



**FCC 47 CFR PART 15 SUBPART C**

**CERTIFICATION TEST REPORT**

**FOR**

**Mobile payment terminal with Bluetooth connectivity and Contactless reader**

**MODEL NUMBER: BLUEPAD-500**

**FCC ID: YRWBLUEPAD-500**

**REPORT NUMBER: 11603522-E1V2**

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*Prepared for*  
**DATECS Ltd.**  
**DEPARTMENT OF INNOVATIVE TECHNOLOGIES**  
**4 "Datecs" Str.**  
**1592 SOFIA, BULGARIA**

*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**

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	04/10/17	Initial Issue	D. Corona
V2	05/04/17	Revised Report based on TCB Comments: Updated Section 5.1, 7.1, 7.2, 8.1, and 9	B. Bayani

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** DATECS Ltd.  
DEPARTMENT OF INNOVATIVE TECHNOLOGIES  
4 "Datecs" Str.  
1592 SOFIA, BULGARIA

**EUT DESCRIPTION:** Mobile payment terminal with Bluetooth connectivity and  
Contactless reader.

**MODEL:** BLUEPAD-500

**SERIAL NUMBER:** 1117900008

**DATE TESTED:** March 13, 2017 to April 06, 2017; May 04, 2017

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	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, or any agency of the U.S. Government.

Approved & Released For  
UL Verification Services Inc. By:



DAN CORONIA  
PROJECT LEAD  
UL Verification Services Inc.

Prepared By:



LIONEL LARA  
LAB ENGINEER  
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, and FCC CFR 47 Part 15.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

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	<input type="checkbox"/> Chamber D
<input type="checkbox"/> Chamber B	<input type="checkbox"/> Chamber E
<input type="checkbox"/> Chamber C	<input type="checkbox"/> Chamber F
	<input type="checkbox"/> Chamber G
	<input type="checkbox"/> Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively

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>.

## 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:

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

### 4.3. MEASUREMENT UNCERTAINTY

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

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%.

## **5. EQUIPMENT UNDER TEST**

### **5.1. DESCRIPTION OF EUT**

Mobile Payment Terminal for Apple devices. Supporting Bluetooth connectivity, Barcode Reader, Magnetic stripe, EMV Chip & PIN and Contactless cards.

This device is designed to operate with an iPod Touch (6th generation).

### **5.2. MAXIMUM OUTPUT POWER**

The testing was performed at 3 meter. The transmitter maximum E-field at 30 meter distance is 38.99 dBuV/m which is converted from the 3 meter data.

### **5.3. DESCRIPTION OF AVAILABLE ANTENNAS**

The radio utilizes an Chip antenna (Integral), with a maximum gain of 0 dBi.

### **5.4. SOFTWARE AND FIRMWARE**

The test utility software used during testing was BLUPAD500\_FW.

### **5.5. WORST-CASE CONFIGURATION AND MODE**

The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z. It was determined that the Z-orientation was the worst-case orientation, therefore, all final radiated testing was performed with the EUT in the Z-orientation while generating continuous emissions.

## 5.6. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC charger	Apple	A1265	1X1132QX28QZ	-

### I/O CABLES

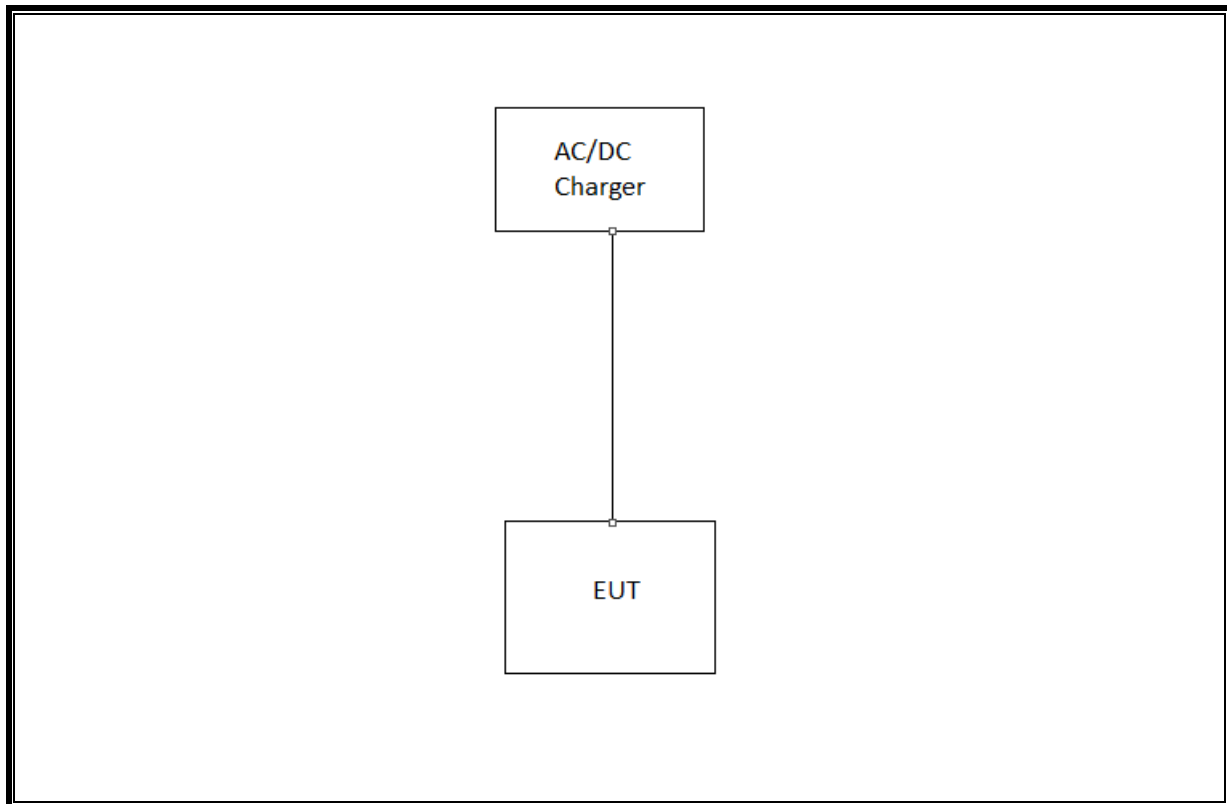
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Unshielded	1	EUT to AC/DC charger

### TEST SETUP

The EUT is connected to the AC/DC charger via USB cable. Test software exercised the EUT.



