 dB AND 99% BW

#### LIMITS

FCC §15.231 (c)

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

RSS-210 A.1.3

The 99% bandwidth of monetarily operated devices shall be less or equal to 0.25% of the center frequency for devices operating between 70MHz and 900MHz. For devices operating above 900MHz, the 99% bandwidth shall be less or equal to 0.5% of the center frequency.

#### TEST PROCEDURE

ANSI C63.10

The transmitter output is connected to the spectrum analyzer.

20dB Bandwidth: The RBW is set to 1% to 5% of OBW. The VBW is set to 3 times the RBW. The sweep time is coupled. Bandwidth is determined at the points 20 dB down from the modulated carrier.

99% Bandwidth: The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

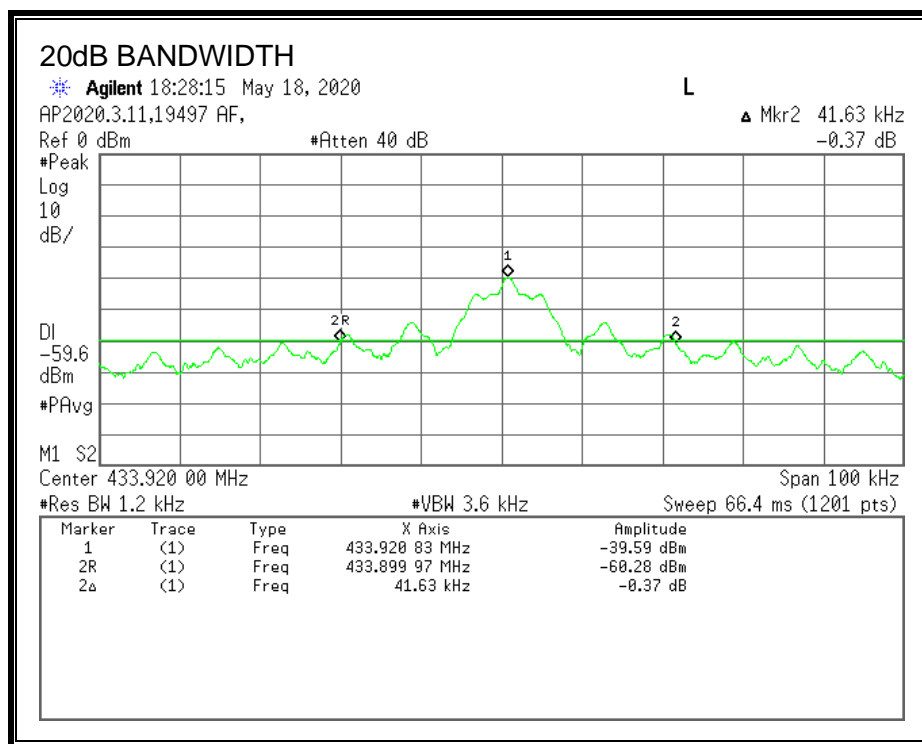
## RESULTS

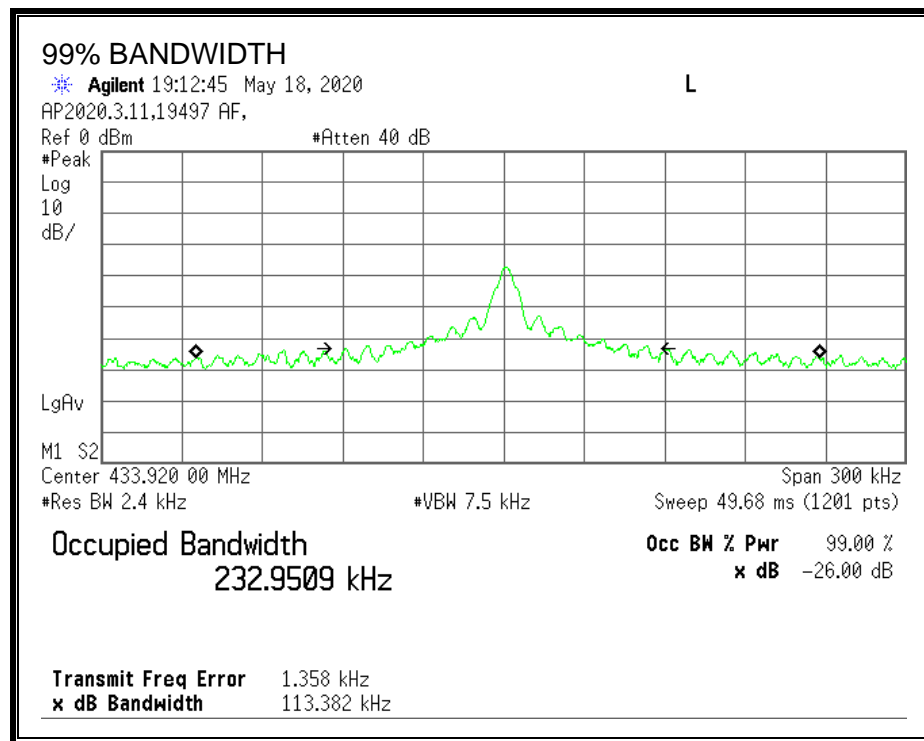
### 20dB Bandwidth

Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
433.92	41.63	1084.8	-1043.17

### 99% Bandwidth

Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
433.92	232.9509	1084.8	-851.8491





## 7.2. DUTY CYCLE

### LIMITS

FCC §15.35 (c)

The measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

### TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 10MHz and the VBW is set to 10MHz. The sweep time is coupled and the span is set to 0 Hz. The number of pulses is measured and calculated in a 100 ms scan.

