



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

Cordella Pulmonary Artery Sensor System

MODEL NUMBER: CorPASS

REPORT NUMBER: 12537947A

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NVLAP LAB CODE 100414-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--		Initial Issue	

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Endotronix Inc.
815 Ogden Ave
Lisle, IL, 60532
US

EUT DESCRIPTION: Cordella Pulmonary Artery Sensor System

MODEL: CorPASS

SERIAL NUMBER: non-serilized

DATE TESTED: October 2018 – January 2019

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	

UL LLC 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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.

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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.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, IL 60062 USA.

UL NBK is accredited by NVLAP, Laboratory Code 100414-0.

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

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

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

4.3. MEASUREMENT UNCERTAINTY

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

Test	Range	Equipment	Uncertainty k=2
Radiated Emissions	30-200MHz	Bicon 10m Horz	4.27dB
Radiated Emissions	30-200MHz	Bicon 10m Vert	4.28dB
Radiated Emissions	200-1000MHz	LogP 10m Horz	3.33dB
Radiated Emissions	200-1000MHz	LogP 10m Vert	3.39dB
Radiated Emissions	30-200MHz	Bicon 3m Horz	3.30dB
Radiated Emissions	30-130MHz	Bicon 3m Vert	4.84dB
Radiated Emissions	130-200MHz	Bicon 3m Vert	4.94dB
Radiated Emissions	200-1000MHz	LogP 3m Horz	3.46dB
Radiated Emissions	200-1000MHz	LogP 3m Vert	4.98dB
Radiated Emissions	1-6GHz	Horn	5.02dB
Radiated Emissions	6-18GHz	Horn	5.34dB
Radiated Emissions	18-26GHz	Horn	6.60dB
Conducted Ant Port	30MHz-26GHz	Spectrum Analyzer	2.94

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Cordella Pulmonary Artery Sensor System intended for home and professional use.

5.2. MAXIMUM OUTPUT FIELD STRENGTH

The transmitter has a maximum peak radiated field strength as follows:

Frequency Range (MHz)	Mode	Peak Field Strength dBuV/m @ 3m	Peak Field Strength dBuV/m @ 30m
13.09	TX stand alone	62.88	22.88
13.34	TX stand alone	62.18	22.18
13.62	TX stand alone	62.78	22.78
13.90	TX stand alone	61.89	21.89

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral patch antenna.

Antenna Area: 0.0192 m²

The smallest antenna length: 0.130meters which is less than 5.4meters (75/13.9MHz) Antenna coil has two turns.

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was 2.2.0.5.

5.5. WORST-CASE CONFIGURATION AND MODE

EUT operates on four possible channels and all four channels were measured. Worst case orientation for EUT was when it was positioned perpendicular to ground.

5.6. MODIFICATIONS

No modifications were made during testing.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

None

INPUT OUTPUT PORTS

None

TEST SETUP

The EUT is setup as stand alone 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:

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	2017-12-21	2018-12-31
Bicon Antenna	Chase	VBA6106A	EMC4078	2018-03-28	2019-03-31
Log-P Antenna	Chase	UPA6109	EMC4313	2018-04-09	2019-04-30
Loop Antenna	EMCO	6502/1	EMC4026	2018-01-10	2019-01-31
Signal Analyzer	Aglient	N9030A PXA	EMC4360	2018-12-11	2019-12-31

7. 20 dB AND 99% BW

LIMITS

For reference only

TEST PROCEDURE

ANSI C63.10

The transmitter output is connected to the spectrum analyzer.

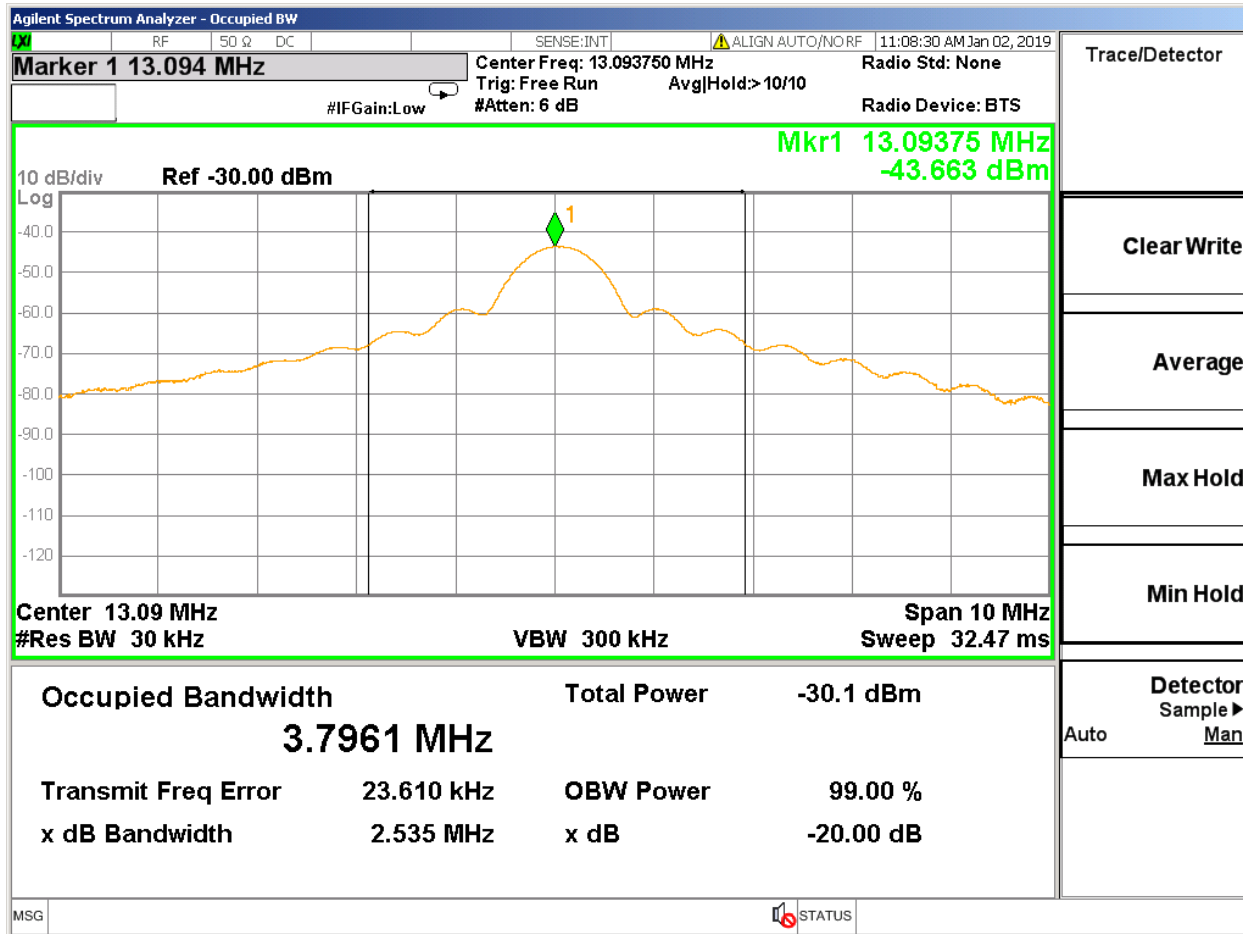
The RBW is set to 1% to 5% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

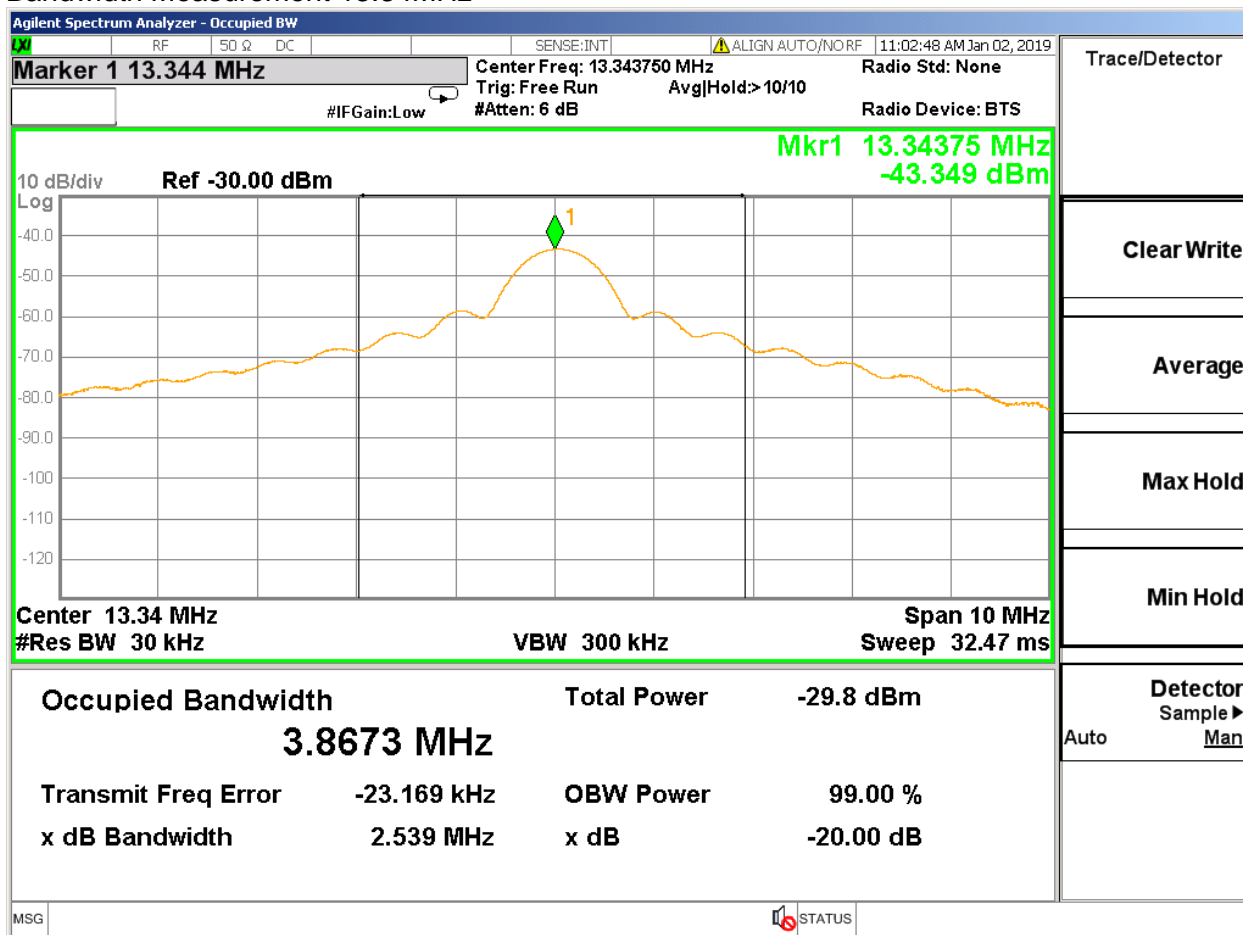
Bandwidth

Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
13.09	2535	3796.1
13.34	2539	3867.3
13.62	2533	3913.3
13.9	2519	3956.5