**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	T No.	Cal Date	Cal Due
Bilog Antenna 30-1000MHz	Sunol	JB1	899	05/26/16	05/26/17
Preamplifier 10kHz-1000MHz	Sonoma	310	300	11/10/16	11/10/17
EMI Test Receiver	Rohde & Schwarz	ESR-EMI	1436	11/19/16	11/19/17
Spectrum Analyzer 44GHz	Agilent	N9030A	908	04/13/16	04/13/17
LISN for Conducted Emission	FCC	50/250-25-2	1310	06/08/16	06/08/17
Temp chamber	Thermotron	SE-600-10-10	T80	01/14/16	05/14/17
Loop Antenna	EMCO	6502	35	03/24/16	03/24/17
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016		
Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015		

## 7. ANTENNA PORT TEST RESULTS

### 7.1. 20 dB BANDWIDTH

#### LIMIT

None; for reporting purposes only.

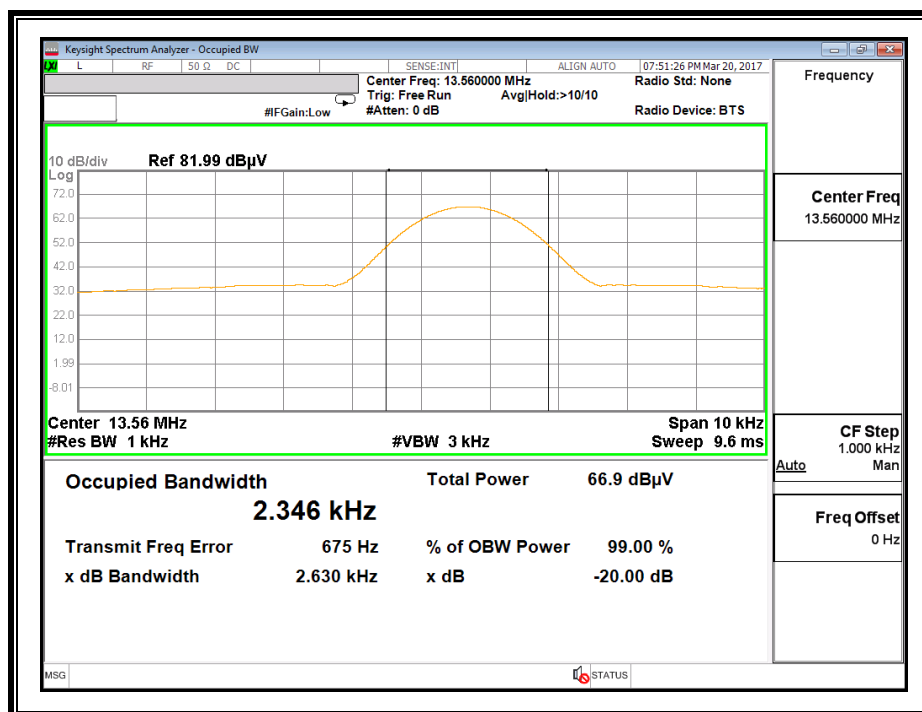
#### TEST PROCEDURE

§2.1049

The 20dB bandwidth was measured by using a spectrum analyzer.

#### RESULTS

Frequency (MHz)	20 dB Bandwidth (KHz)
13.56	2.63



NOTE: Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

## 7.2. FREQUENCY STABILITY

### LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

### TEST PROCEDURE

ANSI C63.10

### RESULTS

ID:	45211	Date:	05/04/2017
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### TEST INFORMATION

Reference Frequency: EUT Channel 13.56 MHz @ 20°C										
Limit: $\pm 100$ ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(Vdc)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
5.0	50	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	$\pm 100$
5.0	40	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	$\pm 100$
5.0	30	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	$\pm 100$
5.0	<b>20</b>	<b>13.5606500</b>	<b>0.000</b>	<b>13.5606500</b>	<b>0.000</b>	<b>13.5606500</b>	<b>0.000</b>	<b>13.5606500</b>	<b>0.000</b>	<b><math>\pm 100</math></b>
5.0	10	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	$\pm 100$
5.0	0	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	$\pm 100$
5.0	-10	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	$\pm 100$
5.0	-20	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	13.5607000	-3.687	$\pm 100$
4.25	20	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	$\pm 100$
5.75	20	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	13.5606500	0.000	$\pm 100$

## 8. RADIATED EMISSION TEST RESULTS

### 8.1. LIMITS AND PROCEDURE

#### LIMIT

#### §15.225

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:

§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:

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	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 - 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.