### CALCULATION

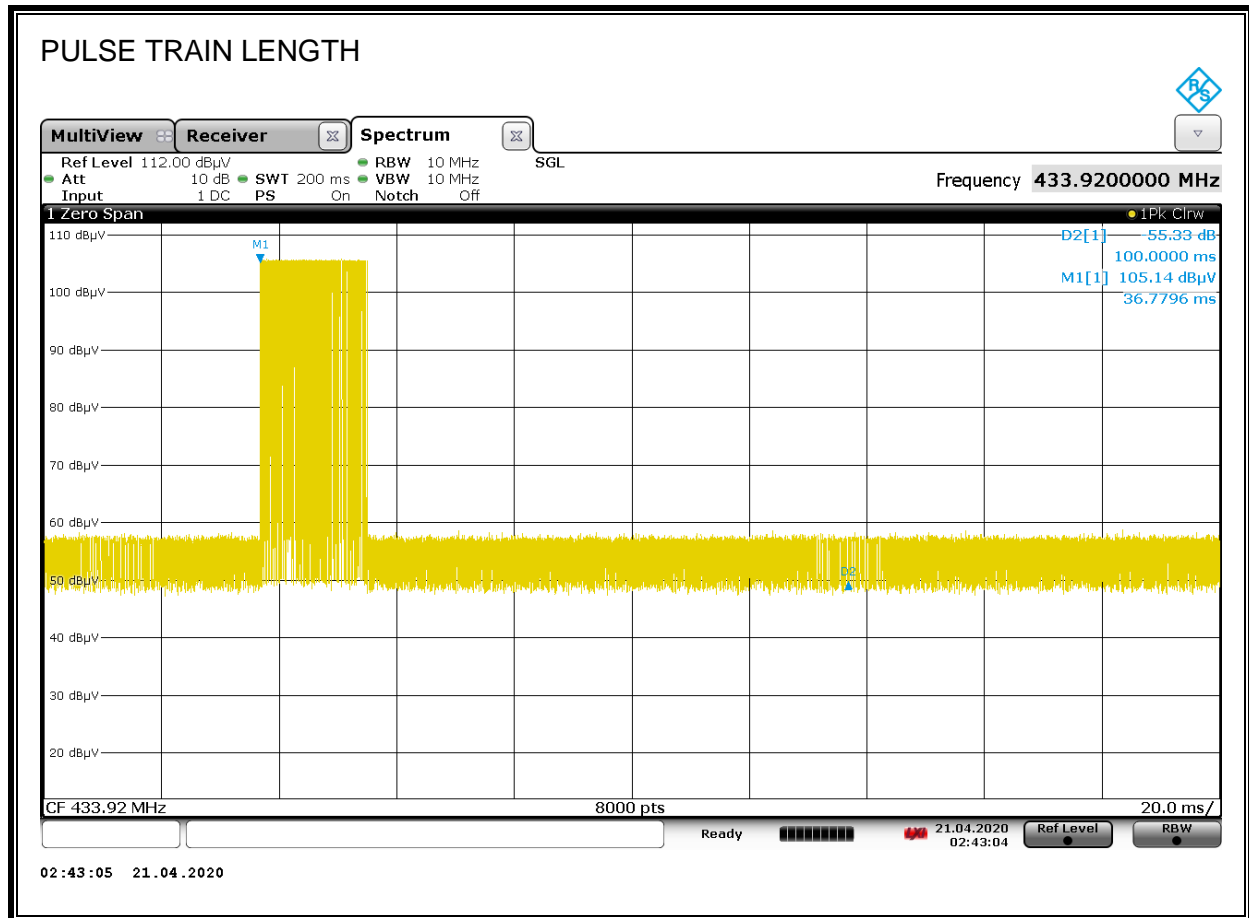
Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is  $(\# \text{ of pulses } 1 * \text{ pulse width } 1) + (\# \text{ of pulses } 2 * \text{ pulse width } 2) + (\# \text{ of pulses } 3 * \text{ pulse width } 3) / 100 \text{ or } T$