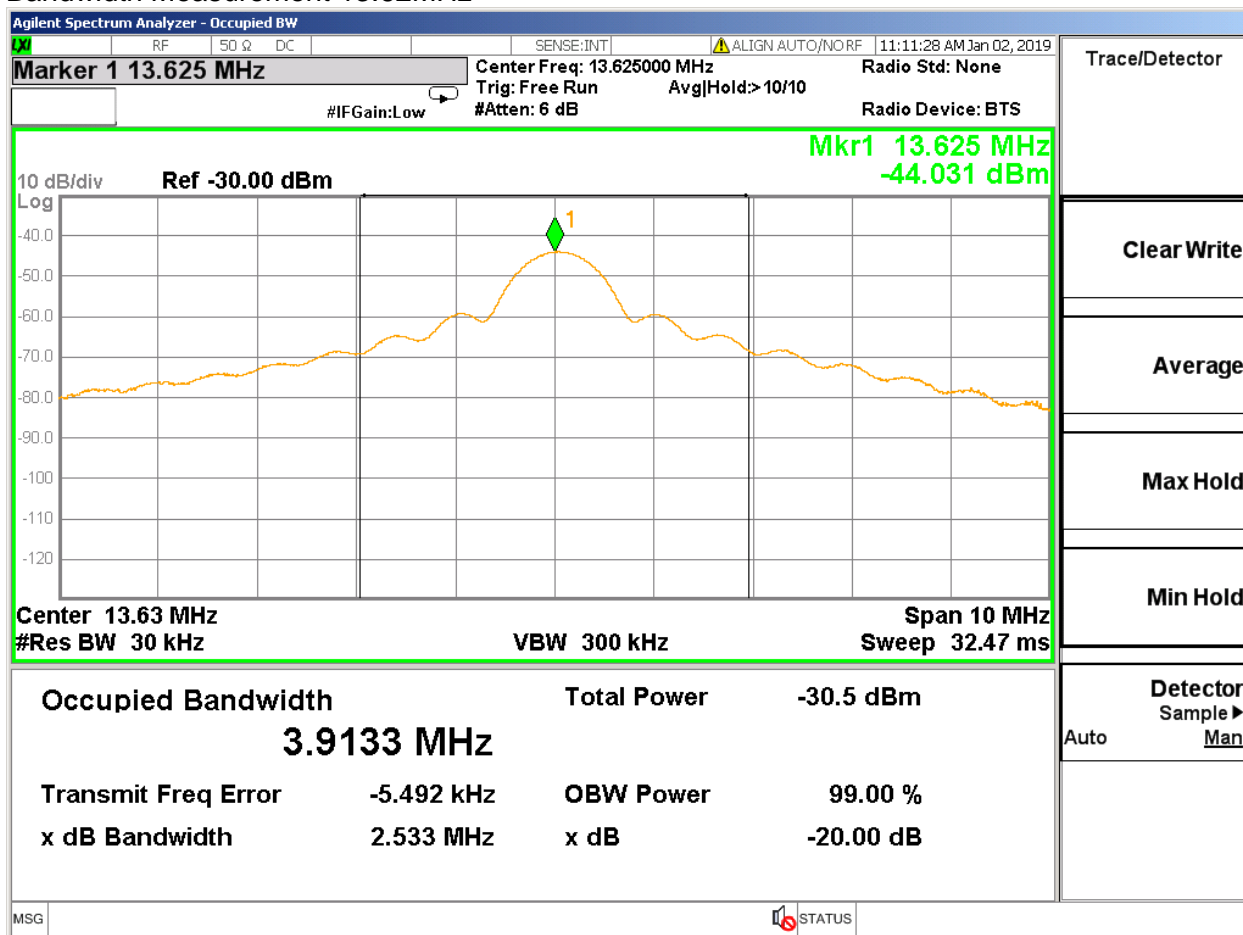
Bandwidth Measurement 13.09MHz



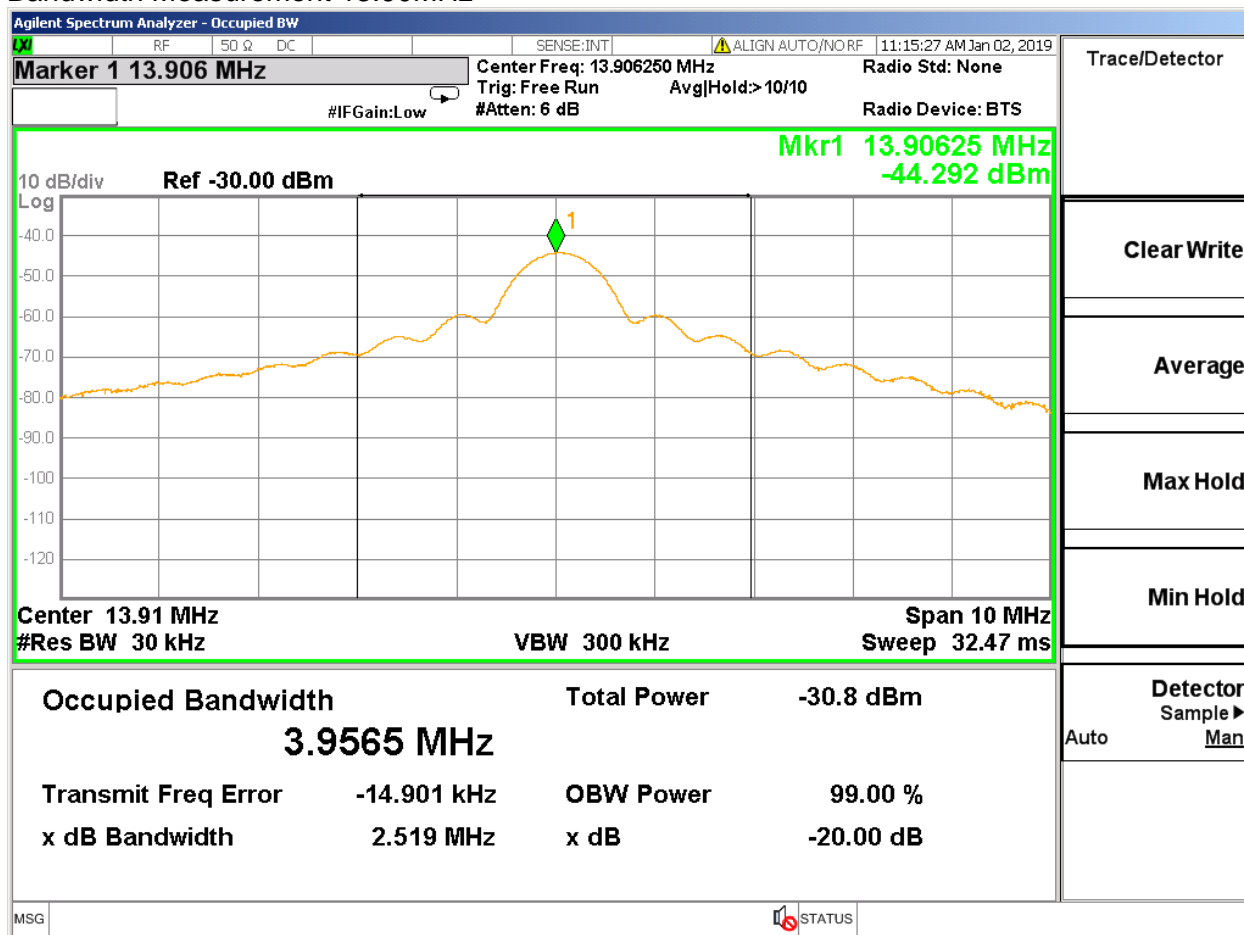
Bandwidth Measurement 13.34MHz



Bandwidth Measurement 13.62MHz



Bandwidth Measurement 13.90MHz



8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.209

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (m)
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 to 216	150	3
216 to 960	200	3
Above 960 MHz	500	3
Note: The lower limit shall apply at the transition frequency.		

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz measurements. The antenna to EUT distance is 3 meters for frequencies 9kHz-30MHz and 10 meters for frequencies 30MHz-1GHz.

The levels measured at 10 meter distance were extrapolated to 3 meter distance using the distance factor ($20 \cdot \log(10/3)$).

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 for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. Peak detection is used unless otherwise noted as quasi-peak.

The spectrum from 9kHz to 1000 MHz is investigated with the transmitter set to all four channels in the band.

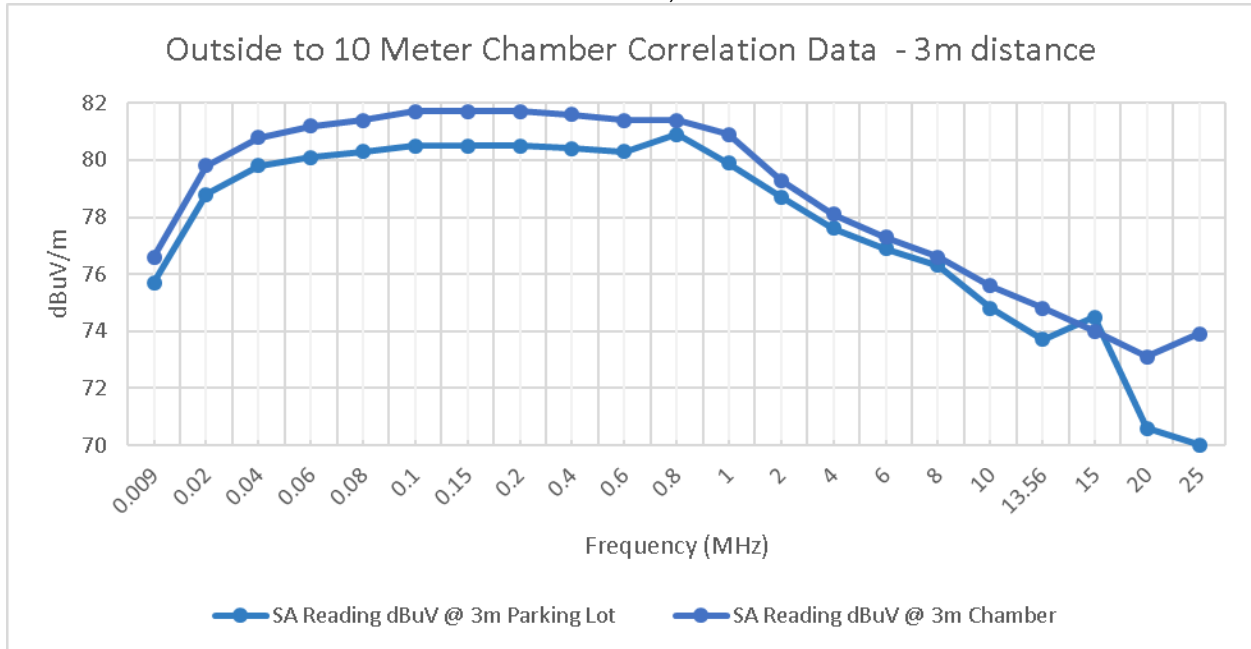
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

