



# **CERTIFICATION TEST REPORT**

**Report Number. :** 11494246-E1V3

**Applicant :** SATELLITE TRACKING OF PEOPLE LLC  
1212 NORTH POST OAK RD,  
HOUSTON, TX, 77055, U.S.A

**Model :** SoberTrack

**FCC ID :** S5EST10417

**IC ID :** 9086A-ST10417

**EUT Description :** SoberTrack Portable Alcohol Product

**Test Standard(s) :** FCC 47 CFR PART 15 SUBPART C  
INDUSTRY CANADA RSS-210 ISSUE 9  
INDUSTRY CANADA RSS-GEN ISSUE 4

**Date of Issue:**

Tuesday, April 25, 2017

**Prepared by:**

UL Verification Services Inc.  
47173 Benicia Street  
Fremont, CA 94538, U.S.A.  
TEL: (510) 771-1000  
FAX: (510) 661-0888



NVLAP LAB CODE 200065-0

## REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	03/13/17	Initial Issue	C. Vergonio
V2	04/05/17	Updated Section 2.1 IC test sites.	C. Vergonio
V3	04/25/17	Updated Section 5.3.1.	C. Vergonio

## TABLE OF CONTENTS

<b>REPORT REVISION HISTORY .....</b>	<b>2</b>
<b>TABLE OF CONTENTS .....</b>	<b>3</b>
<b>1. ATTESTATION OF TEST RESULTS.....</b>	<b>4</b>
<b>2. SUMMARY OF TESTING.....</b>	<b>5</b>
2.1. FACILITIES AND ACCREDITATION .....	5
2.2. SUMMARY TABLE.....	6
2.3. TEST METHODOLOGY.....	7
2.4. CALIBRATION AND UNCERTAINTY.....	7
2.1. MEASUREMENT METHOD .....	8
2.2. TEST AND MEASUREMENT EQUIPMENT.....	9
<b>3. EQUIPMENT UNDER TEST .....</b>	<b>10</b>
3.1. EUT DESCRIPTION.....	10
3.2. MAXIMUM RADIATED E-FIELD STRENGTH.....	10
3.3. DESCRIPTION OF AVAILABLE ANTENNAS.....	10
3.4. SOFTWARE AND FIRMWARE.....	10
3.5. WORST-CASE CONFIGURATION AND MODE.....	10
3.6. DESCRIPTION OF TEST SETUP.....	11
<b>4. ANTENNA PORT TEST RESULTS .....</b>	<b>13</b>
4.1. ON TIME, DUTY CYCLE.....	13
4.2. 20 dB BANDWIDTH AND 99% BANDWIDTH.....	14
<b>5. RADIATED TEST RESULTS .....</b>	<b>15</b>
5.1. LIMITS AND PROCEDURE .....	15
5.2. TRANSMITTER ABOVE 1 GHz .....	17
5.3. TRANSMITTER BELOW 1 GHz.....	19
5.3.1. FUNDAMENAL FREQUENCY RADIATED EMISSION .....	19
5.3.2. SPURIOUS EMISSIONS 30 TO 1000 MHz .....	20
5.3.3. SPURIOUS EMISSIONS 9 kHz TO 30 MHz .....	22
<b>6. AC POWER LINE CONDUCTED EMISSIONS.....</b>	<b>24</b>
<b>7. SETUP PHOTOS.....</b>	<b>27</b>

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** SATELLITE TRACKING OF PEOPLE LLC

**EUT DESCRIPTION:** SoberTrack Portable Alcohol Product

**MODEL:** SoberTrack

**SERIAL NUMBER:** 834167

**DATE TESTED:** MARCH 07 - 08, 2017

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 9	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. 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.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. 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 any government.

Approved & Released For  
UL Verification Services Inc. By:

Tested By:



Charles Vergonio  
WiSE Project Lead  
UL Verification Services Inc.

Jason Qian  
WiSE Laboratory Engineer  
UL Verification Services Inc.

## 2. SUMMARY OF TESTING

### 2.1. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, 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
<input checked="" type="checkbox"/> Chamber A(IC: 2324B-1)	<input type="checkbox"/> Chamber D(IC: 22541-1)
<input type="checkbox"/> Chamber B(IC: 2324B-2)	<input type="checkbox"/> Chamber E(IC: 22541-2)
<input checked="" type="checkbox"/> Chamber C(IC: 2324B-3)	<input type="checkbox"/> Chamber F(IC: 22541-3)
	<input type="checkbox"/> Chamber G(IC: 22541-4)
	<input type="checkbox"/> Chamber H(IC: 22541-5)

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

## 2.2. SUMMARY TABLE

FCC Part Section	RSS Section (s)	Test Description	Test Limit	Test Condition	Test Result
15.207	RSS-GEN 8.8	AC Power Line conducted emission	Section 6	Conducted	Pass
15.249 (c)	RSS-210	Field Strength of Fundamental	< 50mV/m	Radiated	Pass
15.205, 15.209, 15.249	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass

## 2.3. 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 4, and RSS-210 Issue 9.

## 2.4. CALIBRATION AND UNCERTAINTY

### 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.

### SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

### MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

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

## **2.1. MEASUREMENT METHOD**

On time and duty cycle: ANSI C63.10-2013, Section 11.6.

Radiated emissions: ANSI C63.10-2013, Sections 6.5 and 6.6.

Occupied bandwidth (99% dB): ANSI C63.10-2013, Sections 6.9.3.

AC Power Line Conducted Emissions: ANSI C63.10-2013 Section 6.2.