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

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

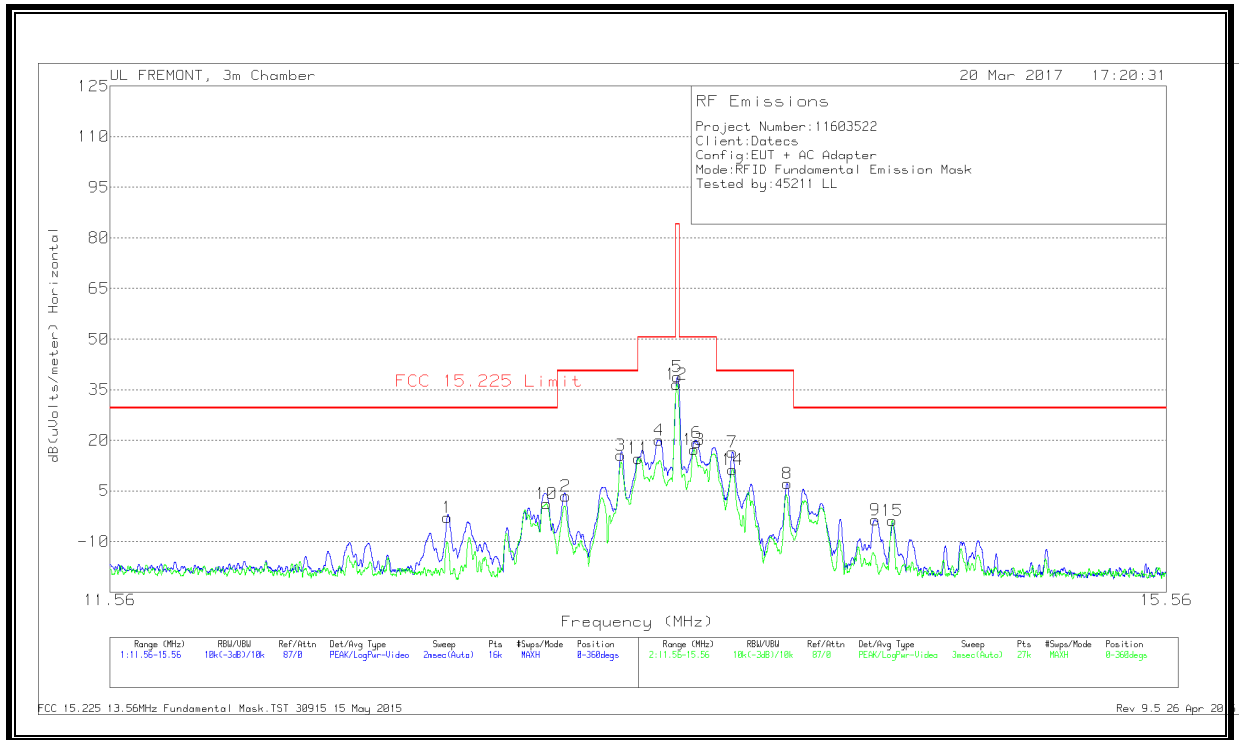
§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

KDB 414788 OATS and Chamber Correlation Justification

- Based 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.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

**RESULTS**

### 8.1.1. FUNDAMENTAL EMISSION MASK(11.56 to 15.56MHz)



## Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.71	24.86	Pk	10.7	1.6	-40	-2.84	29.54	-32.38	0-360
10	13.06982	28.86	Pk	10.7	1.6	-40	1.16	29.54	-28.38	0-360
2	13.1415	31.21	Pk	10.7	1.6	-40	3.51	40.51	-37	0-360
3	13.34525	43.27	Pk	10.7	1.6	-40	15.57	40.51	-24.94	0-360
11	13.41274	42.4	Pk	10.7	1.6	-40	14.7	50.5	-35.8	0-360
4	13.49038	47.77	Pk	10.7	1.6	-40	20.07	50.5	-30.43	0-360
12	13.55896	64.37	Pk	10.6	1.6	-40	36.57	84	-47.43	0-360
5	13.5615	66.68	Pk	10.6	1.6	-40	38.88	84	-45.12	0-360
13	13.62408	45	Pk	10.6	1.6	-40	17.2	50.5	-33.3	0-360
6	13.636	47.14	Pk	10.6	1.6	-40	19.34	50.5	-31.16	0-360
7	13.77175	44.24	Pk	10.6	1.6	-40	16.44	40.51	-24.07	0-360
14	13.77282	39.14	Pk	10.6	1.6	-40	11.34	40.51	-29.17	0-360
8	13.98563	34.94	Pk	10.6	1.6	-40	7.14	40.51	-33.37	0-360
9	14.33588	24.16	Pk	10.6	1.6	-40	-3.64	29.54	-33.18	0-360
15	14.40582	24.02	Pk	10.6	1.6	-40	-3.78	29.54	-33.32	0-360

Pk - Peak detector

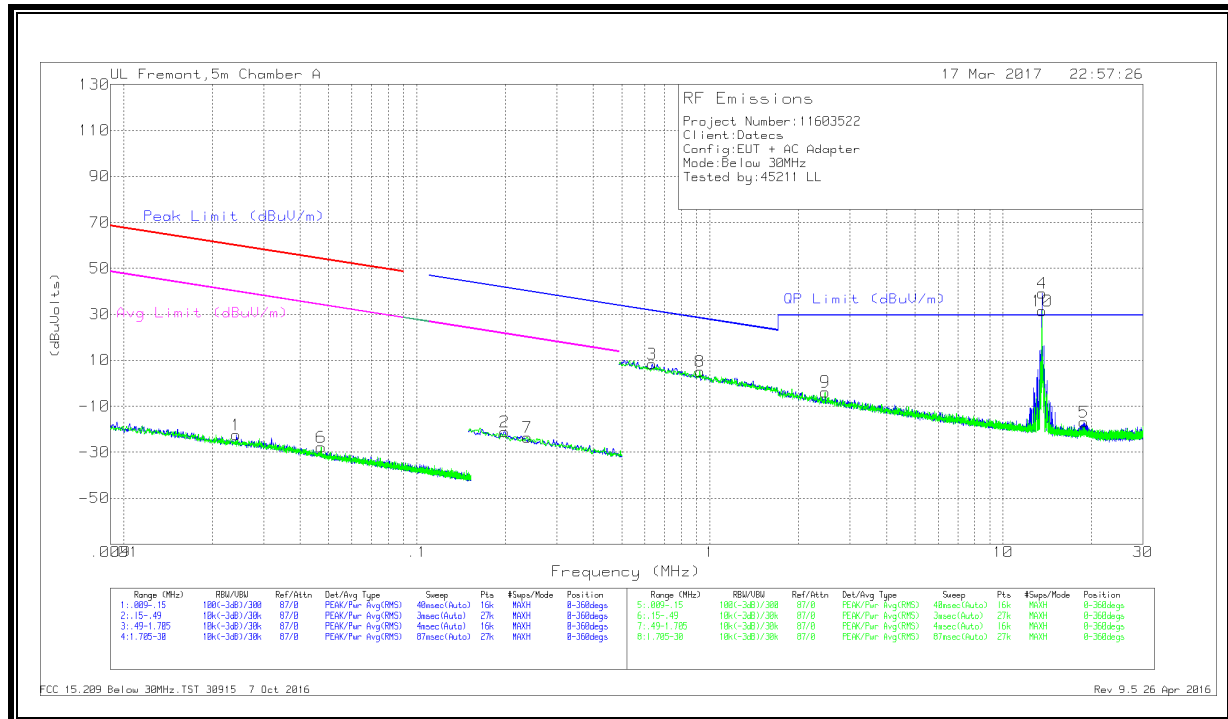
## Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
13.5605	66.79	Pk	10.6	1.6	-40	38.99	84	-45.01	198
13.5605	64.25	Pk	10.6	1.6	-40	36.45	84	-47.55	126