RESULTS

8.2. TX EMISSIONS 0.009MHz TO 30 MHz

8.2.1. Outdoor to 10m SAC Correlation Data

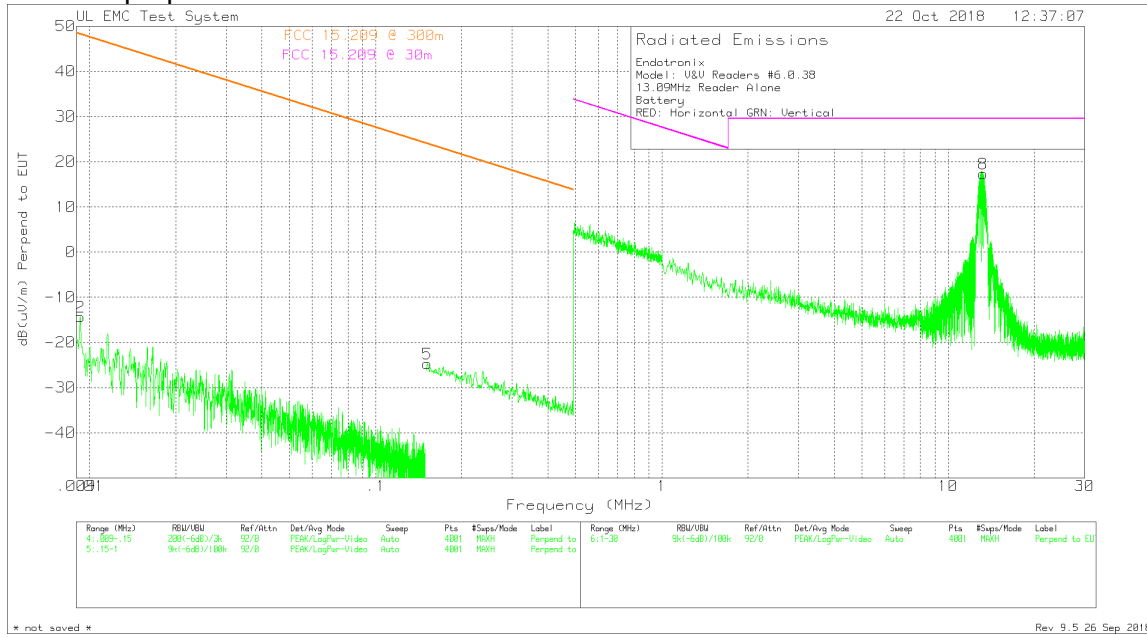
Correlation Data for measurements 9kHz-30MHz between Outside and 10m semi-anechoic chamber at Underwriter Laboratories in Northbrook, IL.



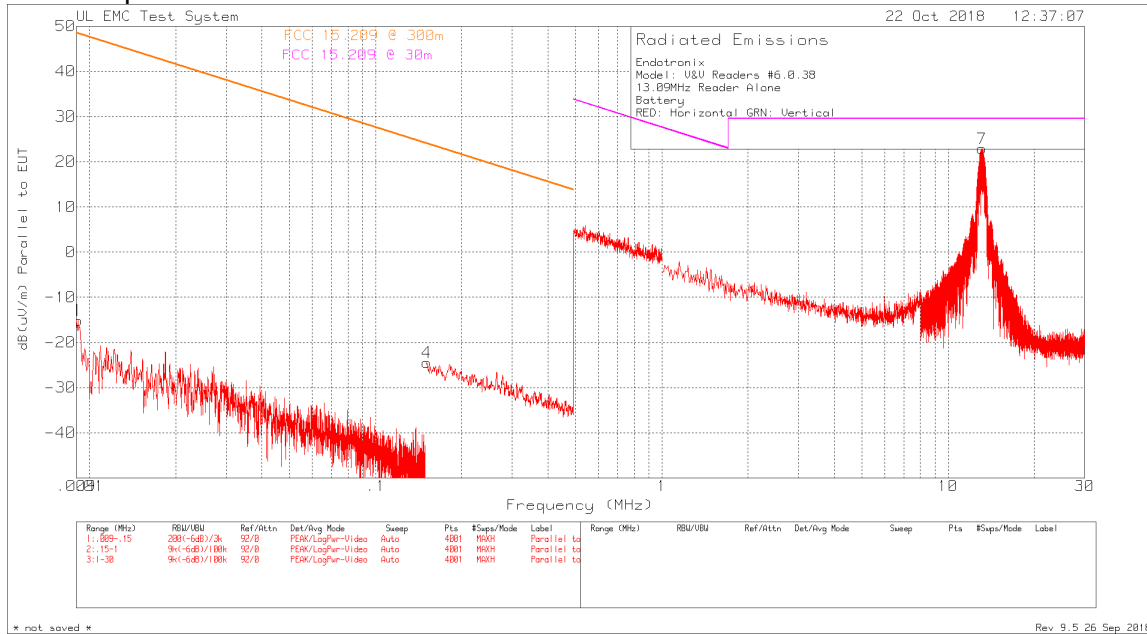
Correlation measurements were conducted using a signal source with an antenna outside in open area (parking lot). Immediately following the measurements the same setup was moved inside the 10 meter semi-anechoic chamber and the measurements were repeated. The above plot shows the difference in levels measured between outside and the 10 meter semi anechoic chamber.