## 2.2. 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	T Number	Cal Date	Cal Due
PXA Spectrum Analyzer, 3Hz to 44GHz	Agilent	N9030A	905	01/11/17	01/11/18
PXA Spectrum Analyzer, 3Hz to 44GHz	Agilent	N9030A	908	04/13/16	04/13/17
Horn Antenna, 1-18GHz	ETS Lindgren	3117	346	01/30/17	01/30/18
Antenna, Broadband Hybrid 30MHz to 2000MHz	Sunol Sciences	JB1	408	11/10/16	11/10/17
Loop Antenna	EMCO	6502	1616	12/12/16	12/12/17
Amplifier, 1-26.5GHz	Miteq	AFS42-00101800-25-S-42	1165	08/01/16	08/01/17
Amplifier, 1 to 8GHz	Miteq	AMF-4D-01000800-30-29P	1170	04/28/16	04/28/17
Amplifier, 10KHz to 1GHz, 32dB	Keysight	8447D	300	11/10/16	11/10/17
P-Series Power Meter	Keysight	N1911A	1264	07/08/16	07/08/17
Wideband Power Sensor 50MHz - 18GHz	Agilent	N1921A	1224	03/22/16	03/22/17
EMI Receiver	Rohde & Schwarz	ESR-EMI	1436	12/19/16	12/19/17
LISN	FISCHER	FCC-LISN-50/250-25-2-01	1310	06/08/16	06/08/17

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Ver 9.5 Apr 26, 2016
Antenna Port Software	UL	UL RF	Ver 6.0 Jan 18, 2017

### 3. EQUIPMENT UNDER TEST

#### 3.1. EUT DESCRIPTION

The SoberTrack is primarily a handheld alcohol detection device used to perform several regularly scheduled or random sobriety tests on the user. The device includes camera which is used to take still and/or video images of the user whilst performing the sobriety test. The pictures and test results are sent back to central gateway using GSM/CDMA wireless networks once the tests have been completed. Additionally, video may be saved to an SD Card. The RF 915MHz functionality in SoberTrack enables the short-range communication between SoberTrack and its optional accessories when used. SoberTrack will transmit its ID and limited status data.

#### 3.2. MAXIMUM RADIATED E-FIELD STRENGTH

The transmitter has a maximum peak E-field as follows:

Frequency Range (MHz)	Output Peak E-Field Strength (dBuV/m)
915	74.09

#### 3.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes flexible ultra wideband antenna, with a maximum gain of 1dBi.

#### 3.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 01.24.

#### 3.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

### 3.6. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Spry Power Products	PA1015-120HUB125	B20160900054503	N/A

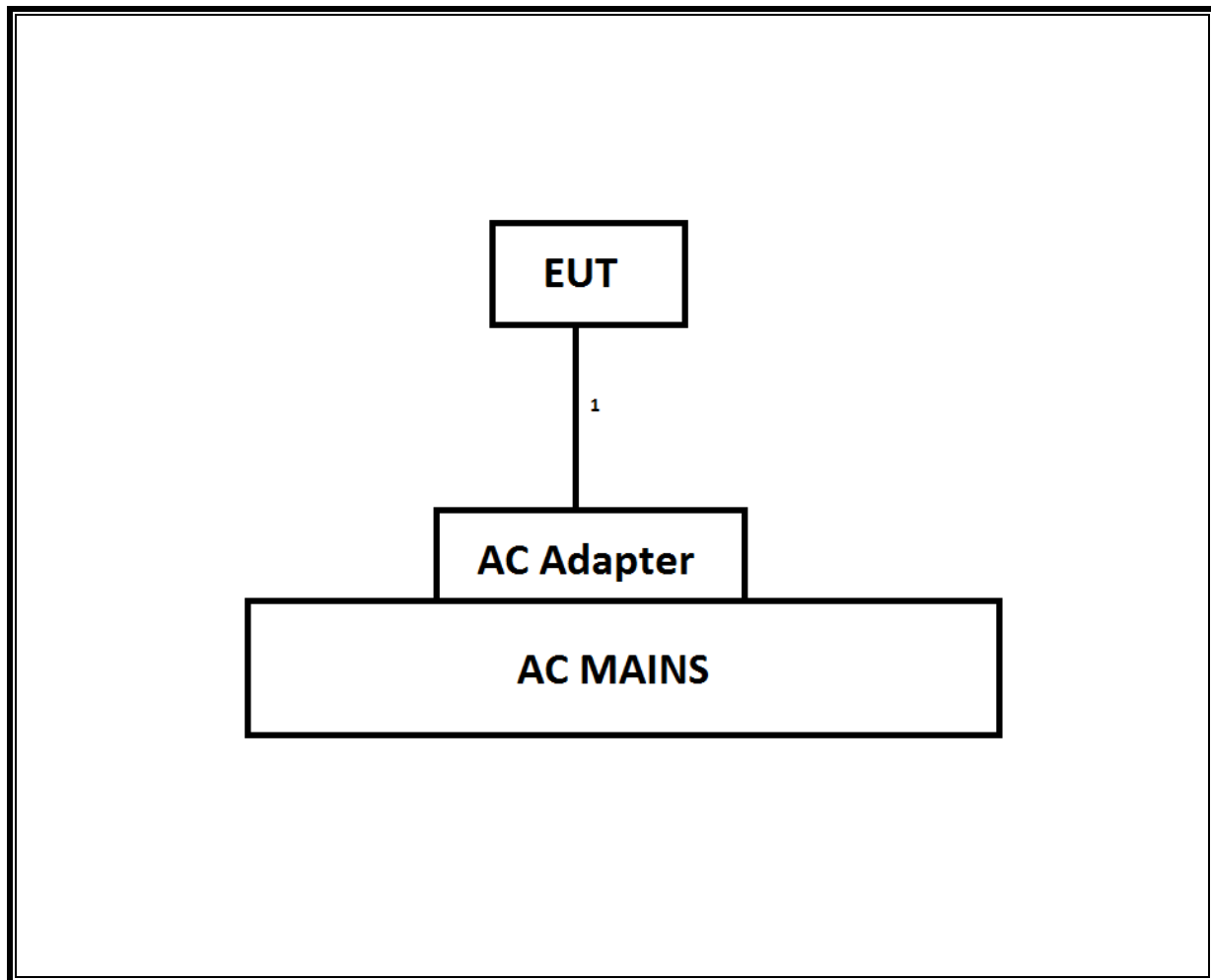
#### I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	12V DC	Unshielded	2	

#### TEST SETUP

Set the EUT to TX Continuous mode, and EUT was connected to an AC adapter to transmit a continuous RF signal.