### RESULTS

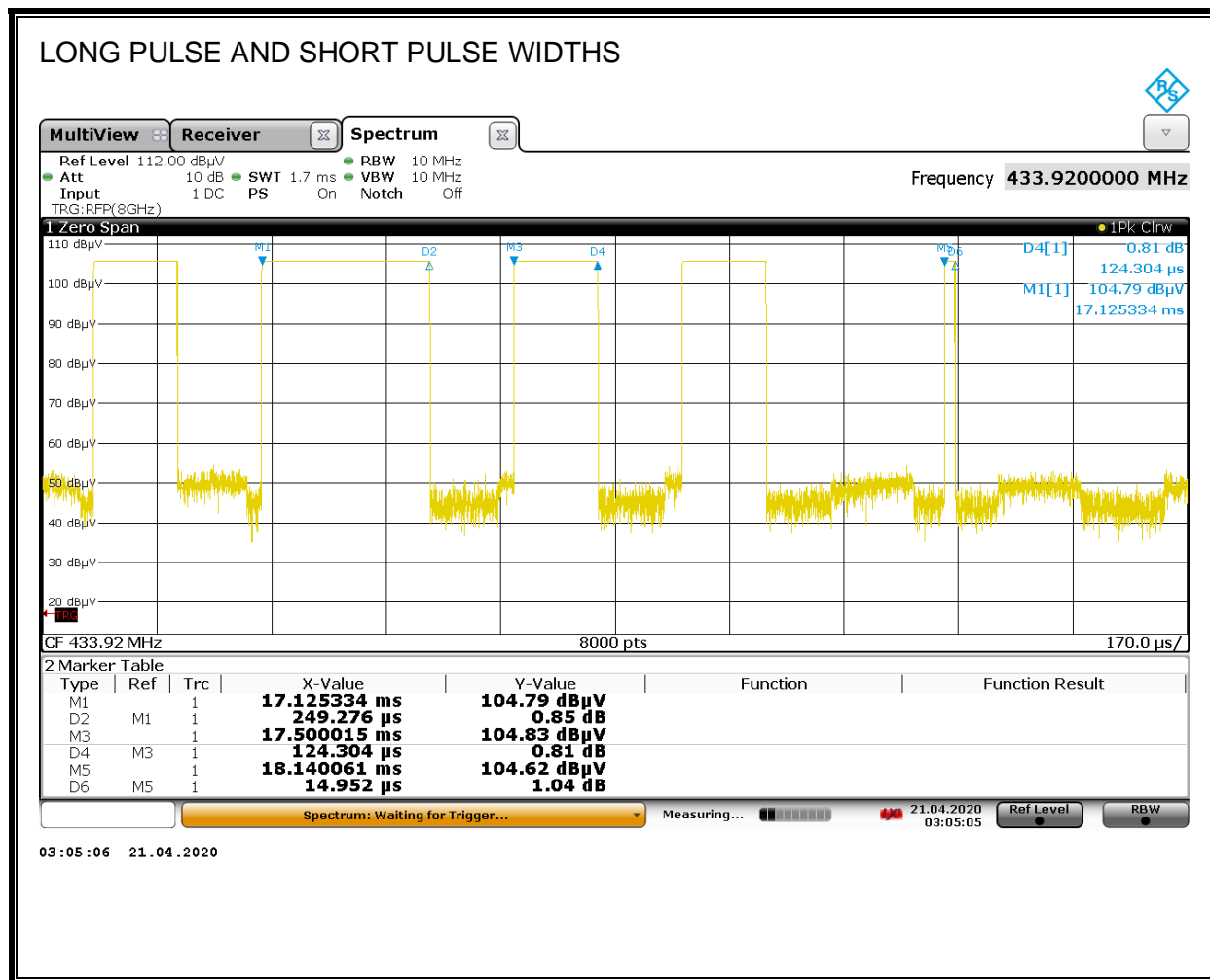
No non-compliance noted:

One Period (ms)	Pulse Width 1 (ms)	# of Pulses 1	Pulse Width 2 (ms)	# of Pulses 2	Pulse Width 3 (ms)	# of Pulses 3	Duty Cycle	20*Log Duty Cycle (dB)
100	0.014952	2	0.124304	58	0.249276	7	0.090	-20.93