8.2.2. TX Data 13.09MHz

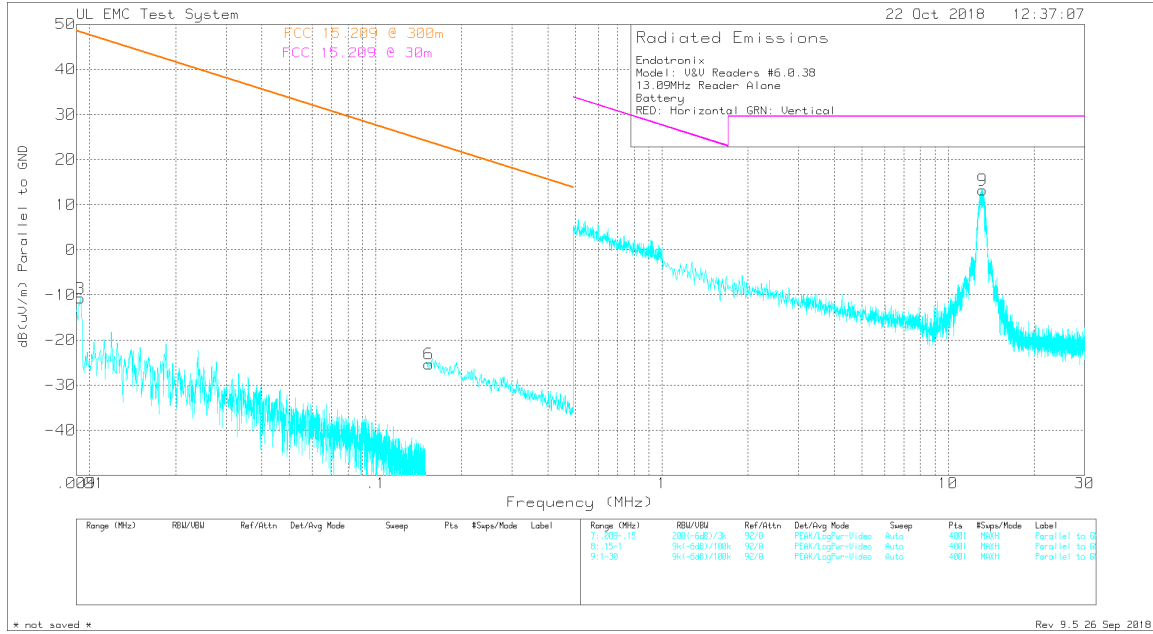
Antenna perpendicular to EUT



Antenna parallel to EUT



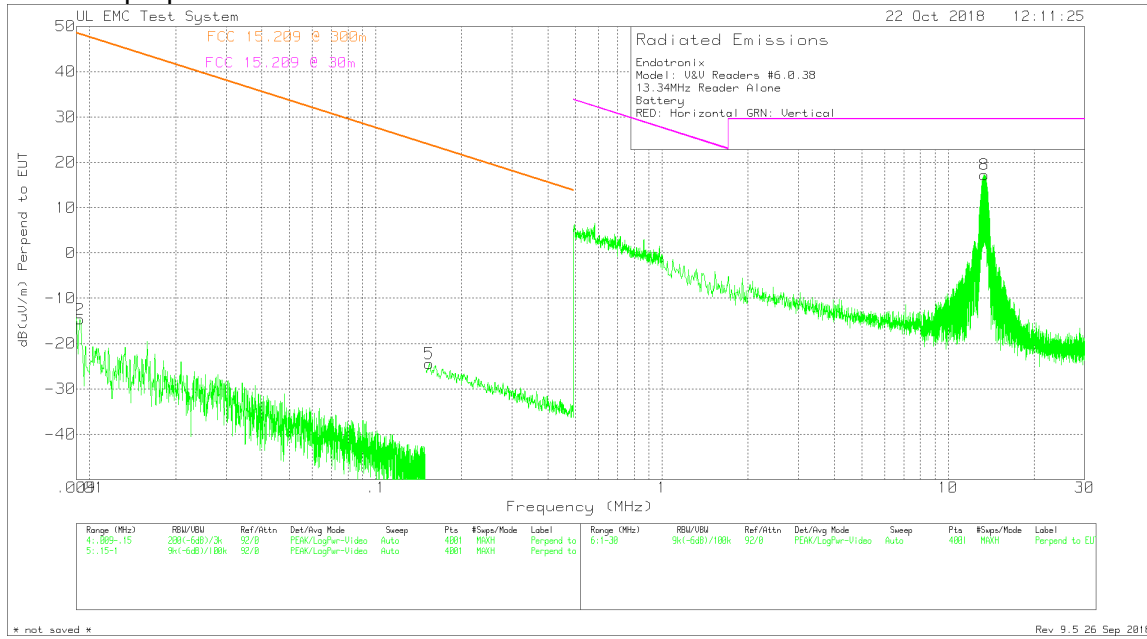
Antenna Parallel to Ground



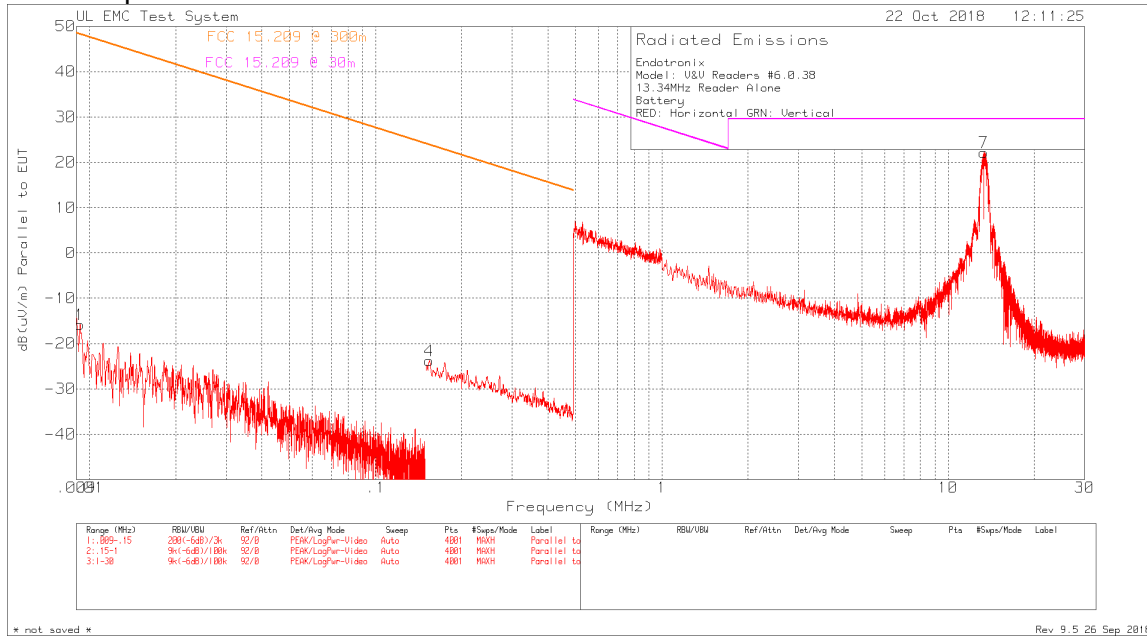
Endotronic												
Model: V&V Readers #6.0.38												
13.09MHz Reader Alone												
Battery												
RED: Horizontal GRN: Vertical												
Trace MARKERS												
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Distance Correction Factor dB	Level dBuV/m	FCC 15.209 @ 300m	Margin (dB)	FCC 15.209 @ 30m	Margin (dB)	Azimuth [Degs]
Antenna Parallel to EUT												
1	0.009105	41.8	Pk	23.1	0	-80	-15.1	48.41	-63.51	-	-	0-360
4	0.15085	43.59	Pk	11.9	0.1	-80	-24.41	24.03	-48.44	-	-	0-360
7	13.12925	50.98	Pk	11.5	0.4	-40	22.88	-	-	29.54	-6.66	0-360
Antenna Perpendicular to EUT												
2	0.00928	42.55	Pk	23.1	0	-80	-14.35	48.24	-62.59	-	-	0-360
5	0.1517	43.29	Pk	11.9	0.1	-80	-24.71	23.98	-48.69	-	-	0-360
8	13.25975	45.46	Pk	11.5	0.4	-40	17.36	-	-	29.54	-12.18	0-360
Antenna Parallel to Ground												
3	0.00928	46.16	Pk	23.1	0	-80	-10.74	48.24	-58.98	-	-	0-360
6	0.15341	42.68	Pk	11.9	0.1	-80	-25.32	23.88	-49.2	-	-	0-360
9	13.18	41.35	Pk	11.5	0.4	-40	13.25	-	-	29.54	-16.29	0-360
Pk - Peak detector												

8.2.3. TX Data 13.34MHz

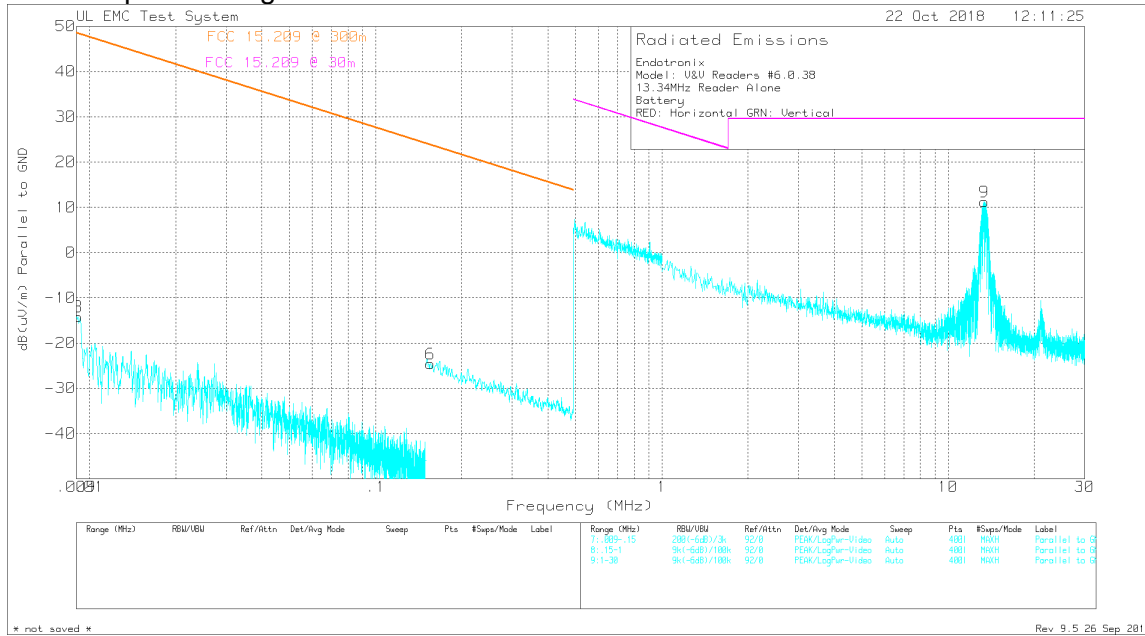
Antenna perpendicular to EUT



Antenna parallel to EUT



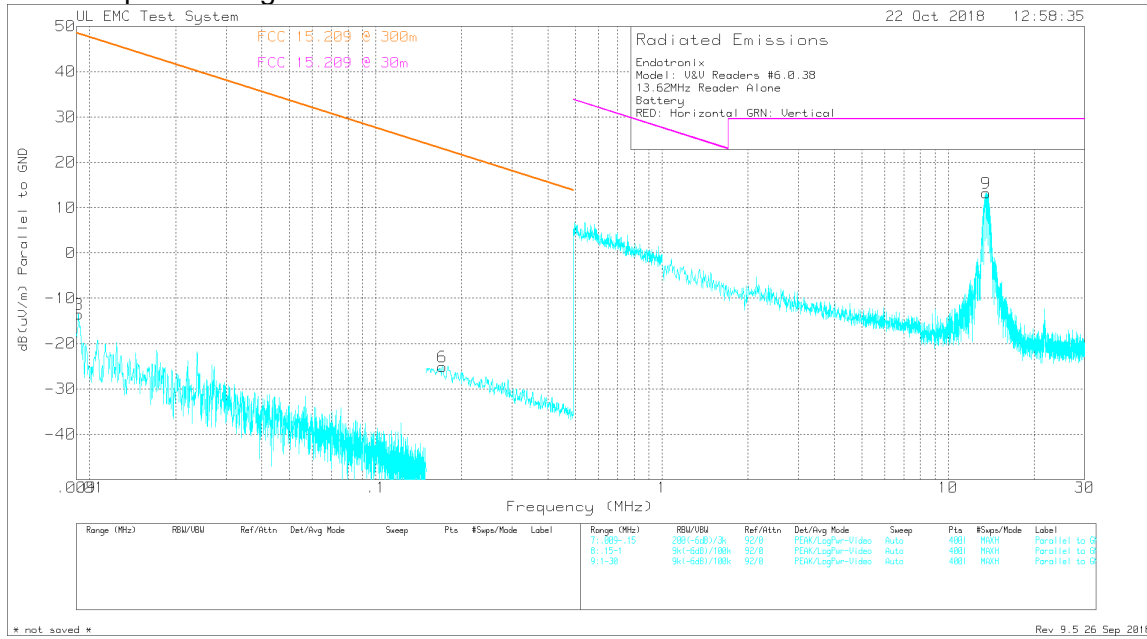
Antenna parallel to ground



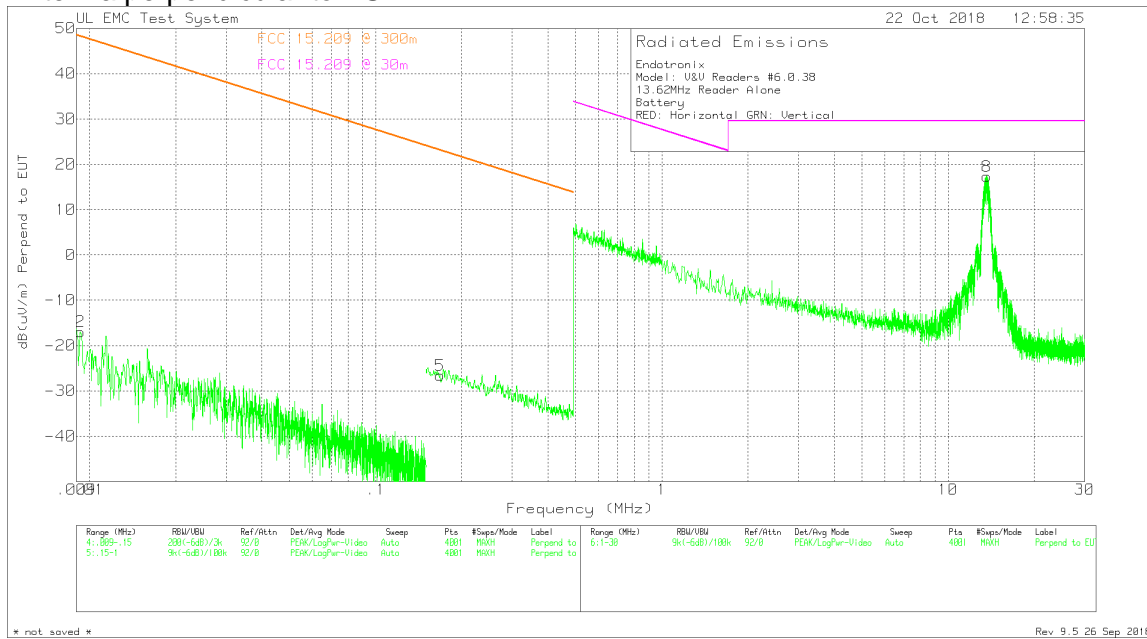
Endotronix												
Model: V&V Readers #6.0.38												
13.34MHz Reader Alone												
Battery												
RED: Horizontal GRN: Vertical												
Trace Markers												
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Distance Correction Factor dB	Level dBuV/m	FCC 15.209 @ 300m	Margin (dB)	FCC @ 30m	Margin (dB)	Azimuth [Degs]
Antenna Parallel to EUT												
1	0.009245	41.07	Pk	23.1	0	-80	-15.83	48.28	-64.11	-	-	0-360
4	0.15405	44.2	Pk	11.9	0.1	-80	-23.8	23.85	-47.65	-	-	0-360
7	13.3395	50.28	Pk	11.5	0.4	-40	22.18	-	-	29.54	-7.36	0-360
Antenna Perpendicular to EUT												
2	0.009245	42.3	Pk	23.1	0	-80	-14.6	48.28	-62.88	-	-	0-360
5	0.15383	43.6	Pk	11.9	0.1	-80	-24.4	23.86	-48.26	-	-	0-360
8	13.40475	45.37	Pk	11.5	0.4	-40	17.27	-	-	29.54	-12.27	0-360
Antenna Parallel to Ground												
3	0.009105	42.73	Pk	23.1	0	-80	-14.17	48.41	-62.58	-	-	0-360
6	0.15511	43.37	Pk	11.9	0.1	-80	-24.63	23.79	-48.42	-	-	0-360
9	13.3975	39.29	Pk	11.5	0.4	-40	11.19	-	-	29.54	-18.35	0-360
Pk - Peak detector												