**SETUP DIAGRAM FOR RADIATED TESTS**



## 4. ANTENNA PORT TEST RESULTS

### 4.1. ON TIME, DUTY CYCLE

#### LIMITS

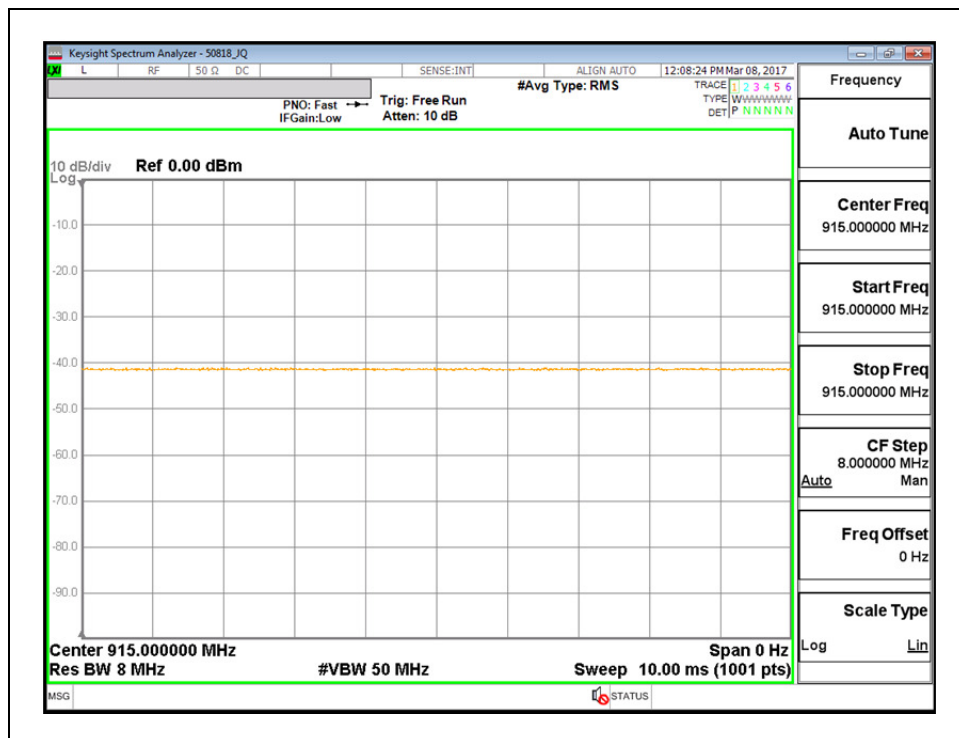
None; for reporting purposes only.

#### ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
915MHz	10.000	10.000	1.000	100.00%	0.00	0.010

#### DUTY CYCLE PLOTS

#### DUTY CYCLE PLOT



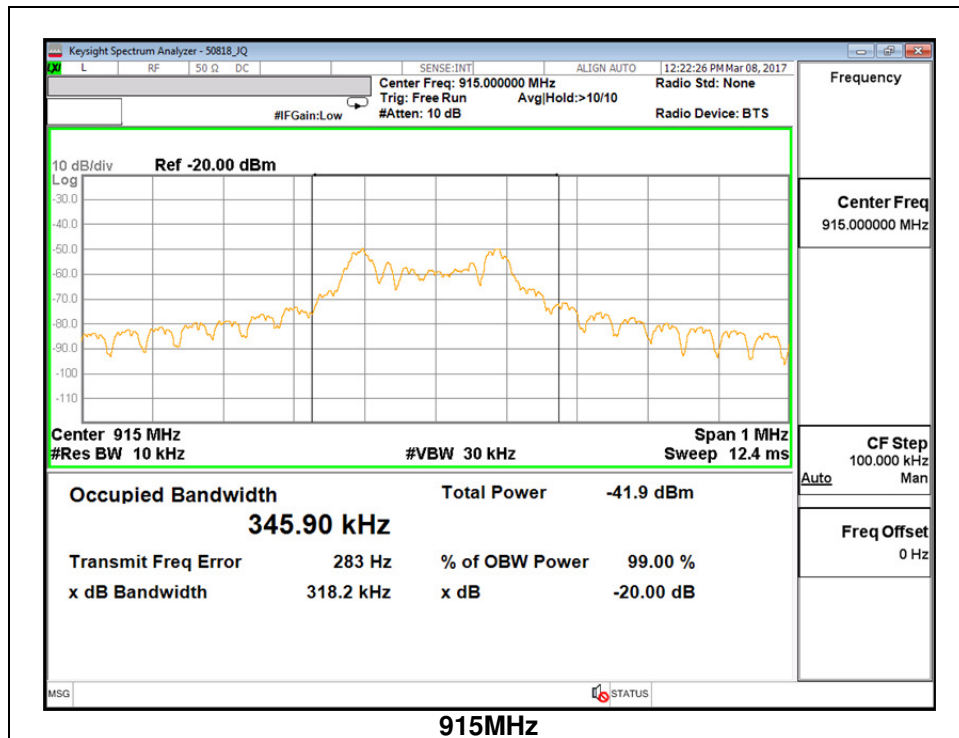
## 4.2. 20 dB BANDWIDTH AND 99% BANDWIDTH

### LIMITS

None; for reporting purposes only.

### RESULTS

Frequency (MHz)	20 dB Bandwidth (kHz)	99% Bandwidth (kHz)
915	318.2	345.9



## 5. RADIATED TEST RESULTS

### 5.1. LIMITS AND PROCEDURE

#### LIMITS

FCC 15.249  
IC RSS-210  
IC RSS-GEN Clause 8.9 (Transmitter)  
IC RSS-GEN Clause 7 (Receiver)

Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz, and 24.0–24.25 GHz.

(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz .....	50	500
2400–2483.5 MHz .....	50	500
5725–5875 MHz .....	50	500
24.0–24.25 GHz .....	250	2500

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

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., §§15.231 and 15.241.

## **TEST PROCEDURE**

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for 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, then the video bandwidth is set to 1 MHz for peak measurements and add duty cycle factor for average measurements. 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.