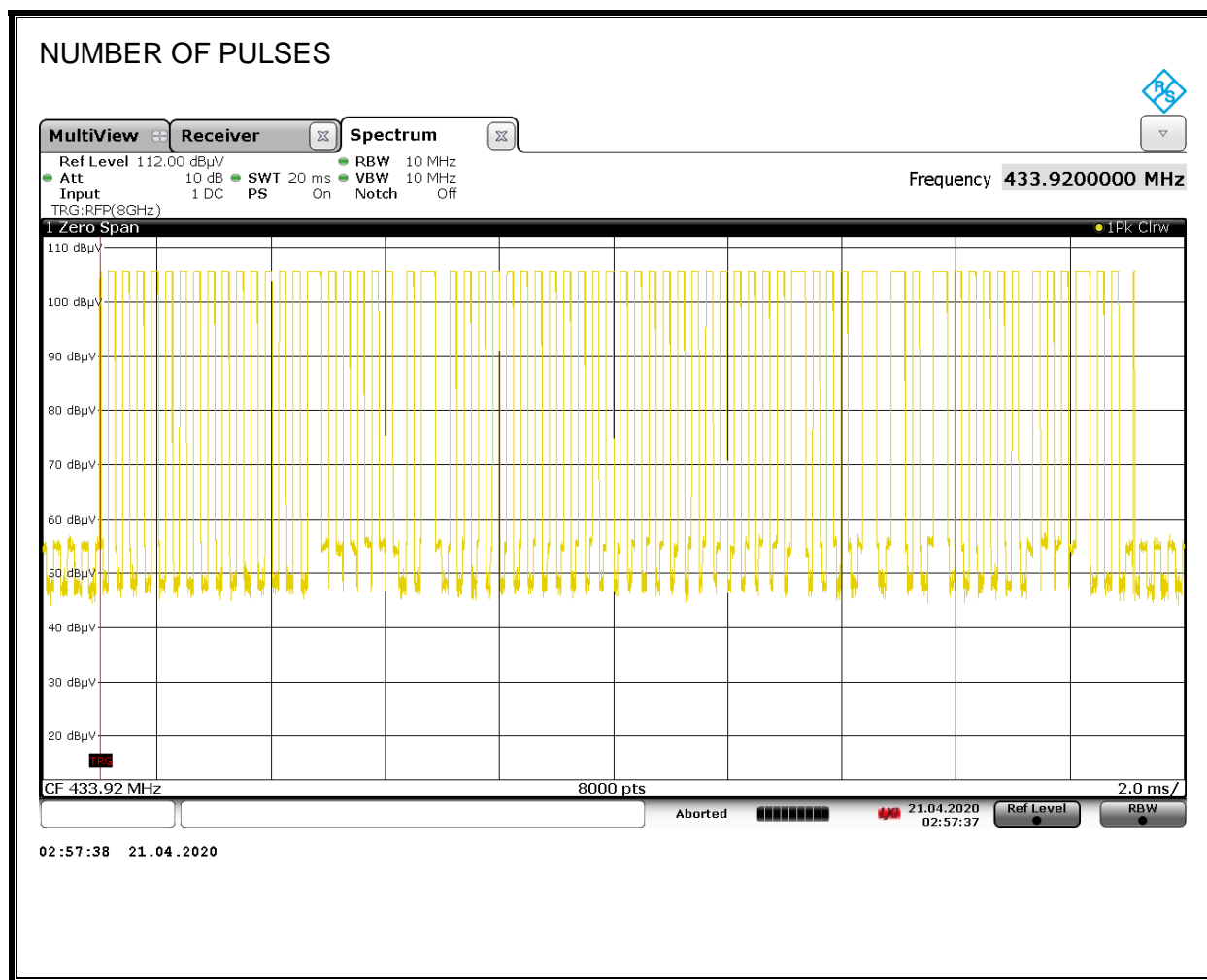
## PULSE TRAIN LENGTH



## PULSE WIDTHS



## NUMBER OF PULSES





### 7.3. TRANSMISSION TIME

FCC §15.231 (a) (2)  
RSS-210 A.1.1 (b)

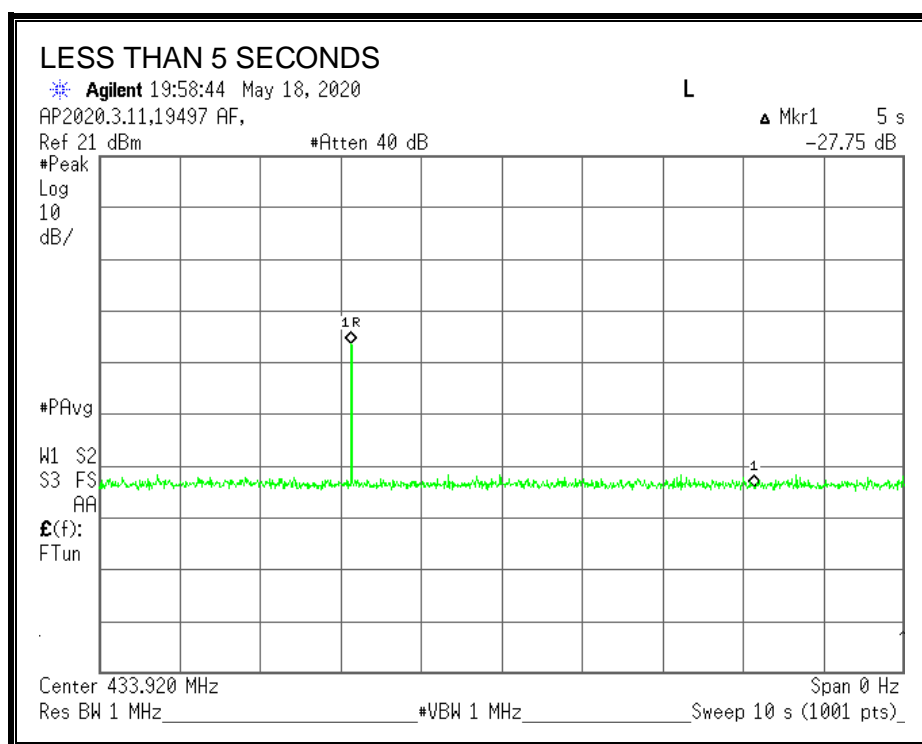
A transmitter that has been activated automatically shall cease transmission within 5 seconds of activation.

#### TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 1MHz and the VBW is set to 1MHz. The sweep time is set to 10 seconds and the span is set to 0 Hz.

#### RESULTS

No non-compliance noted:



## 8. RADIATED EMISSION TEST RESULTS

### LIMITS

FCC §15.231 (b)  
RSS-210 A.1.2

In addition to the provisions of § 15.205, the field strength of emissions from Intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	<sup>1</sup> 1,250 to 3,750	<sup>1</sup> 125 to 375
174-260	3,750	375
260-470	<sup>1</sup> 3,750 to 12,500	<sup>1</sup> 375 to 1,250
Above 470	12,500	1,250

<sup>1</sup>Linear interpolation

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41	322 - 335.4		

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup> Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
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., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

## **TEST PROCEDURE**

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 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 3 MHz for peak measurements and add duty cycle factor for average measurements. Please refer to test report section 7.2 for duty cycle factor information. Note: The pre-scan measurements above 1GHz the VBW is set to 30 kHz.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. 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.

2D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.

## **KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification**

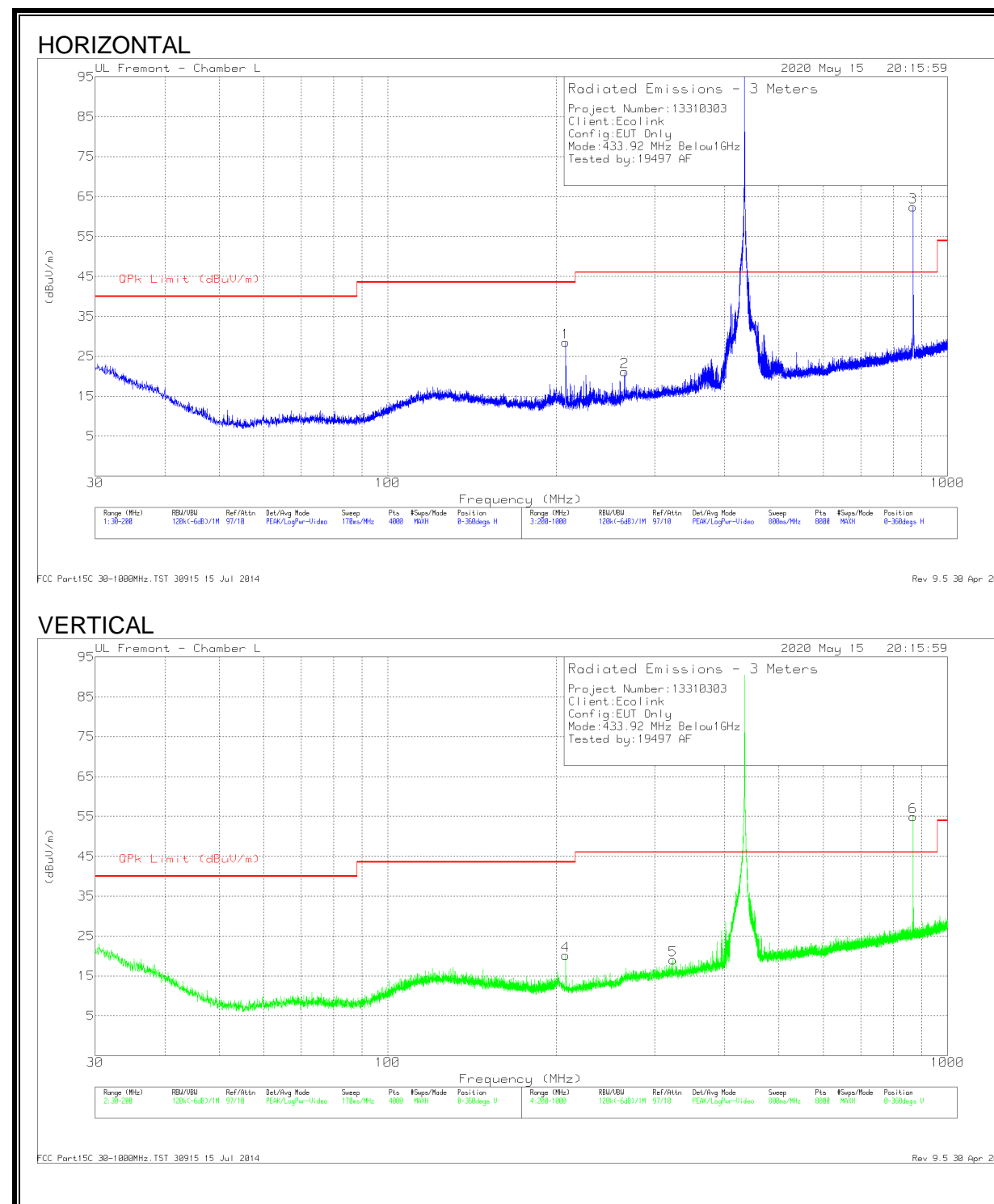
Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