8.2.4. TX Data 13.62MHz

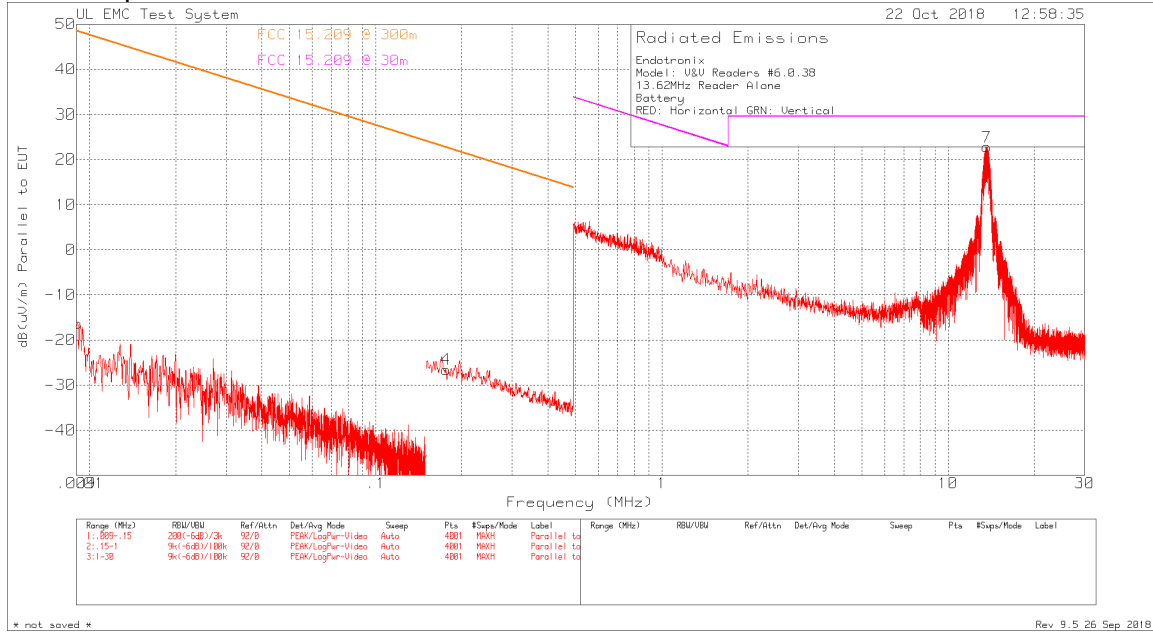
Antenna parallel to ground



Antenna perpendicular to EUT



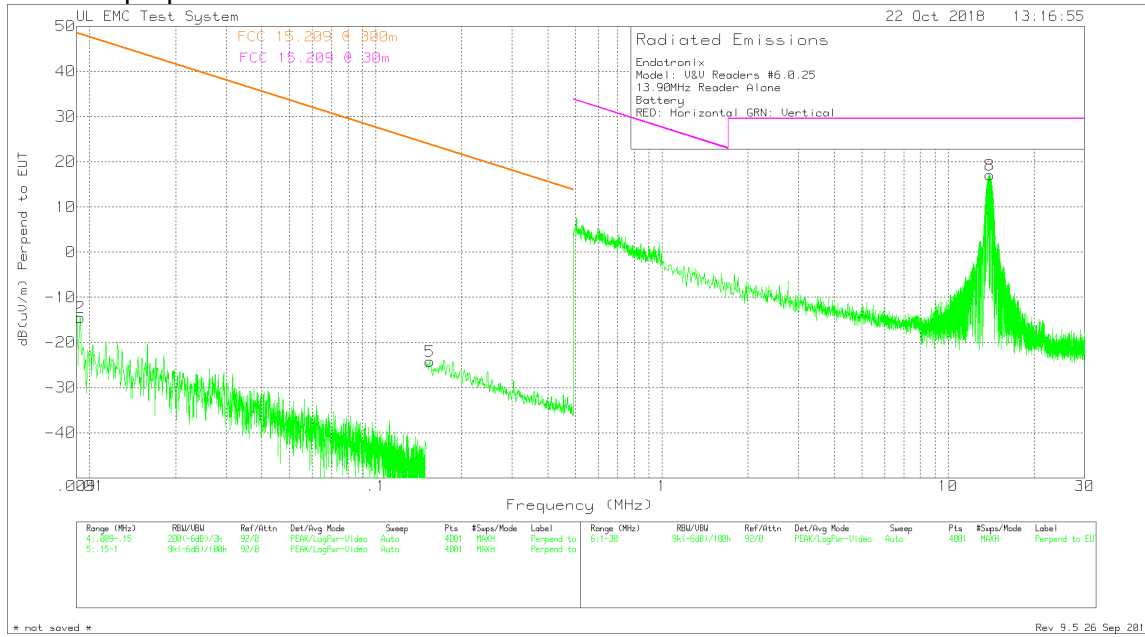
Antenna parallel to EUT



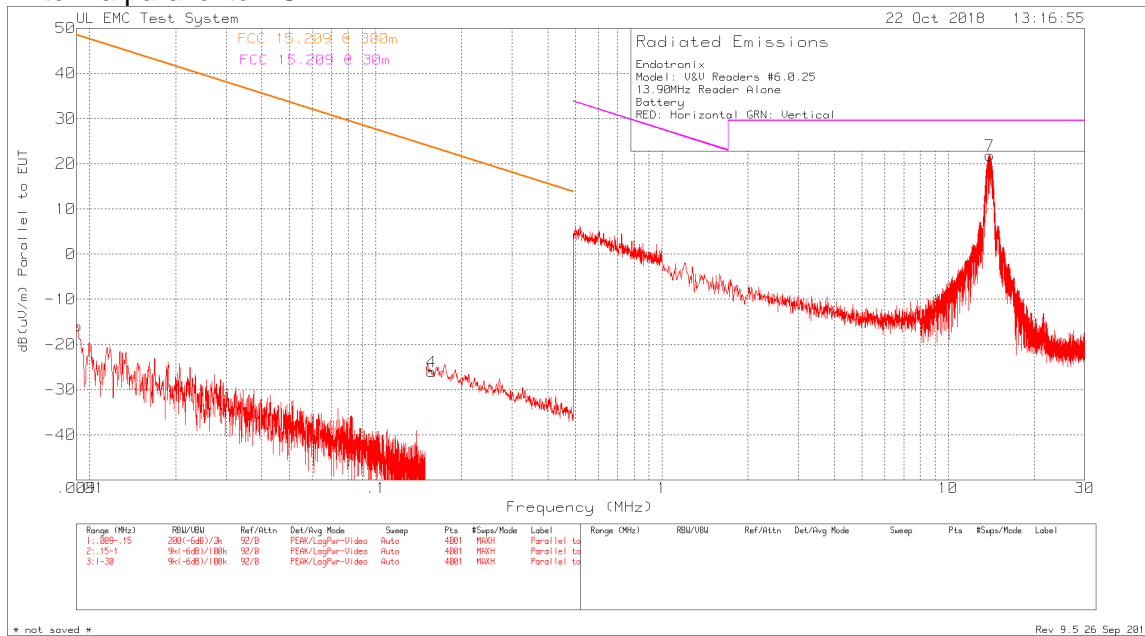
Endotronic												
Model: V&V Readers #6.0.38												
13.62MHz Reader Alone												
Battery												
RED: Horizontal GRN: Vertical												
Trace Markers												
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Distance Correction Factor dB	Level dBuV/m	FCC 15.209 @ 300m	Margin (dB)	FCC 15.209 @ 30m	Margin (dB)	Azimuth [Degs]
Antenna Parallel to EUT												
1	0.00907	40.52	Pk	23.1	0	-80	-16.38	48.44	-64.82	-	-	0-360
4	0.17577	41.48	Pk	11.9	0.1	-80	-26.52	22.7	-49.22	-	-	0-360
7	13.63675	50.98	Pk	11.4	0.4	-40	22.78	-	-	29.54	-6.76	0-360
Antenna Perpendicular to EUT												
2	0.00928	39.96	Pk	23.1	0	-80	-16.94	48.24	-65.18	-	-	0-360
5	0.16768	41.41	Pk	11.9	0.1	-80	-26.59	23.11	-49.7	-	-	0-360
8	13.6585	45.51	Pk	11.4	0.4	-40	17.31	-	-	29.54	-12.23	0-360
Antenna Parallel to Ground												
3	0.009175	43.36	Pk	23.1	0	-80	-13.54	48.34	-61.88	-	-	0-360
6	0.1713	42.89	Pk	11.9	0.1	-80	-25.11	22.93	-48.04	-	-	0-360
9	13.5715	41.38	Pk	11.4	0.4	-40	13.18	-	-	29.54	-16.36	0-360
Pk - Peak detector												