## **RESULTS**

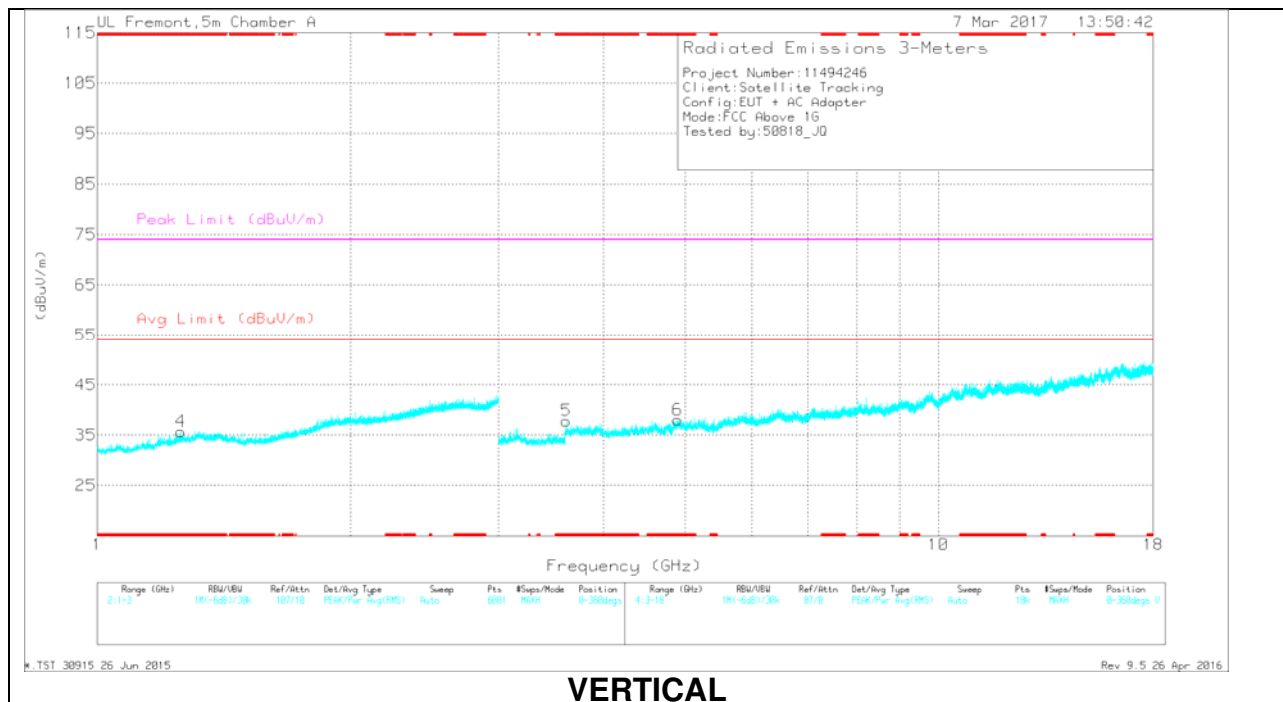
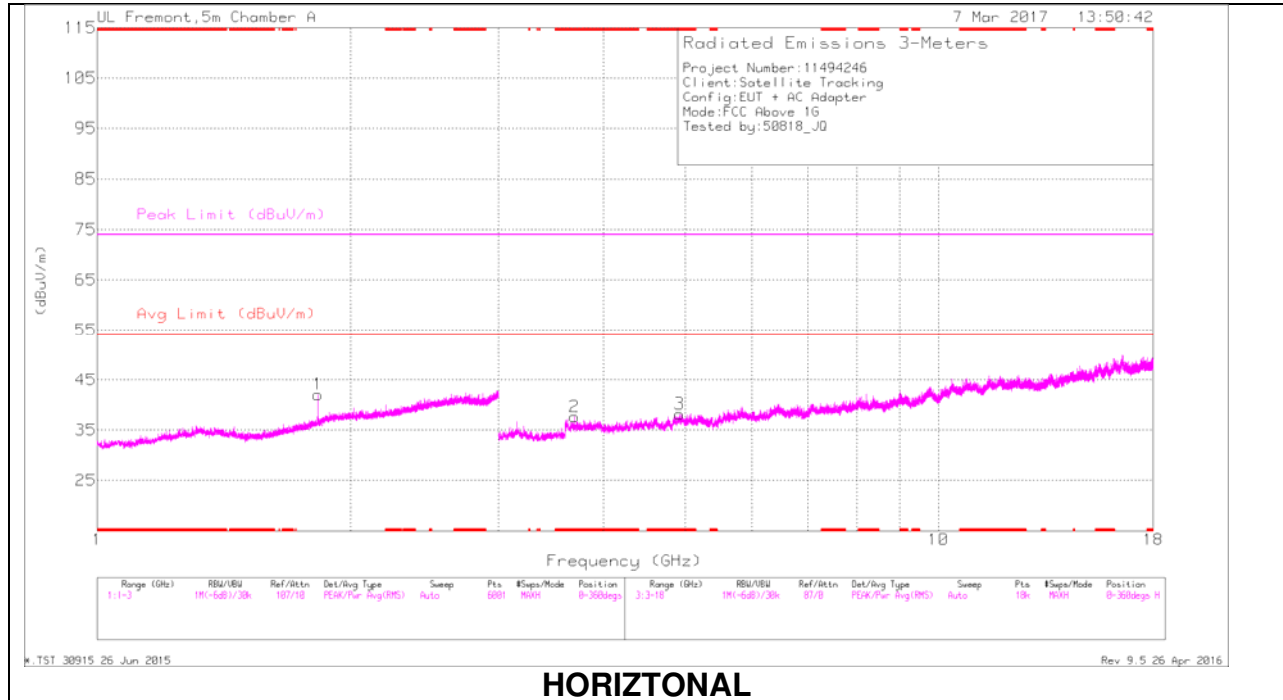
No non-compliance noted:



## 5.2. TRANSMITTER ABOVE 1 GHz

### HARMONICS AND SPURIOUS EMISSIONS (915 MHz)

### RESULTS



## DATA

### Trace Markers

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fitr/ Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.258	30.61	Pk	29.2	-24.1	0	35.71	-	-	74	-38.29	0-360	199	V
2	* 3.694	34.75	Pk	33	-30.1	0	37.65	-	-	74	-36.35	0-360	101	H
3	* 4.922	31.79	Pk	34.1	-27.7	0	38.19	-	-	74	-35.81	0-360	101	H
5	* 3.614	35.34	Pk	33.1	-30.6	0	37.84	-	-	74	-36.16	0-360	199	V
6	* 4.898	31.32	Pk	34	-27.3	0	38.02	-	-	74	-35.98	0-360	101	V
1	1.83	35.09	Pk	30.6	-23.6	0	42.09	-	-	-	-	0-360	101	H

\* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

Pk - Peak detector

### Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fitr/ Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.258	35.33	PK2	29.2	-24.1	40.43	-	-	74	-33.57	202	112	V
* 1.255	24.19	MAv1	29.1	-24	29.29	54	-24.71	-	-	202	112	V
* 3.696	39.5	PK2	33	-30.1	42.4	-	-	74	-31.6	96	335	H
* 3.692	28.21	MAv1	33	-30	31.21	54	-22.79	-	-	96	335	H
* 4.92	37.42	PK2	34.1	-27.6	43.92	-	-	74	-30.08	31	112	H
* 4.922	26.95	MAv1	34.1	-27.7	33.35	54	-20.65	-	-	31	112	H
* 3.612	38.67	PK2	33.1	-30.6	41.17	-	-	74	-32.83	168	297	V
* 3.613	28.75	MAv1	33.1	-30.6	31.25	54	-22.75	-	-	168	297	V
* 4.899	36.99	PK2	34	-27.3	43.69	-	-	74	-30.31	173	259	V
* 4.897	27.02	MAv1	34	-27.3	33.72	54	-20.28	-	-	173	259	V
1.83	39.54	PK2	30.6	-23.6	46.54	-	-	-	-	128	213	H
1.83	33.29	MAv1	30.6	-23.6	43.3	-	-	-	-	128	213	H

\* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

### 5.3. TRANSMITTER BELOW 1 GHz

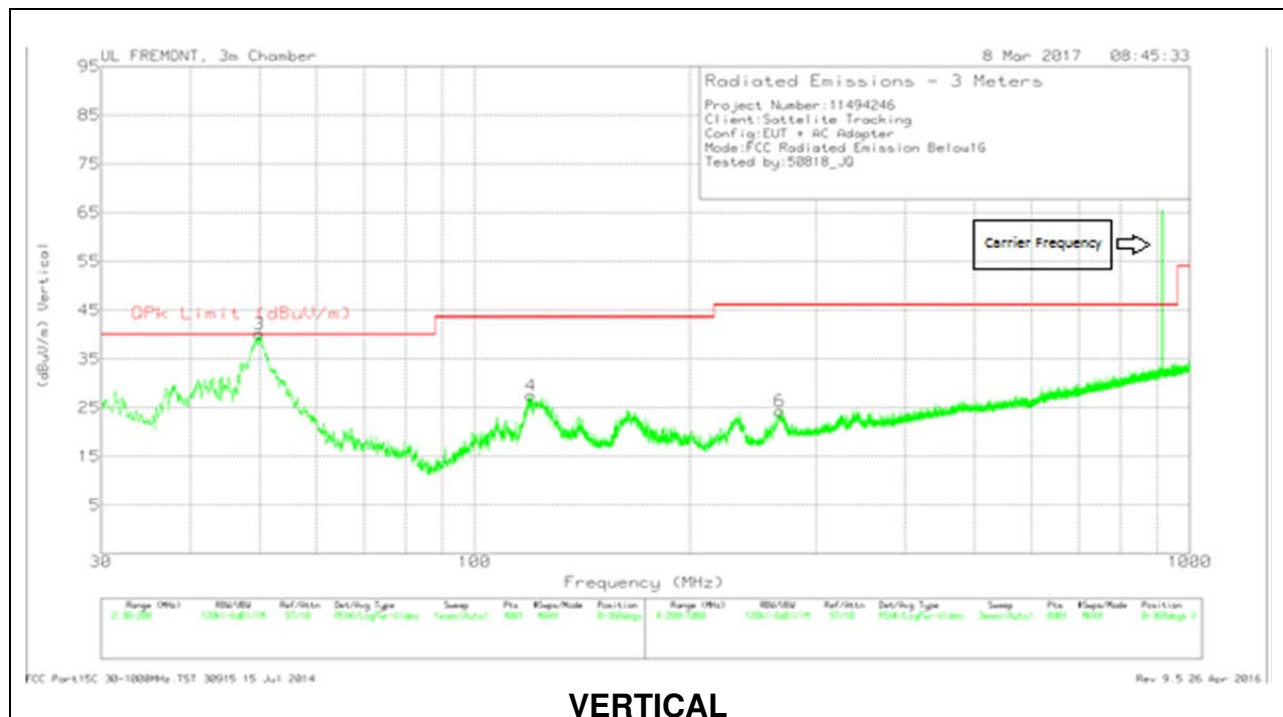
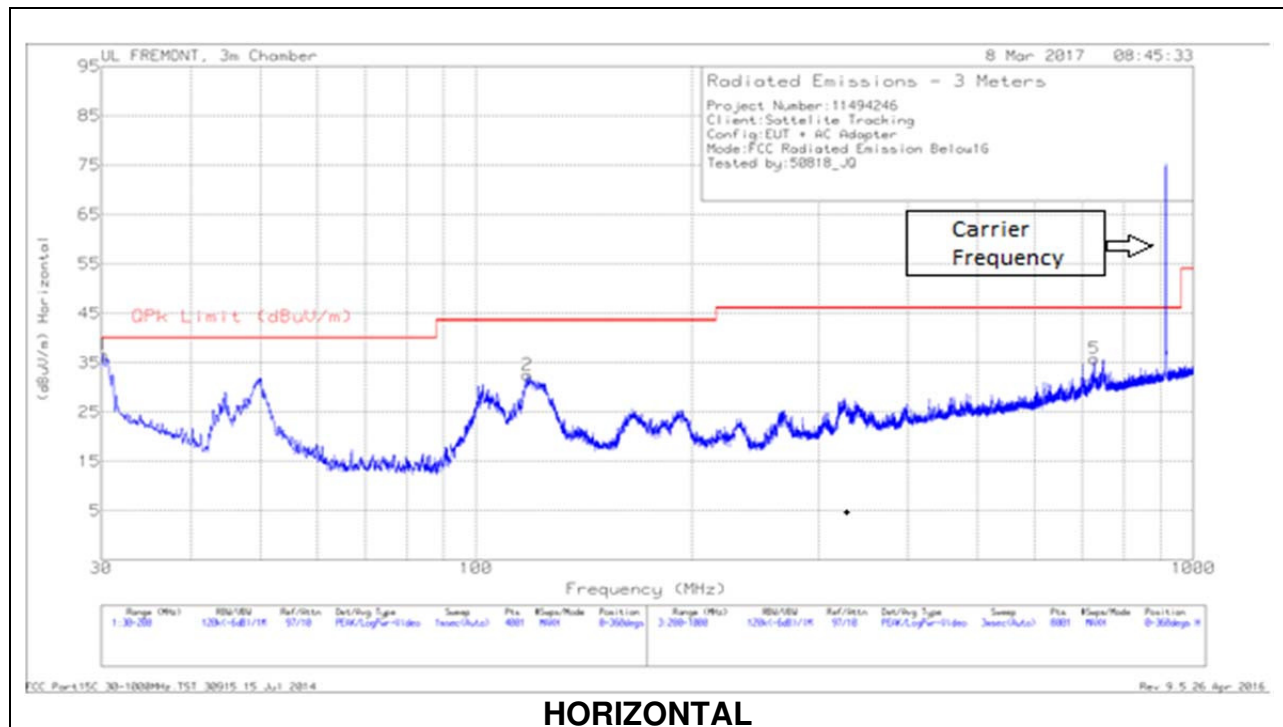
#### 5.3.1. FUNDAMENTAL FREQUENCY RADIATED EMISSION