Pk - Peak detector



## 8.1.2. SPURIOUS EMISSIONS (0.09 – 30 MHz)



## Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	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	.02421	43.21	Pk	14.3	.1	-80	-22.39	59.9	-82.29	39.9	-62.29	-	-	-	-	0-360
6	.04719	39.69	Pk	12.4	.1	-80	-27.81	54.11	-81.92	34.11	-61.92	-	-	-	-	0-360
2	.19916	46.99	Pk	11.8	.1	-80	-21.11	-	-	-	-	41.63	-62.74	21.63	-42.74	0-360
7	.23785	44.62	Pk	11.7	.1	-80	-23.58	-	-	-	-	40.09	-63.67	20.09	-43.67	0-360

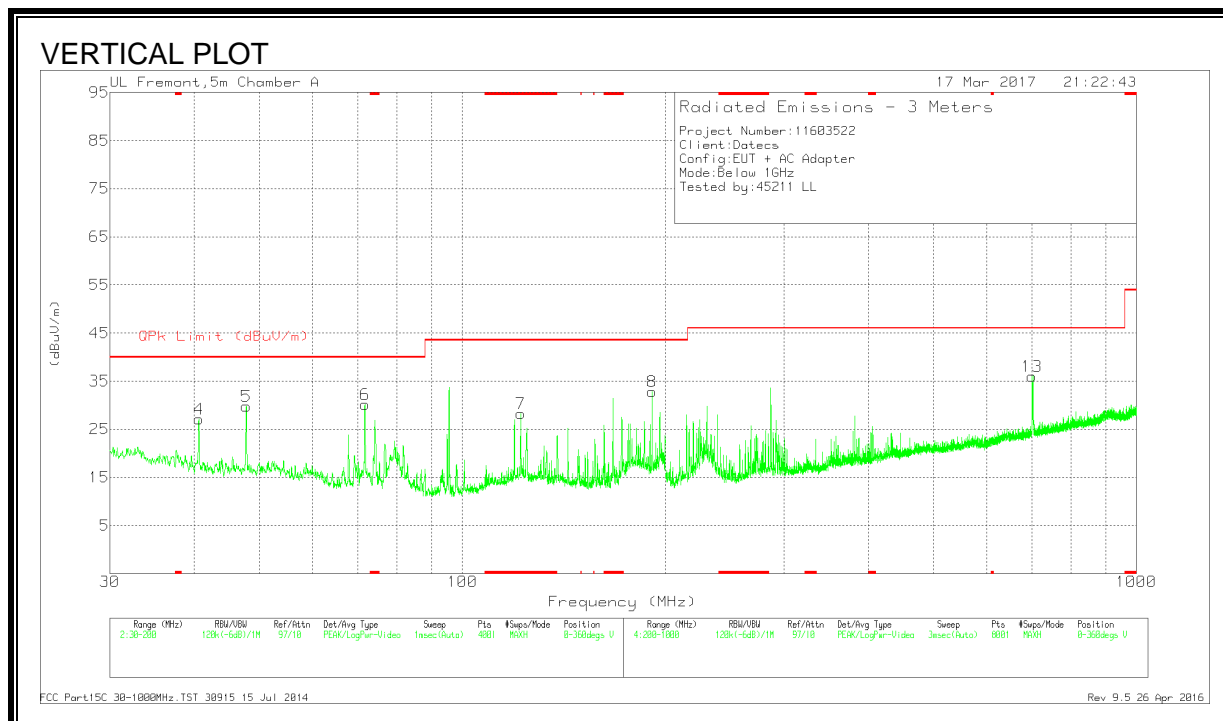
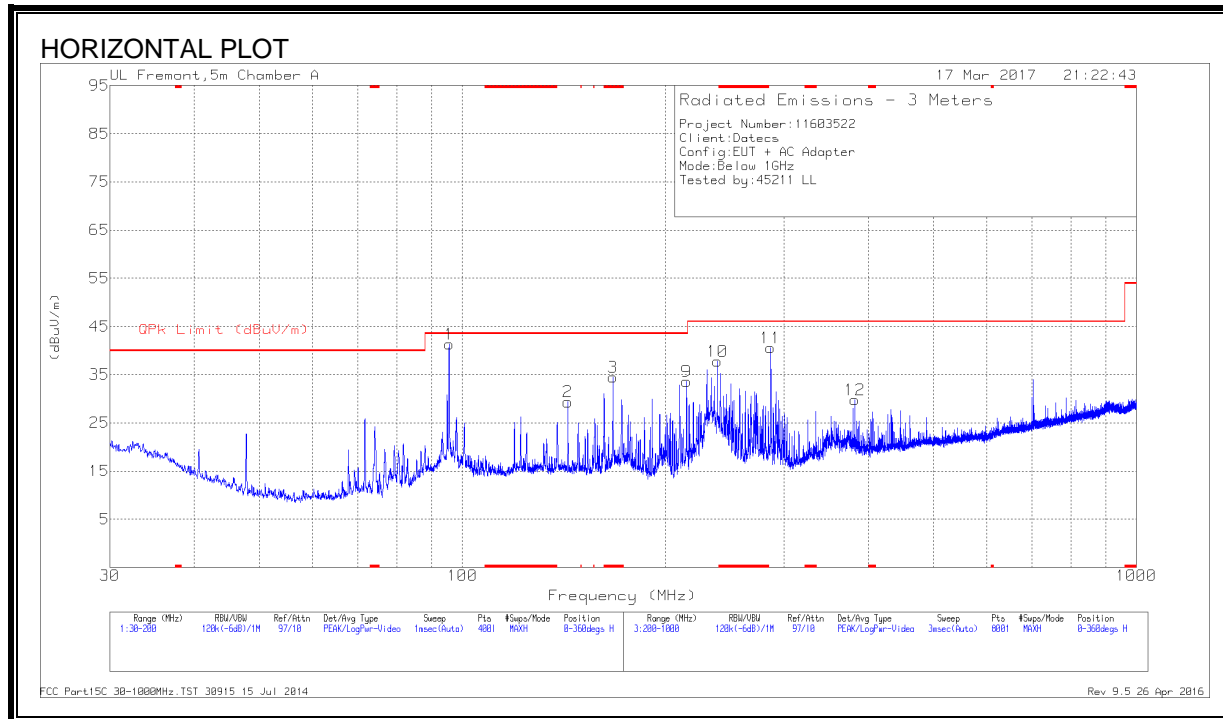
## Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.63527	36.37	Pk	11.8	.1	-40	8.27	31.55	-23.28	-	-	-	-	0-360
8	.92233	33.15	Pk	11.8	.2	-40	5.15	28.32	-23.17	-	-	-	-	0-360
9	2.46952	24.15	Pk	11.9	.2	-40	-3.75	29.5	-33.25	-	-	-	-	0-360
4	**13.5615	68.02	Pk	10.6	.6	-40	39.22	-	-	-	-	-	-	0-360
10	**13.5615	60.33	Pk	10.6	.6	-40	31.53	-	-	-	-	-	-	0-360
5	18.84399	12.4	Pk	10	.6	-40	-17	29.5	-46.5	-	-	-	-	0-360