8.2.5. TX Data 13.90MHz

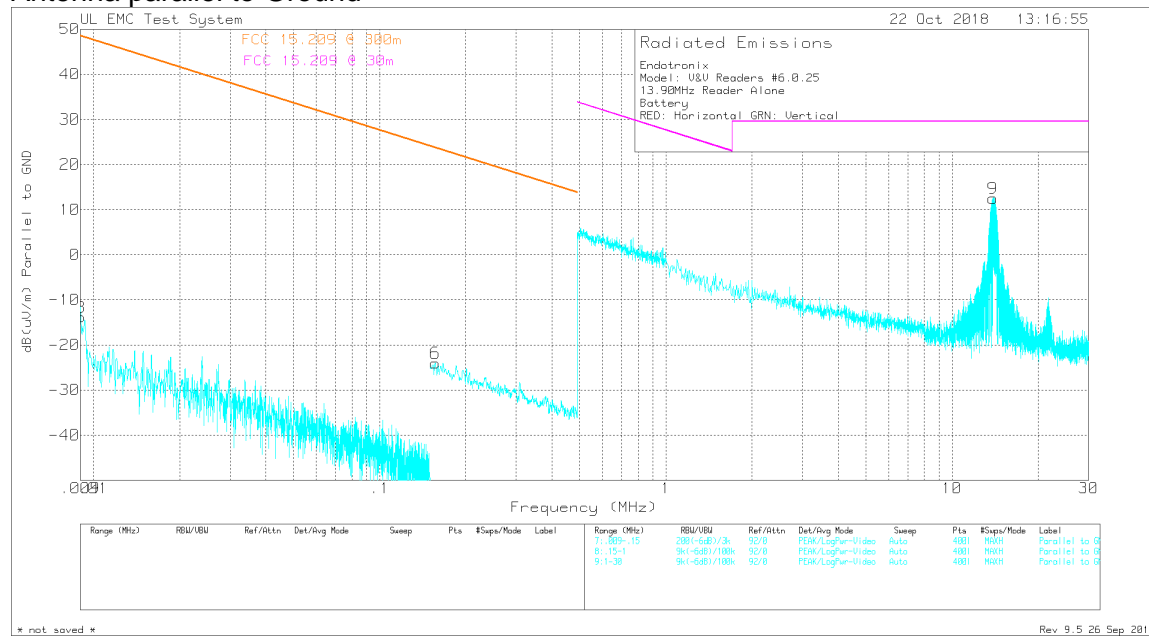
Antenna perpendicular to EUT



Antenna parallel to EUT



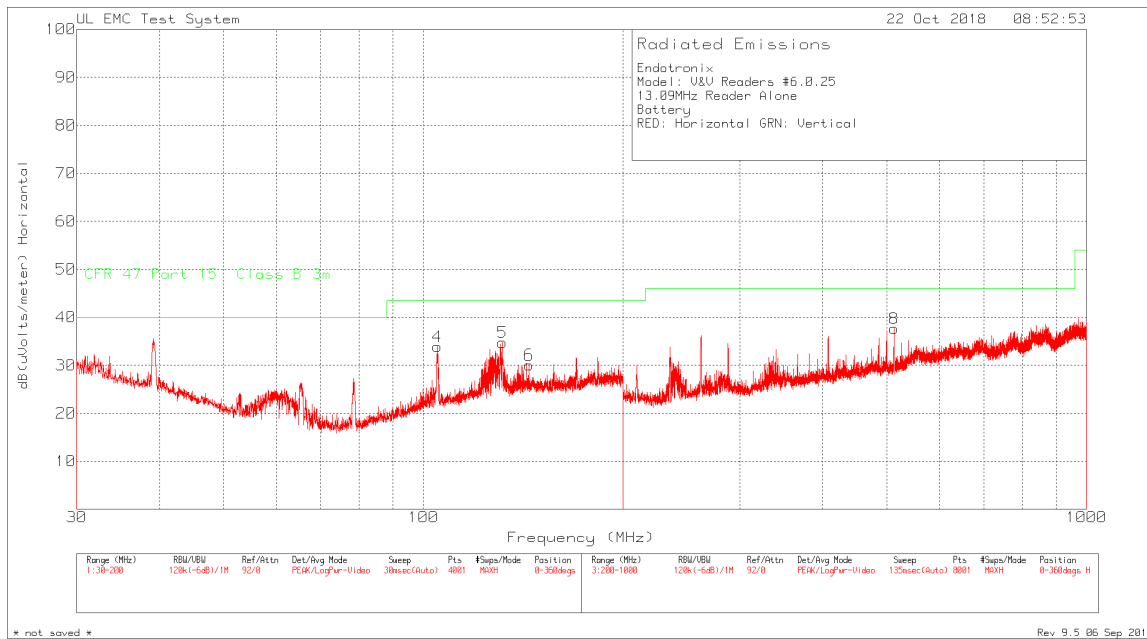
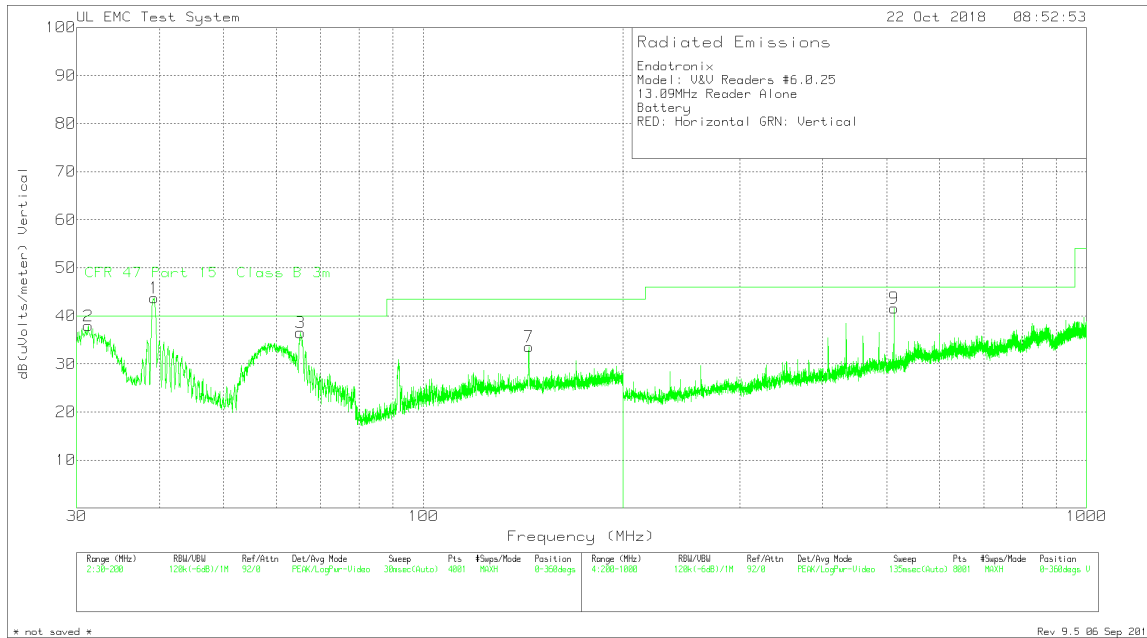
Antenna parallel to Ground



Endotronic												
Model: V&V Readers #6.0.25												
13.90MHz Reader Alone												
Battery												
RED: Horizontal GRN: Vertical												
Trace MARKers												
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Distance Correction Factor dB	Level dBuV/m	FCC 15.209 @ 300m	Margin (dB)	FCC 15.209 @ 30m	Margin (dB)	Azimuth [Degs]
Antenna Parallel to EUT												
1	0.00907	40.95	Pk	23.1	0	-80	-15.95	48.44	-64.39	-	-	0-360
4	0.1566	41.95	Pk	11.9	0.1	-80	-26.05	23.71	-49.76	-	-	0-360
7	13.95575	50.09	Pk	11.4	0.4	-40	21.89	-	-	29.54	-7.65	0-360
Antenna Perpendicular to EUT												
2	0.00928	42.47	Pk	23.1	0	-80	-14.43	48.24	-62.67	-	-	0-360
5	0.15469	43.78	Pk	11.9	0.1	-80	-24.22	23.81	-48.03	-	-	0-360
8	13.98475	45.23	Pk	11.4	0.4	-40	17.03	-	-	29.54	-12.51	0-360
Antenna Parallel to Ground												
3	0.009035	43.12	Pk	23.1	0	-80	-13.78	48.48	-62.26	-	-	0-360
6	0.15639	44	Pk	11.9	0.1	-80	-24	23.72	-47.72	-	-	0-360
9	13.88325	40.69	Pk	11.4	0.4	-40	12.49	-	-	29.54	-17.05	0-360
Pk - Peak detector												

8.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

8.3.1. TX Data for 13.09MHz



Endotronix
 Model: V&V Readers #6.0.25
 13.09MHz Reader Alone
 Battery
 RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (uVolts/meter)	Limit:1 (dB)
4	105.0125	41.92dBuV Pk	11.5	-19.5	33.92	43.52
		Azimuth:0-360	Height:399	Horz	Margin (dB)	-9.6
5	131.575	39.95dBuV Pk	14.2	-19.4	34.75	43.52
		Azimuth:0-360	Height:399	Horz	Margin (dB)	-8.77
6	144.325	34.88dBuV Pk	14.7	-19.5	30.08	43.52
		Azimuth:0-360	Height:399	Horz	Margin (dB)	-13.44
1	39.265	49.16dBuV Pk	14.5	-19.9	43.76	40
		Azimuth:0-360	Height:101	Vert	Margin (dB)	3.76
2	31.2325	39.82dBuV Pk	17.8	-19.7	37.92	40
		Azimuth:0-360	Height:101	Vert	Margin (dB)	-2.08
3	65.2325	50.11dBuV Pk	6.3	-19.9	36.51	40
		Azimuth:0-360	Height:251	Vert	Margin (dB)	-3.49
7	144.325	38.38dBuV Pk	14.7	-19.5	33.58	43.52
		Azimuth:0-360	Height:101	Vert	Margin (dB)	-9.94
8	512.8	37.17dBuV Pk	17.5	-17	37.67	46.02
		Azimuth:0-360	Height:199	Horz	Margin (dB)	-8.35
9	512.5	41.03dBuV Pk	17.5	-16.9	41.63	46.02
		Azimuth:0-360	Height:302	Vert	Margin (dB)	-4.39