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T408 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
914.897	69.69	Pk	26.3	-21.9	74.09	94	-19.91	172	101	H
914.897	61.52	Pk	26.3	-21.9	65.92	94	-28.08	215	118	V

Pk - Peak detector

Note: Peak detector was used as an alternative to CISPR quasi-peak measurements for the fundamental signal level.

### 5.3.2. SPURIOUS EMISSIONS 30 TO 1000 MHz



## Data

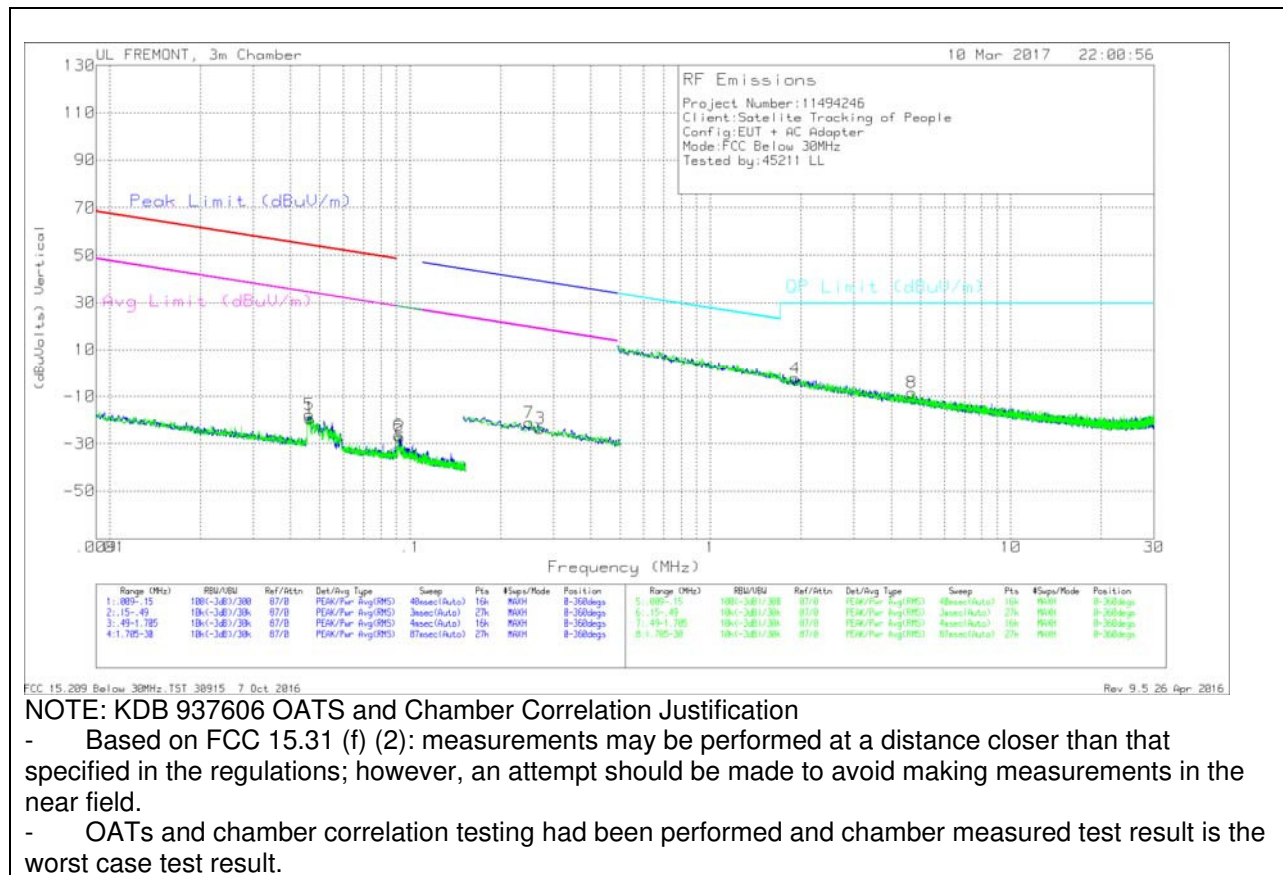
### Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T408 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.17	38.69	Pk	25.2	-27.3	36.59	40	-3.41	0-360	100	H
		24.07	Qp	25.1	-27.2	21.97	40	-18.03	327	148	H
3	49.9538	55.32	Pk	11.8	-27	40.12	40	.12	0-360	100	V
		41.78	Qp	11.9	-27	26.68	40	-13.32	315	236	V
2	117.89	41.04	Pk	17.6	-26.1	32.54	43.52	-10.98	0-360	300	H
4	119.8025	35.91	Pk	17.7	-26.1	27.51	43.52	-16.01	0-360	100	V
6	267	31.82	Pk	16.9	-24.4	24.32	46.02	-21.7	0-360	200	V
5	727.3	34.83	Pk	24.5	-23.5	35.83	46.02	-10.19	0-360	100	H