## **RESULTS**

No non-compliance noted:

# **FUNDAMENTAL, HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz)**



## BELOW 1GHZ RADIATED EMISSIONS

### FUNDAMENTAL FIELD STRENGTH AND HARMONICS SPURIOUS EMISSIONS

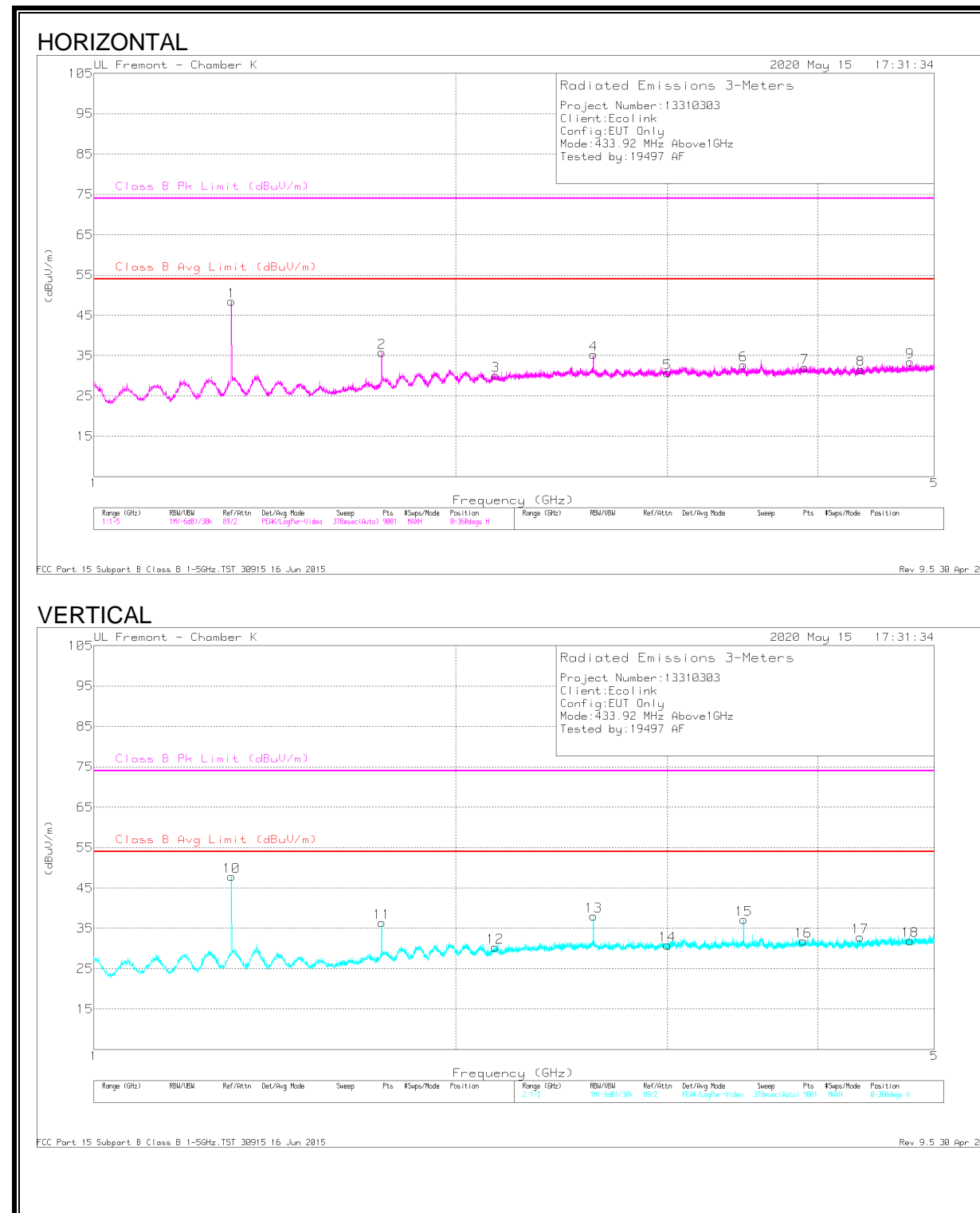
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF PRE0184971 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	207.9998	43.24	Pk	16.2	-30.1	29.34	80.83	-51.49	298	112	H
	207.9998		Av			8.41	60.83	-52.42	298	112	H
2	264.9401	33.99	Pk	18.8	-29.8	22.99	80.83	-57.84	62	258	H
	264.9401		Av			2.06	60.83	-58.77	62	258	H
3	**867.8432	64.35	Pk	27.6	-27.7	64.25	80.83	-16.58	283	218	H
	**867.8432		Av			43.32	60.83	-17.51	283	218	H
4	207.9969	36.68	Pk	16.2	-30.1	22.78	80.83	-58.05	214	370	V
	207.9969		Av			1.85	60.83	-58.98	214	370	V
5	323.3436	27.31	Pk	19.8	-29.4	17.71	80.83	-63.12	300	347	V
	323.3436		Av			-3.22	60.83	-64.05	300	347	V
6	**867.8408	61.14	Pk	27.6	-27.7	61.04	80.83	-19.79	264	290	V
	**867.8408		Av			40.11	60.83	-20.72	264	290	V
Fund	433.9223	107.18	Pk	22.5	-29.1	100.58	100.83	-0.25	126	136	H
	*433.9223		Av			79.65	80.83	-1.18	126	136	H
Fund	433.9218	100.03	Pk	22.5	-29.1	93.43	100.83	-7.4	177	262	V
	*433.9218		Av			72.5	80.83	-8.33	177	262	V