## Pk - Peak detector

\*\* - Fundamental frequency

### 8.1.3. TX SPURIOUS EMISSION 30 TO 1000 MHz



## Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	* 122.055	40.71	Pk	17.9	-30.4	28.21	43.52	-15.31	0-360	100	V
4	40.6675	40.59	Pk	17.6	-31.1	27.09	40	-12.91	0-360	100	V
5	47.8075	48.34	Pk	12.5	-31.1	29.74	40	-10.26	0-360	100	V
6	71.6925	48.47	Pk	12.5	-30.8	30.17	40	-9.83	0-360	100	V
1	95.5775	58.9	Pk	13	-30.6	41.3	43.52	-2.22	0-360	300	H
2	143.39	42.65	Pk	17	-30.3	29.35	43.52	-14.17	0-360	100	H
3	167.275	48.81	Pk	15.9	-30.2	34.51	43.52	-9.01	0-360	100	H
8	191.16	47.36	Pk	15.5	-30	32.86	43.52	-10.66	0-360	100	V
9	215.1	48.85	Pk	14.6	-29.9	33.55	43.52	-9.97	0-360	100	H
10	239	51.92	Pk	15.6	-29.7	37.82	46.02	-8.2	0-360	100	H
11	286.8	52.82	Pk	17.3	-29.5	40.62	46.02	-5.4	0-360	100	H
12	382.4	39.9	Pk	19	-29.1	29.8	46.02	-16.22	0-360	100	H
13	700.1	40.06	Pk	24.2	-28.3	35.96	46.02	-10.06	0-360	200	V

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

Pk - Peak detector

## Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
95.5981	58.5	Qp	13	-30.6	40.9	43.52	-2.62	329	285	H
286.7837	49.94	Qp	17.3	-29.5	37.74	46.02	-8.28	200	132	H