Pk - Peak detector

Qp - Quasi-Peak detector

### 5.3.3. SPURIOUS EMISSIONS 9 kHz TO 30 MHz



### Trace Markers

Ma r k e r	Frequ ency (MHz)	Meter Readi ng (dBuV )	De t	Lo o p Ant enn a (dB /m)	Cbl (dB )	Dist Corr 300m	Corre cted Readi ng (dBu Volts)	Peak Limit (dBuV/ m)	Margi n (dB)	Avg Limit (dBuV /m)	Margi n (dB)	QP Limit (dBuV/ m)	Margi n (dB)	QP Limit (dBuV/ m)	Margi n (dB )	Peak Limit (dBuV /m)	Margi n (dB)	Avg Limit (dBuV/ m)	Margin (dB)	Azi mut h (De gs)
5	.04612	48.41	Pk	12.5	1.4	-80	-17.69	54.31	-72	34.31	-52	-	-	-	-	-	-	-	-	0-360
1	.04644	46.89	Pk	12.5	1.4	-80	-19.21	54.25	-73.46	34.25	-53.46	-	-	-	-	-	-	-	-	0-360
6	.09144	40.42	Pk	11.8	1.4	-80	-26.38	-	-	-	-	28.37	-54.75	-	-	-	-	-	-	0-360
2	.09239	39.62	Pk	11.8	1.4	-80	-27.18	-	-	-	-	28.28	-55.46	-	-	-	-	-	-	0-360
7	.24901	45.59	Pk	11.7	1.5	-80	-21.21	-	-	-	-	-	-	-	-	39.69	-60.9	19.69	-40.9	0-360
3	.2713	43.16	Pk	11.7	1.5	-80	-23.64	-	-	-	-	-	-	-	-	38.94	-62.58	18.94	-42.58	0-360

### Pk - Peak detector

M a r k e r	Frequ ency (MHz)	Meter Readi ng (dBuV )	Det	Lo o p Ant enna (dB/ m)	Cbl (dB )	Dist Corr 30m	Corre cted Readi ng (dBu Volts )	Peak Limit (dBuV/ m)	Margi n (dB )	Avg Limit (dBuV/m )	Margi n (dB )	QP Limit (dBuV/ m)	Margi n (dB )	QP Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	Margi n (dB )	Avg Limit (dBuV/m )	Margi n (dB )	Azi mut h (De gs)
4	1.91879	24.21	Pk	11.9	1.5	-40	-2.39	-	-	-	-	-	-	29.5	-31.89	-	-	-	-	0-360
8	4.68446	18.66	Pk	11.5	1.5	-40	-8.34	-	-	-	-	-	-	29.5	-37.84	-	-	-	-	0-360

### Pk - Peak detector

## 6. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

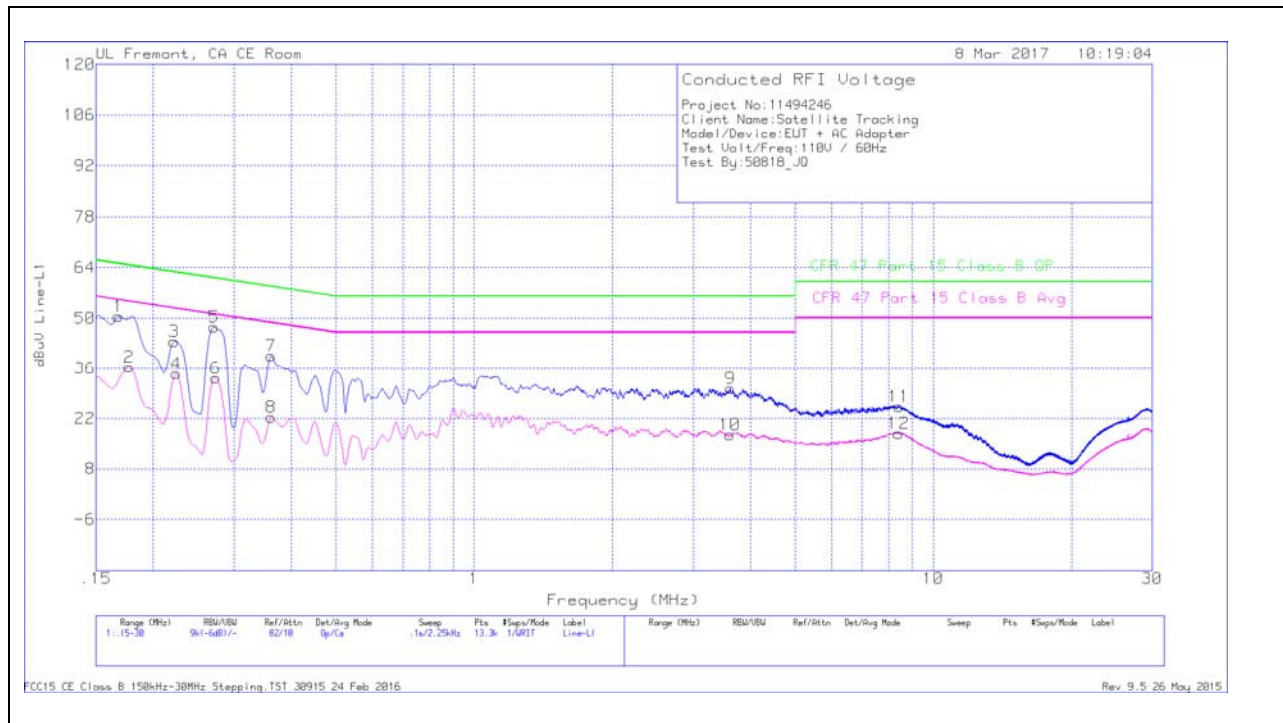
Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 <sup>*</sup>	56 to 46 <sup>*</sup>
0.5-5	56	46
5-30	60	50

<sup>\*</sup> Decreases with the logarithm of the frequency.