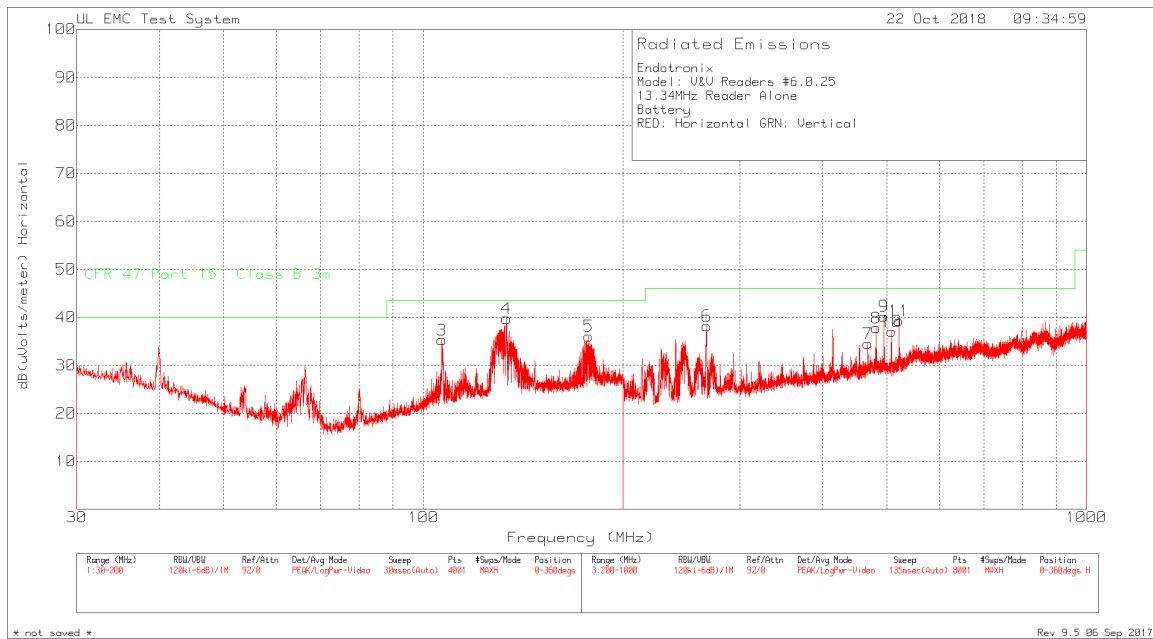
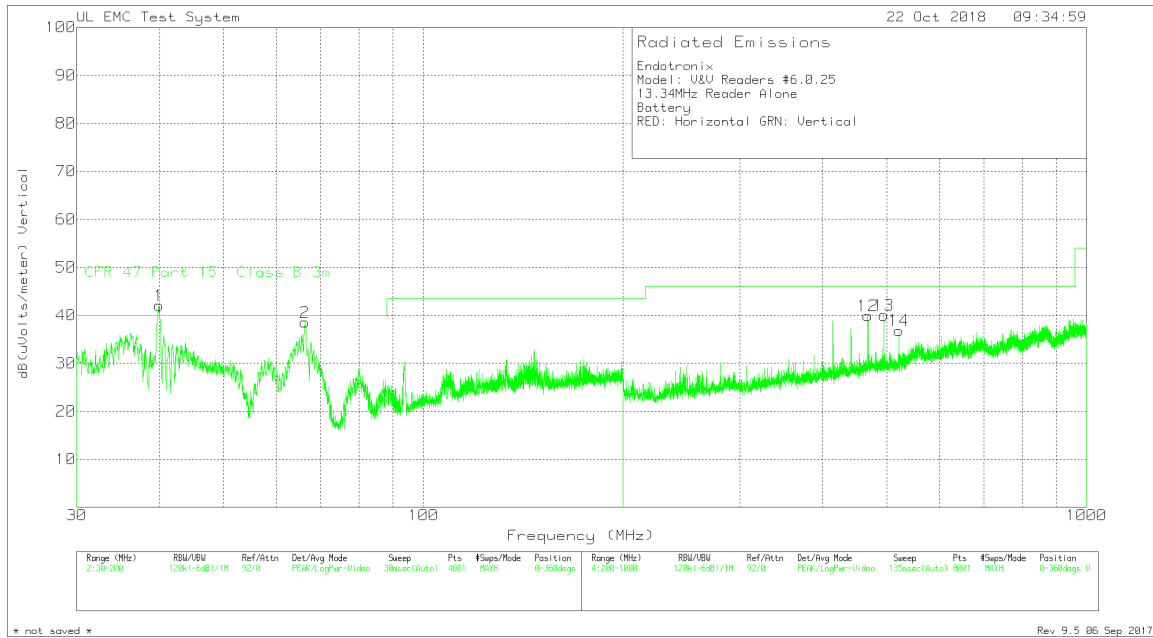
Radiated Emission Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (uVolts/meter)	Limit:1 (dB)
31.227	34.28dBuV Qp	17.8	-19.7	32.38	40
	Azimuth: 46	Height:101	Vert	Margin (dB):	-7.62
39.1875	44.32dBuV Qp	14.5	-19.9	38.92	40
	Azimuth: 56	Height:102	Vert	Margin (dB):	-1.08
65.3675	44.16dBuV Qp	6.3	-19.8	30.66	40
	Azimuth: 236	Height:237	Vert	Margin (dB):	-9.34
512.52125	29.82dBuV Qp	17.5	-16.9	30.42	46.02
	Azimuth: 44	Height:308	Vert	Margin (dB):	-15.6

LIMIT 1: CFR 47 Part 15 Class B 3m

Pk - Peak detector
 Qp - Quasi-Peak detector

8.3.2. TX Data for 13.34MHz



Endotronix
 Model: V&V Readers #6.0.38
 13.34MHz Reader Alone
 Battery
 RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dB (uVolts/meter)	Limit:1
3	106.6275	43.09dBuV Pk	11.7	-19.5	35.29	43.52
		Azimuth:0-360	Height:398	Horz	Margin (dB)	-8.23
4	133.4025	44.57dBuV Pk	14.3	-19.1	39.77	43.52
		Azimuth:0-360	Height:398	Horz	Margin (dB)	-3.75
5	177.56	39.1dBuV Pk	15.6	-18.6	36.1	43.52
		Azimuth:0-360	Height:398	Horz	Margin (dB)	-7.42
1	39.9025	47.48dBuV Pk	14.2	-19.6	42.08	40
		Azimuth:0-360	Height:102	Vert	Margin (dB)	2.08
2	66.2525	51.84dBuV Pk	6.2	-19.5	38.54	40
		Azimuth:0-360	Height:251	Vert	Margin (dB)	-1.46
6	267.3	44.33dBuV Pk	12.5	-18.6	38.23	46.02
		Azimuth:0-360	Height:299	Horz	Margin (dB)	-7.79
7	468	34.87dBuV Pk	17.3	-17.6	34.57	46.02
		Azimuth:0-360	Height:199	Horz	Margin (dB)	-11.45
8	481.6	37.61dBuV Pk	17.4	-17.2	37.81	46.02
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-8.21
9	494.9	40.03dBuV Pk	17.6	-17.4	40.23	46.02
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-5.79
10	508.3	36.81dBuV Pk	17.5	-17.2	37.11	46.02
		Azimuth:0-360	Height:199	Horz	Margin (dB)	-8.91
11	521.5	38.83dBuV Pk	17.9	-17.4	39.33	46.02
		Azimuth:0-360	Height:199	Horz	Margin (dB)	-6.69
12	468	40.24dBuV Pk	17.3	-17.6	39.94	46.02
		Azimuth:0-360	Height:299	Vert	Margin (dB)	-6.08
13	494.6	39.83dBuV Pk	17.6	-17.4	40.03	46.02
		Azimuth:0-360	Height:299	Vert	Margin (dB)	-5.99
14	521.4	36.25dBuV Pk	17.9	-17.3	36.85	46.02
		Azimuth:0-360	Height:299	Vert	Margin (dB)	-9.17

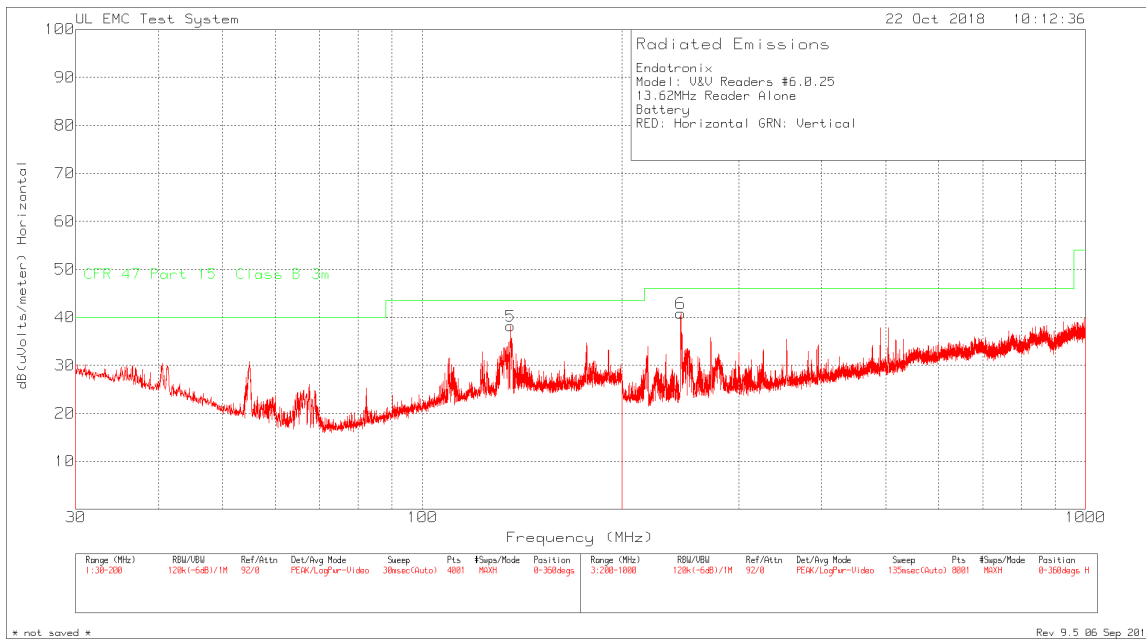
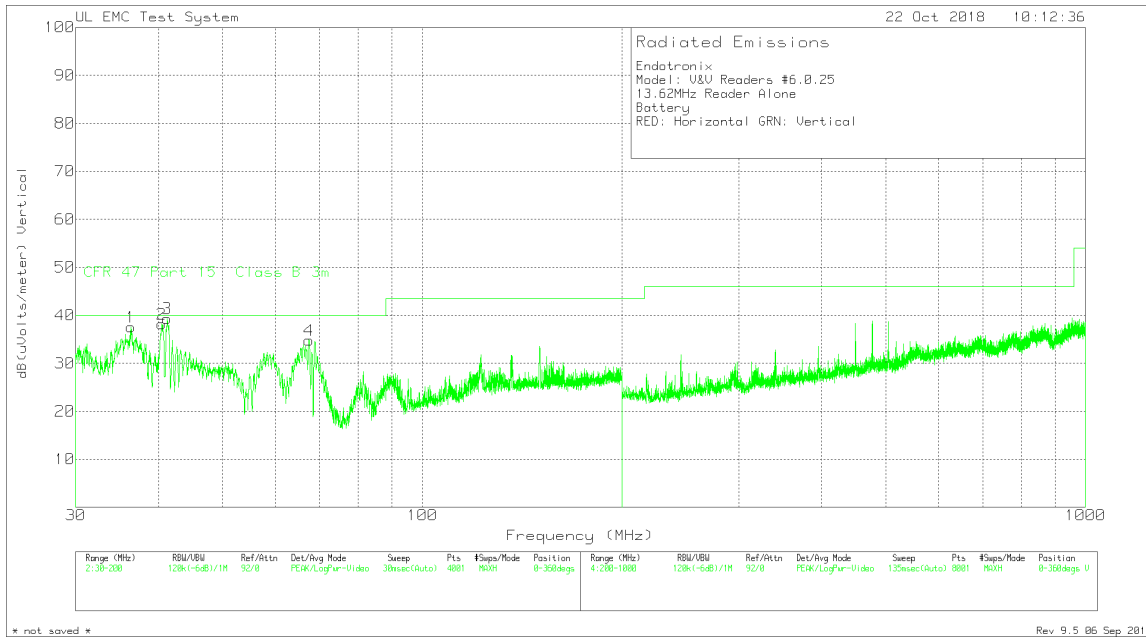
Radiated Emission Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dB (uVolts/meter)	Limit:1
66.25	46.15dBuV Qp	6.2	-19.5	32.85	40
	Azimuth: 235	Height:238	Vert	Margin (dB):	-7.15
133.1875	40.6dBuV Qp	14.3	-19.2	35.7	43.52
	Azimuth: 71	Height:394	Horz	Margin (dB):	-7.82
39.8675	41.56dBuV Qp	14.3	-19.7	36.16	40
	Azimuth: 49	Height:104	Vert	Margin (dB):	-3.84

LIMIT 1: CFR 47 Part 15 Class B 3m

Pk - Peak detector
 Qp - Quasi-Peak detector

8.3.3. TX Data for 13.62MHz



Endotronix
 Model: V&V Readers #6.0.25
 13.62MHz Reader Alone
 Battery
 RED: Horizontal GRN: Vertical