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

Qp - Quasi-Peak detector

## 9. AC MAINS LINE CONDUCTED EMISSIONS

### LIMITS

§15.207

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

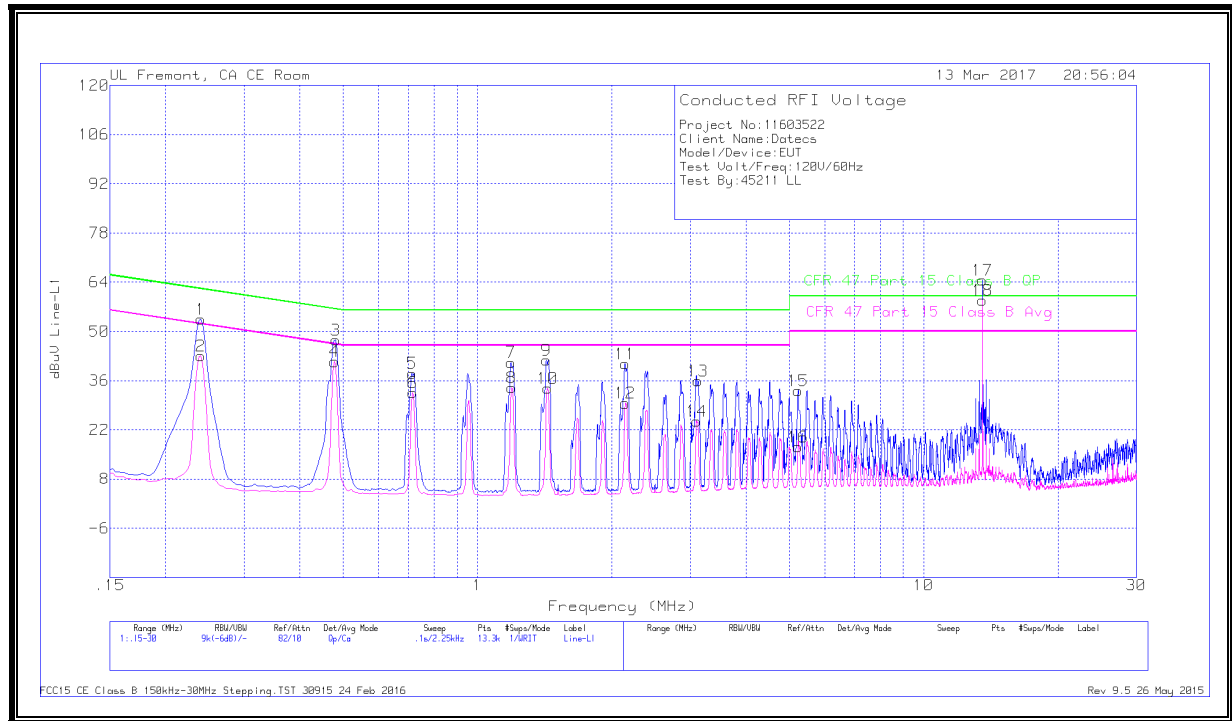
### TEST PROCEDURE

ANSI C63.10

### RESULTS

## 9.1. NORMAL OPERATION

### LINE 1 RESULTS



## Trace Markers

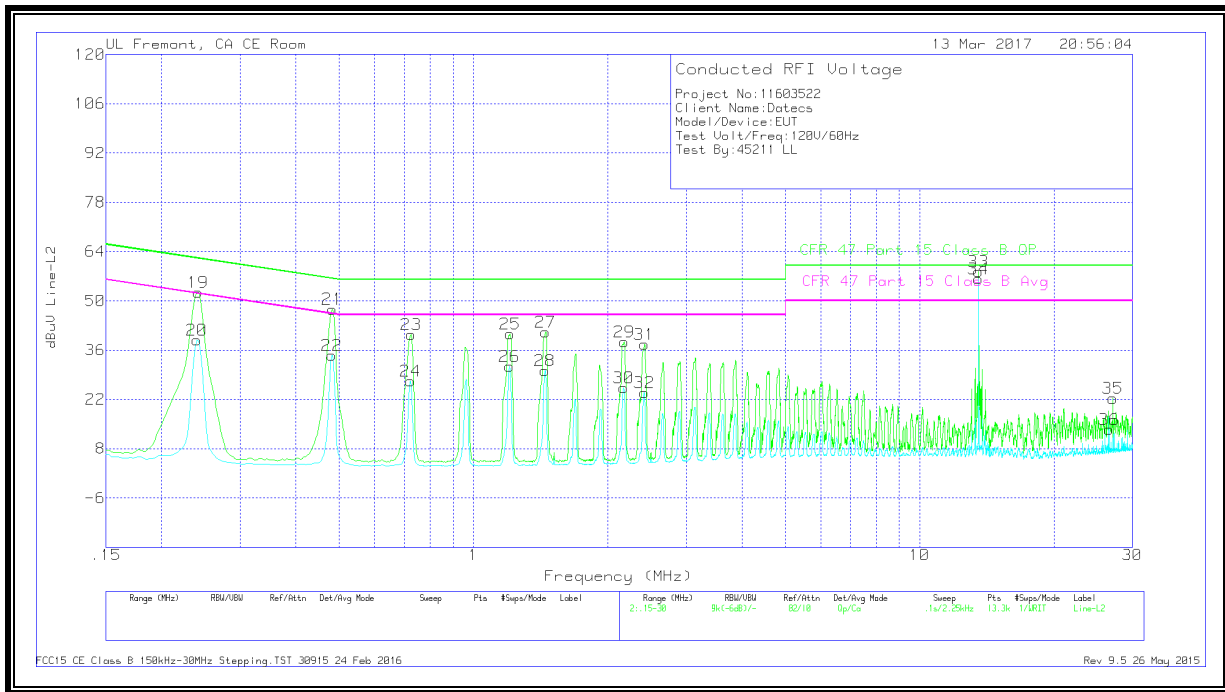
Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.24	43.33	Qp	0	.1	10.1	53.53	62.1	-8.57	-	-
2	.24	32.88	Ca	0	.1	10.1	43.08	-	-	52.1	-9.02
3	.48075	37.36	Qp	0	.1	10.1	47.56	56.33	-8.77	-	-
4	.4785	31.2	Ca	0	.1	10.1	41.4	-	-	46.37	-4.97
5	.71475	27.89	Qp	0	.1	10.1	38.09	56	-17.91	-	-
6	.717	22.4	Ca	0	.1	10.1	32.6	-	-	46	-13.4
7	1.1895	31.02	Qp	0	.1	10.1	41.22	56	-14.78	-	-
8	1.194	23.77	Ca	0	.1	10.1	33.97	-	-	46	-12.03
9	1.428	31.69	Qp	0	.1	10.1	41.89	56	-14.11	-	-
10	1.43475	23.57	Ca	0	.1	10.1	33.77	-	-	46	-12.23
11	2.1435	30.65	Qp	0	.1	10.1	40.85	56	-15.15	-	-
12	2.14575	19.38	Ca	0	.1	10.1	29.58	-	-	46	-16.42
13	3.12225	25.75	Qp	0	.1	10.1	35.95	56	-20.05	-	-
14	3.09975	14.19	Ca	0	.1	10.1	24.39	-	-	46	-21.61
15	5.226	22.93	Qp	0	.1	10.1	33.13	60	-26.87	-	-
16	5.226	6.93	Ca	0	.1	10.1	17.13	-	-	50	-32.87
17	**13.56	54.11	Qp	.1	.2	10.2	64.61	-	-	-	-
18	**13.56	48.32	Ca	.1	.2	10.2	58.82	-	-	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

\*\* - Fundamental frequency, 13.56MHz.