### RESULTS



## LINE 1 RESULTS

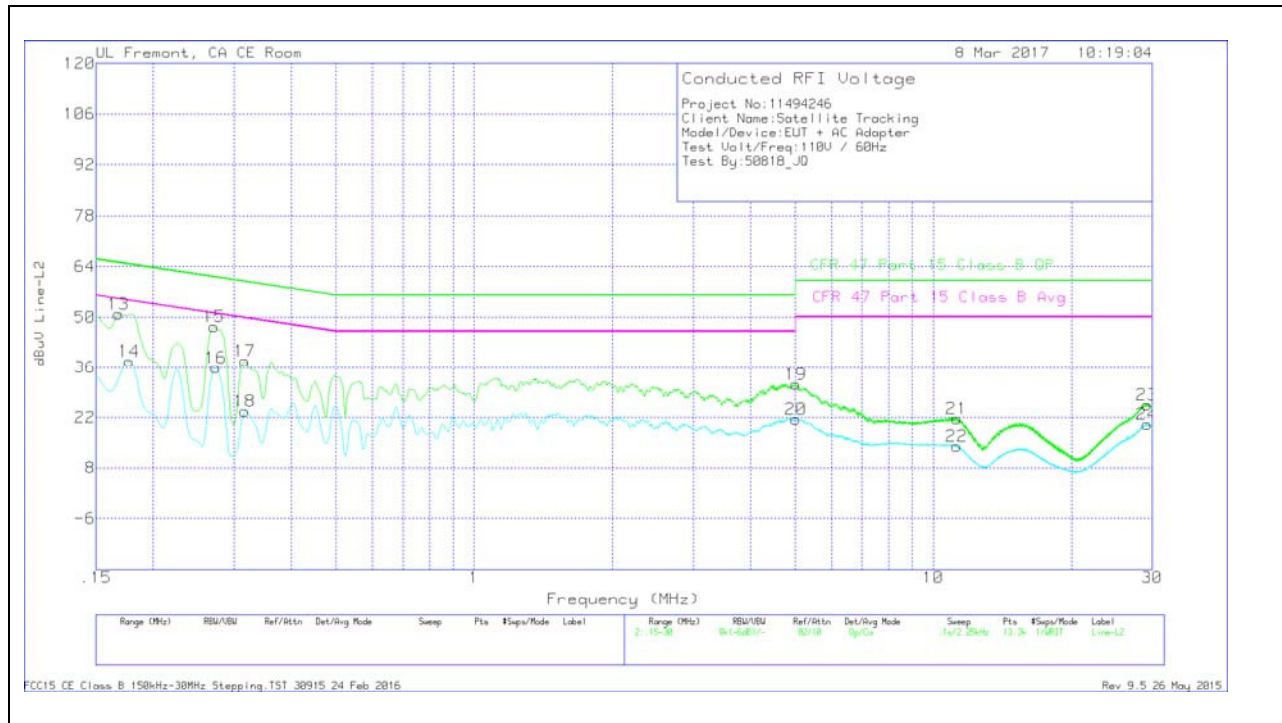


### Trace Markers

Range 1: Line-L1 15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.168	40.48	Qp	0	0	10.1	50.58	65.06	-14.48	-	-
2	.177	26.27	Ca	0	.1	10.1	36.47	-	-	54.63	-18.16
3	.222	33.35	Qp	0	.1	10.1	43.55	62.74	-19.19	-	-
4	.22425	24.32	Ca	0	.1	10.1	34.52	-	-	52.66	-18.14
5	.2715	37.33	Qp	0	.1	10.1	47.53	61.07	-13.54	-	-
6	.27375	23.13	Ca	0	.1	10.1	33.33	-	-	51	-17.67
7	.3615	29.35	Qp	0	.1	10.1	39.55	58.69	-19.14	-	-
8	.3615	12.13	Ca	0	.1	10.1	22.33	-	-	48.69	-26.36
9	3.61275	20.08	Qp	0	.1	10.1	30.28	56	-25.72	-	-
10	3.6105	7.31	Ca	0	.1	10.1	17.51	-	-	46	-28.49
11	8.40863	14.91	Qp	0	.2	10.2	25.31	60	-34.69	-	-
12	8.40638	7.52	Ca	0	.2	10.2	17.92	-	-	50	-32.08

Qp - Quasi-Peak detector  
Ca - CISPR average detection

## LINE 2 RESULTS



### Trace Markers

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.168	40.84	Qp	0	0	10.1	50.94	65.06	-14.12	-	-
14	.177	27.54	Ca	0	.1	10.1	37.74	-	-	54.63	-16.89
15	.2715	37.16	Qp	0	.1	10.1	47.36	61.07	-13.71	-	-
16	.27375	25.68	Ca	0	.1	10.1	35.88	-	-	51	-15.12
17	.3165	27.65	Qp	0	.1	10.1	37.85	59.8	-21.95	-	-
18	.3165	13.62	Ca	0	.1	10.1	23.82	-	-	49.8	-25.98
19	5.01675	21.04	Qp	0	.1	10.1	31.24	60	-28.76	-	-
20	5.0235	11.23	Ca	0	.1	10.1	21.43	-	-	50	-28.57
21	11.247	11.3	Qp	0	.2	10.2	21.7	60	-38.3	-	-
22	11.2403	3.64	Ca	0	.2	10.2	14.04	-	-	50	-35.96
23	29.2313	14.61	Qp	.1	.3	10.4	25.41	60	-34.59	-	-
24	29.229	9.26	Ca	.1	.3	10.4	20.06	-	-	50	-29.94

Qp - Quasi-Peak detector  
Ca - CISPR average detection