Trace Markers

No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (uVolts/meter)	Limit:1 (dB)
5	135.6975	43.3dBuV Pk	14.4	-19.5	38.2	43.52
		Azimuth:0-360	Height:398	Horz	Margin (dB)	-5.32
1	36.3325	41.56dBuV Pk	15.7	-19.7	37.56	40
		Azimuth:0-360	Height:102	Vert	Margin (dB)	-2.44
2	40.455	43.65dBuV Pk	14	-19.5	38.15	40
		Azimuth:0-360	Height:102	Vert	Margin (dB)	-1.85
3	41.22	45.26dBuV Pk	13.7	-19.6	39.36	40
		Azimuth:0-360	Height:102	Vert	Margin (dB)	-.64
4	67.4425	48.4dBuV Pk	6.2	-19.8	34.8	40
		Azimuth:0-360	Height:248	Vert	Margin (dB)	-5.2
6	245.2	48.01dBuV Pk	11.6	-18.8	40.81	46.02
		Azimuth:0-360	Height:299	Horz	Margin (dB)	-5.21

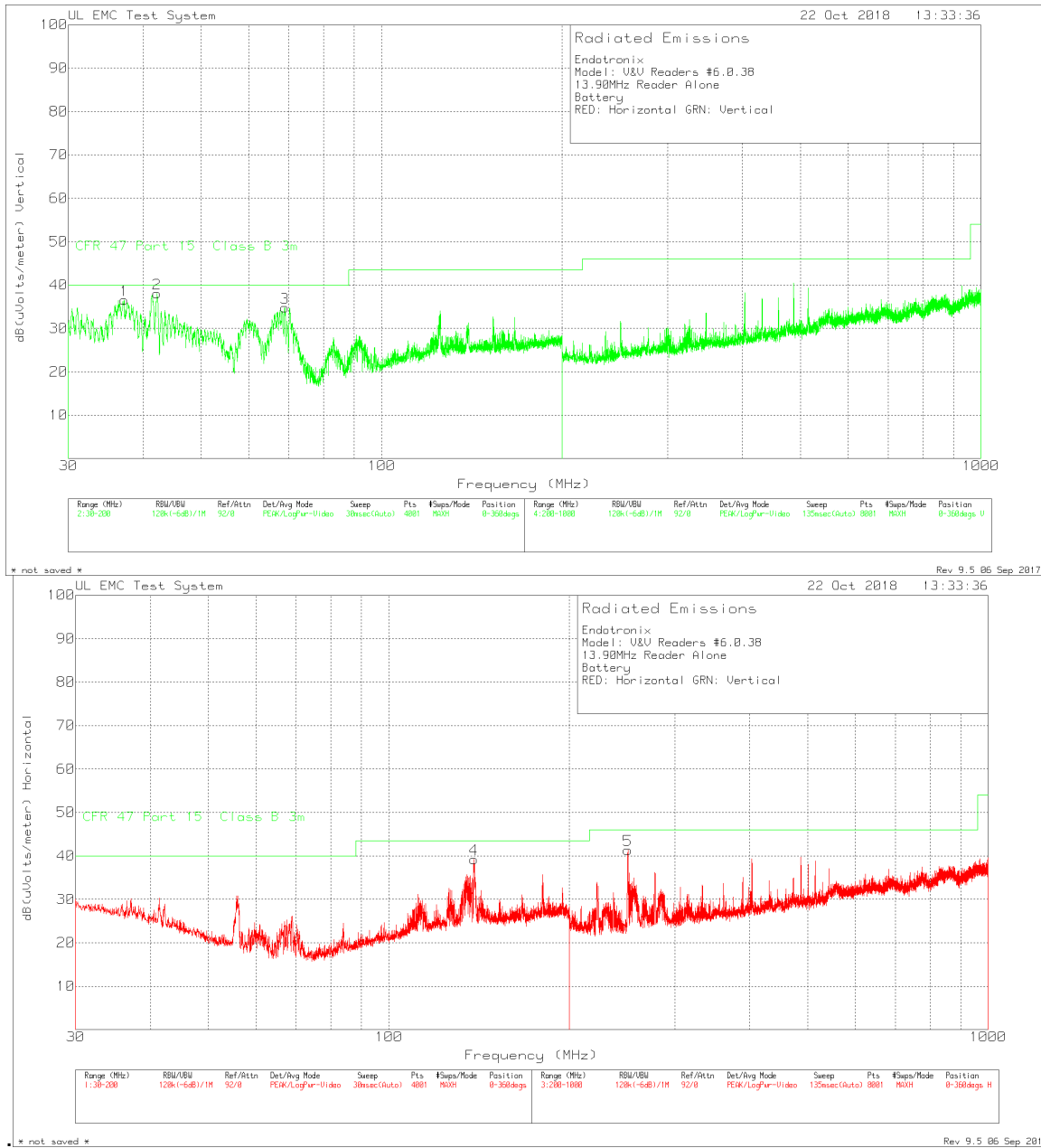
Radiated Emission Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (uVolts/meter)	Limit:1 (dB)
135.6975	38.57dBuV Qp	14.4	-19.5	33.47	43.52
	Azimuth: 74	Height:394	Horz	Margin (dB):	-10.05
41.2625	40.65dBuV Qp	13.7	-19.6	34.75	40
	Azimuth: 240	Height:102	Vert	Margin (dB):	-5.25
40.52875	39.12dBuV Qp	14	-19.5	33.62	40
	Azimuth: 232	Height:101	Vert	Margin (dB):	-6.38
36.3325	35.84dBuV Qp	15.7	-19.7	31.84	40
	Azimuth: 58	Height:105	Vert	Margin (dB):	-8.16

LIMIT 1: CFR 47 Part 15 Class B 3m

Pk - Peak detector
 Qp - Quasi-Peak detector

8.3.4. TX Data for 13.90MHz



Endotronix
 Model: V&V Readers #6.0.38
 13.90MHz Reader Alone
 Battery
 RED: Horizontal GRN: Vertical

Trace Markers

No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (uVolts/meter)	Limit:1 (dB)
4	138.6725	43.94dBuV Pk	14.6	-19.3	39.24	43.52
		Azimuth:0-360	Height:398	Horz	Margin (dB)	-4.28
1	37.1825	40.92dBuV Pk	15.3	-19.7	36.52	40
		Azimuth:0-360	Height:101	Vert	Margin (dB)	-3.48
2	42.1975	44.43dBuV Pk	13.3	-19.7	38.03	40
		Azimuth:0-360	Height:101	Vert	Margin (dB)	-1.97
3	68.8875	48.12dBuV Pk	6.1	-19.4	34.82	40
		Azimuth:0-360	Height:252	Vert	Margin (dB)	-5.18
5	250.4	48.46dBuV Pk	11.9	-19	41.36	46.02
		Azimuth:0-360	Height:299	Horz	Margin (dB)	-4.66

Radiated Emission Data

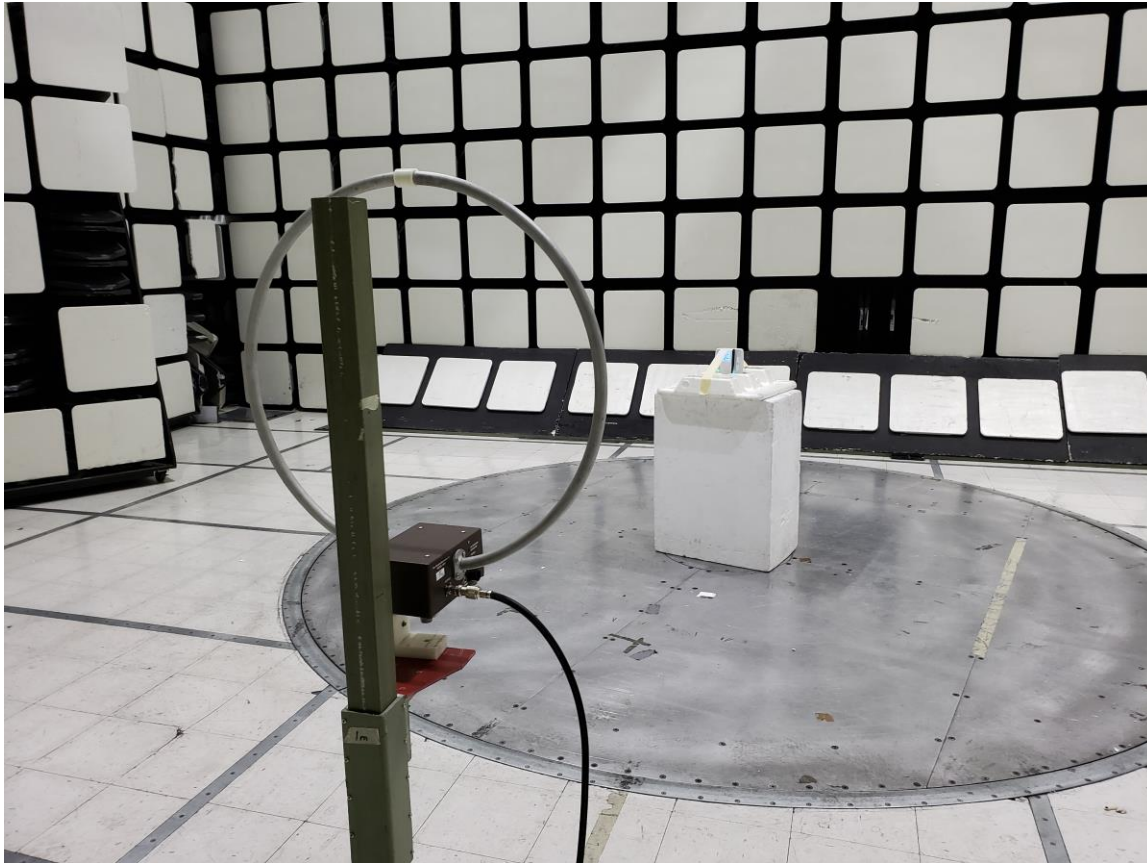
Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (uVolts/meter)	Limit:1 (dB)
41.541	42.78dBuV Qp	13.6	-19.7	36.68	40
	Azimuth: 55	Height:104	Vert	Margin (dB):	-3.32
42.19	35.4dBuV Qp	13.3	-19.7	29	40
	Azimuth: 55	Height:104	Vert	Margin (dB):	-11
37.1825	32.77dBuV Qp	15.3	-19.7	28.37	40
	Azimuth: 55	Height:102	Vert	Margin (dB):	-11.63
250.46375	26.6dBuV Qp	11.9	-19	19.5	46.02
	Azimuth: 133	Height:103	Horz	Margin (dB):	-26.52

LIMIT 1: CFR 47 Part 15 Class B 3m

Pk - Peak detector
 Qp - Quasi-Peak detector

9. SETUP PHOTOS

RADIATED EMISSION BELOW 30 MHz



RADIATED EMISSION ABOVE 30 MHz



END OF TEST REPORT