**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)
19	.24113	42.25	Qp	0	.1	10.1	52.45	62.06	-9.61	-	-
20	.24	28.62	Ca	0	.1	10.1	38.82	-	-	52.1	-13.28
21	.483	37.45	Qp	0	.1	10.1	47.65	56.29	-8.64	-	-
22	.48075	24.36	Ca	0	.1	10.1	34.56	-	-	46.33	-11.77
23	.726	30.31	Qp	0	.1	10.1	40.51	56	-15.49	-	-
24	.72375	17.07	Ca	0	.1	10.1	27.27	-	-	46	-18.73
25	1.2075	30.35	Qp	0	.1	10.1	40.55	56	-15.45	-	-
26	1.20525	21.13	Ca	0	.1	10.1	31.33	-	-	46	-14.67
27	1.4505	31	Qp	0	.1	10.1	41.2	56	-14.8	-	-
28	1.446	20.01	Ca	0	.1	10.1	30.21	-	-	46	-15.79
29	2.175	28.11	Qp	0	.1	10.1	38.31	56	-17.69	-	-
30	2.1705	15.14	Ca	0	.1	10.1	25.34	-	-	46	-20.66
31	2.41575	27.51	Qp	0	.1	10.1	37.71	56	-18.29	-	-
32	2.4135	13.77	Ca	0	.1	10.1	23.97	-	-	46	-22.03
33	13.56	47.91	Qp	.1	.2	10.2	58.41	-	-	-	-
34	13.56	45.8	Ca	.1	.2	10.2	56.3	-	-	-	-
35	27.12075	11.38	Qp	.1	.3	10.5	22.28	60	-37.72	-	-
36	26.61225	2.55	Ca	.1	.3	10.5	13.45	-	-	50	-36.55

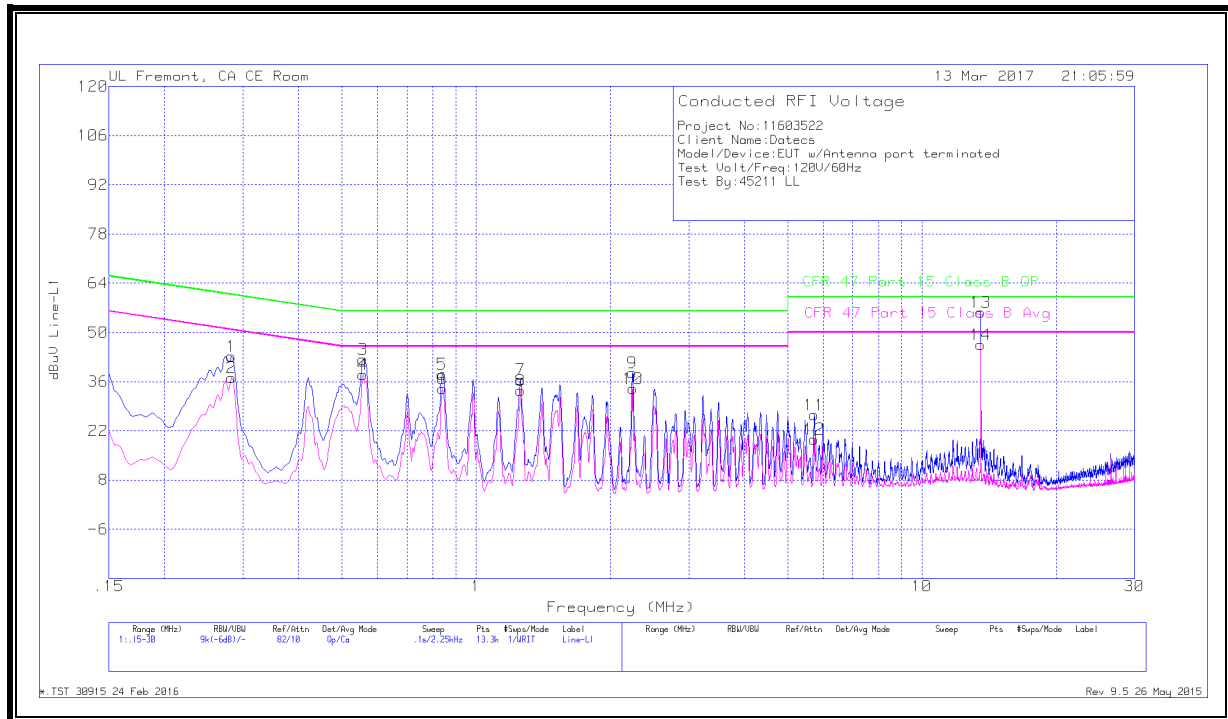
Qp - Quasi-Peak detector

Ca - CISPR average detection

\*\* - Fundamental frequency, 13.56MHz.