Pk - Peak detector

Av – Average detector

- Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is (# of pulses 1 \* pulse width 1) + (# of pulses 2 \* pulse width 2) + (# of pulses 3 \* pulse width 3) / 100 or T.
- Refer to section 7.1 for Duty Cycle Correction Factor calculation (-20.93dB).
- Note: Radiated peak result is based on 100% duty cycle sample; average reading = peak reading + DCCF.
- \*\* Harmonics of fundamental 433.9 MHz

## HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz



Frequency (GHz)	Meter Reading (dBuV)	Det	AFT862 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	FCC Avg Limit (dBuV/m)	Margin (dB)	FCC Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
**1.30176	66.83	Pk	29	-46.6	49.23	54	-25.7	74	-24.77	298	161	H
		Av			28.3			-	-			
**1.73567	56.21	Pk	29.6	-46.5	39.31	60.82	-35.62	80.82	-41.51	231	337	H
		Av			18.38			-	-			
**2.16015	44.68	Pk	31.2	-45.8	30.08	60.82	-48.11	80.82	-50.74	317	170	H
		Av			9.15			-	-			
**2.6035	51.93	Pk	32.6	-44.3	40.23	60.82	-37.96	80.82	-40.59	8	370	H
		Av			19.3			-	-			
**3.00146	41.29	Pk	32.8	-43.3	30.79	60.82	-47.4	80.82	-50.03	203	245	H
		Av			9.86			-	-			
**3.47135	45.42	Pk	33.1	-42.5	36.02	60.82	-45.73	80.82	-44.8	34	364	H
		Av			15.09			-	-			
**3.90291	41.8	Pk	33.4	-42.4	32.8	60.82	-42.13	74	-41.2	258	233	H
		Av			11.87			-	-			
**4.34228	40.28	Pk	33.5	-42	31.78	54	-43.15	74	-42.22	96	190	H
		Av			10.85			-	-			
**4.77585	39.05	Pk	34	-41.6	31.45	54	-43.48	74	-42.55	113	363	H
		Av			10.52			-	-			
**1.3017	68.47	Pk	29	-46.6	50.87	54	-24.06	74	-23.13	101	166	V
		Av			29.94			-	-			
**1.73578	60.08	Pk	29.6	-46.5	43.18	60.82	-31.75	80.82	-37.64	339	103	V
		Av			22.25			-	-			
**2.15828	54.92	Pk	31.2	-45.8	40.32	60.82	-34.61	80.82	-40.5	227	151	V
		Av			19.39			-	-			
**2.60352	56.4	Pk	32.6	-44.3	44.7	60.82	-30.23	80.82	-36.12	103	149	V
		Av			23.77			-	-			
**2.99963	50.77	Pk	32.8	-43.2	40.37	60.82	-34.56	80.82	-40.45	357	303	V
		Av			19.44			-	-			
**3.47129	54.46	Pk	33.1	-42.5	45.06	60.82	-28.87	80.82	-35.76	166	132	V
		Av			25.13			-	-			
**3.89503	50.34	Pk	33.4	-42.4	41.34	54	-33.59	74	-32.66	220	102	V
		Av			20.41			-	-			
**4.33944	49.93	Pk	33.5	-42	41.43	54	-33.5	74	-32.57	177	173	V
		Av			20.5			-	-			
**4.77712	49.91	Pk	34	-41.6	42.31	54	-32.62	74	-31.69	171	145	V
		Av			21.38			-	-			

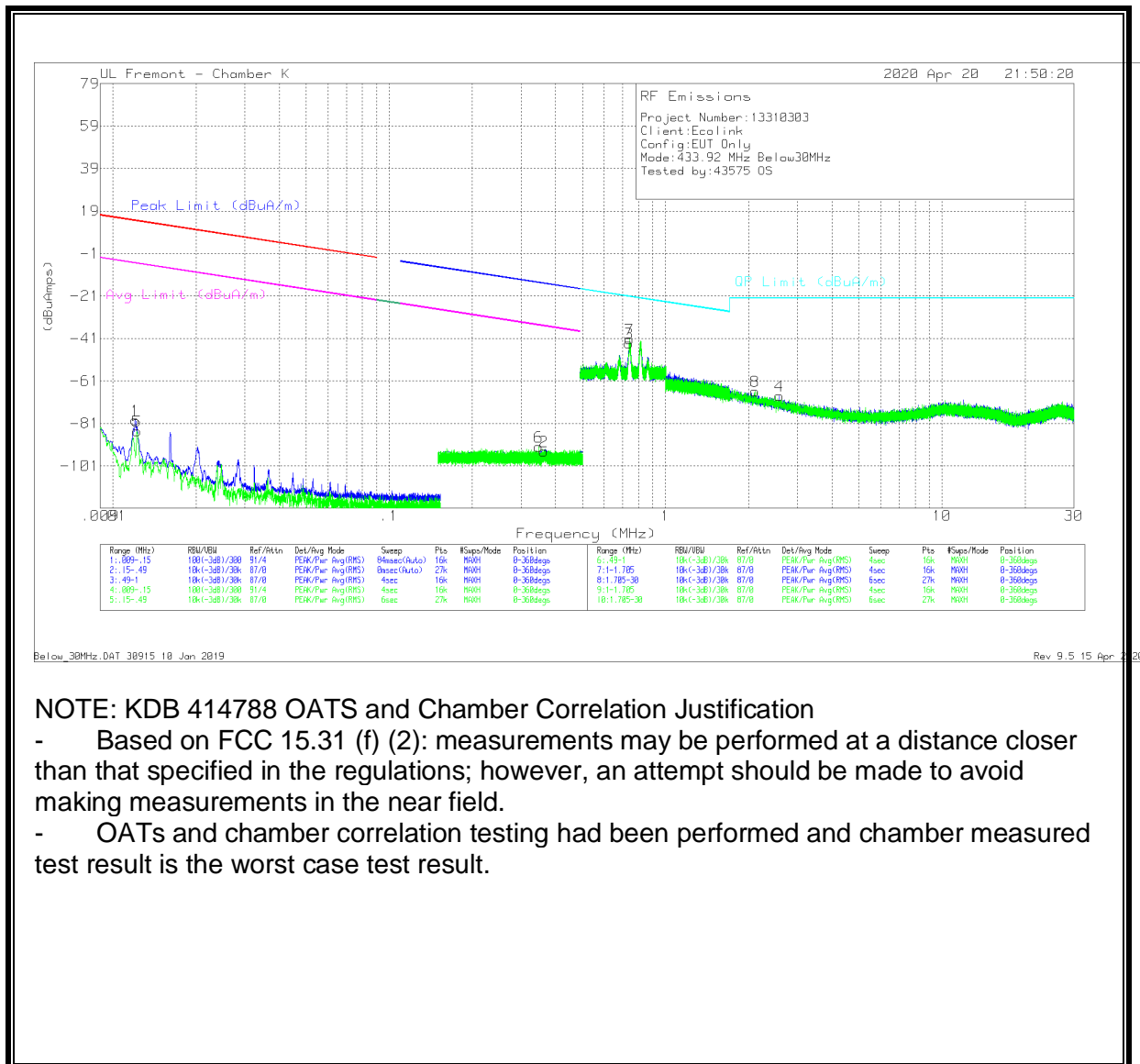
Pk - Peak detector

Av – Average detector

- Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is (# of pulses 1 \* pulse width 1) + (# of pulses 2 \* pulse width 2) + (# of pulses 3 \* pulse width 3) / 100 or T.
- Refer to section 7.1 for Duty Cycle Correction Factor calculation (-20.93dB).
- Note: Radiated peak result is based on 100% duty cycle sample; average reading = peak reading + DCCF.
- \*\* Harmonics of fundamental 433.9 MHz



## BELOW 30MHz



## BELOW 30MHz RADIATED EMISSIONS

### Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Cables w/ PRE0186650	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01207	23.92	Pk	8.4	-31.8	-80	-79.48	14.45	-93.93	-5.55	-73.93	-	-	-	-	0-360
2	.36241	13.29	Pk	4.5	-32.1	-80	-94.31	-	-	-	-	-15.08	-79.23	-35.08	-59.23	0-360
5	.01224	18.85	Pk	8.4	-31.8	-80	-84.55	14.33	-98.88	-5.67	-78.88	-	-	-	-	0-360
6	.34721	15.51	Pk	4.6	-32.1	-80	-91.99	-	-	-	-	-14.7	-77.29	-34.7	-57.29	0-360

### Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Cables w/ PRE0186650	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.73845	24.24	Pk	4.6	-32.1	-40	-43.26	-21.25	-22.01	0-360
7	.74165	26.13	Pk	4.6	-32.1	-40	-41.37	-21.29	-20.08	0-360
4	2.57694	15.54	Pk	-11.5	-32	-40	-67.96	-22	-45.96	0-360
8	2.10953	16.28	Pk	-10.2	-32	-40	-65.92	-22	-43.92	0-360

### Pk - Peak detector

**Note:** The Limits in CRF 47, Part 15, Subpart C, Paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels ( as reported in the table) using the free space impedance of 377 Ohms. For example, the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to  $Y - 51.5 = Z$  dBuA/m, which has the same margin, W dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.