## 9.2. WITH ANTENNA PORT TERMINATED

### LINE 1 RESULTS



### Trace Markers

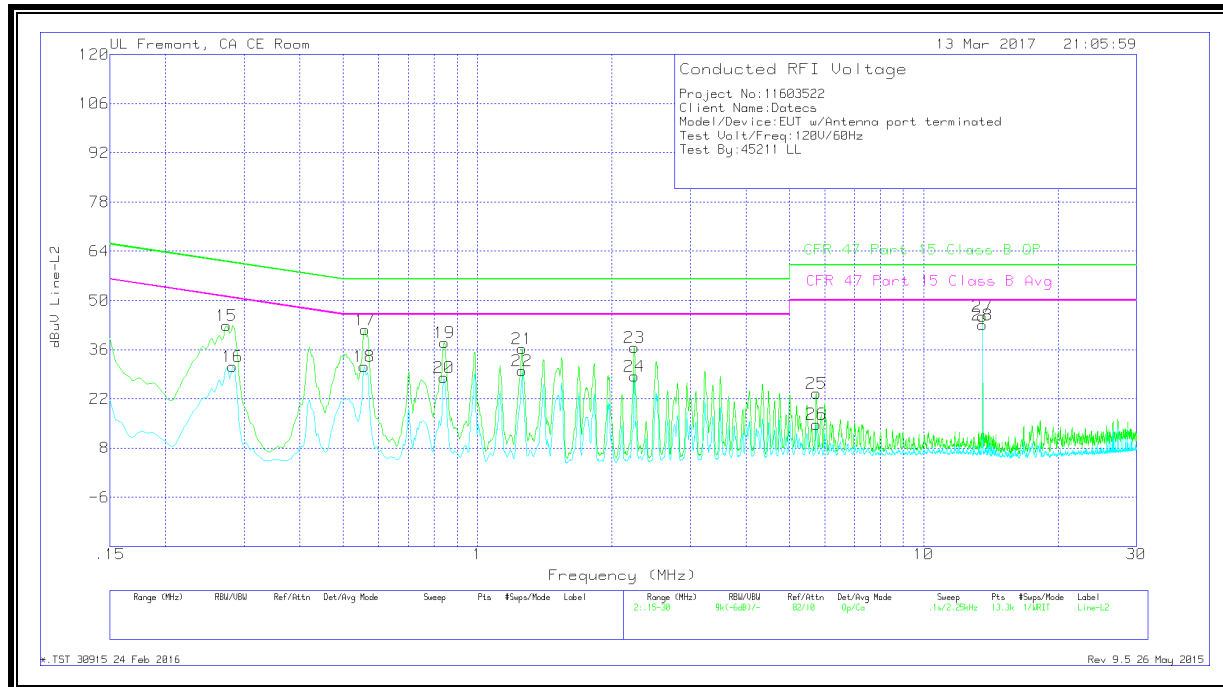
Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.28275	33.05	Qp	0	.1	10.1	43.25	60.73	-17.48	-	-
2	.28275	26.96	Ca	0	.1	10.1	37.16	-	-	50.73	-13.57
3	.55725	32.13	Qp	0	.1	10.1	42.33	56	-13.67	-	-
4	.55725	27.79	Ca	0	.1	10.1	37.99	-	-	46	-8.01
5	.8385	27.89	Qp	0	.1	10.1	38.09	56	-17.91	-	-
6	.84075	23.75	Ca	0	.1	10.1	33.95	-	-	46	-12.05
7	1.257	26.4	Qp	0	.1	10.1	36.6	56	-19.4	-	-
8	1.25925	23.21	Ca	0	.1	10.1	33.41	-	-	46	-12.59
9	2.2425	28.34	Qp	0	.1	10.1	38.54	56	-17.46	-	-
10	2.24475	23.85	Ca	0	.1	10.1	34.05	-	-	46	-11.95
11	5.739	16.36	Qp	0	.1	10.1	26.56	60	-33.44	-	-
12	5.739	9.46	Ca	0	.1	10.1	19.66	-	-	50	-30.34
13	13.56	45.19	Qp	.1	.2	10.2	55.69	60	-4.31	-	-
14	13.56	36.04	Ca	.1	.2	10.2	46.54	-	-	50	-3.46

Qp - Quasi-Peak detector

Ca - CISPR average detection

**Note:** The 13.56MHz is a fundamental frequency of the EUT. The plots under the following section (with Antenna Port Terminated) indicate that when the antenna port is terminated, and with the EUT is transmitting, the fundamental is below the limit line.

## 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)
15	.27375	32.69	Qp	0	.1	10.1	42.89	61	-18.11	-	-
16	.28275	21.04	Ca	0	.1	10.1	31.24	-	-	50.73	-19.49
17	.5595	31.42	Qp	0	.1	10.1	41.62	56	-14.38	-	-
18	.55725	21.05	Ca	0	.1	10.1	31.25	-	-	46	-14.75
19	.843	27.85	Qp	0	.1	10.1	38.05	56	-17.95	-	-
20	.84075	17.91	Ca	0	.1	10.1	28.11	-	-	46	-17.89
21	1.25925	26.08	Qp	0	.1	10.1	36.28	56	-19.72	-	-
22	1.25925	19.78	Ca	0	.1	10.1	29.98	-	-	46	-16.02
23	2.24475	26.42	Qp	0	.1	10.1	36.62	56	-19.38	-	-
24	2.24475	18.31	Ca	0	.1	10.1	28.51	-	-	46	-17.49
25	5.7435	13.3	Qp	0	.1	10.1	23.5	60	-36.5	-	-
26	5.7435	4.6	Ca	0	.1	10.1	14.8	-	-	50	-35.2
27	13.56225	34.94	Qp	.1	.2	10.2	45.44	60	-14.56	-	-
28	13.56	32.5	Ca	.1	.2	10.2	43	-	-	50	-7

Qp - Quasi-Peak detector

Ca - CISPR average detection

**Note:** The 13.56MHz is a fundamental frequency of the EUT. The plots under the following section (with Antenna Port Terminated) indicate that when the antenna port is terminated, and with the EUT is transmitting, the fundamental is below the limit line.