



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

Mobile Barcode Scanner with Bluetooth connectivity and Contactless reader

MODEL NUMBER: INFINEAX7

FCC ID: YRWINFINEAX7

REPORT NUMBER: 11718294-E1V2

ISSUE DATE: 03/14/2018

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[®]
TESTING
NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	10/05/17	Initial Issue	B. Bayani
V2	03/14/18	Revised report based on reviewer's comments: 1. Sec. 3: Updated Note. 2. Sec. 8.1: Updated Note. 3. Sec. 9.2: Added Note.	B. Bayani

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION.....	5
4. CALIBRATION AND UNCERTAINTY	5
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	5
4.2. <i>SAMPLE CALCULATION.....</i>	5
4.3. <i>MEASUREMENT UNCERTAINTY.....</i>	6
5. EQUIPMENT UNDER TEST	7
5.1. <i>DESCRIPTION OF EUT</i>	7
5.2. <i>MAXIMUM OUTPUT POWER.....</i>	7
5.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	7
5.4. <i>SOFTWARE AND FIRMWARE</i>	7
5.5. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	7
5.6. <i>DESCRIPTION OF TEST SETUP.....</i>	8
6. TEST AND MEASUREMENT EQUIPMENT	10
7. ANTENNA PORT TEST RESULTS	11
7.1. <i>20 dB BANDWIDTH</i>	11
7.2. <i>FREQUENCY STABILITY.....</i>	12
8. RADIATED EMISSION TEST RESULTS.....	13
8.1. <i>LIMITS AND PROCEDURE</i>	13
8.1.1. <i>FUNDAMENTAL EMISSION MASK(11.56 to 15.56MHz).....</i>	15
8.1.2. <i>SPURIOUS EMISSIONS (0.09 – 30 MHz).....</i>	17
8.1.3. <i>TX SPURIOUS EMISSION 30 TO 1000 MHz</i>	19
9. AC MAINS LINE CONDUCTED EMISSIONS.....	21
9.1. <i>NORMAL OPERATION</i>	22
9.2. <i>WITH ANTENNA PORT TERMINATED</i>	26
10. SETUP PHOTOS.....	28

1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: Mobile barcode scanner with Bluetooth connectivity and Contactless reader.

MODEL: INFINEAX7

SERIAL NUMBER: IX7030000290317

DATE TESTED: May 10, 2017 to May 15, 2017; October 4, 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:

BOBBY BAYANI & 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 type="checkbox"/> Chamber A	<input type="checkbox"/> Chamber D
<input checked="" 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. 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 barcode scanner with Bluetooth connectivity and Contactless reader.

This device is designed to operate with an iPhone 7.

5.2. MAXIMUM OUTPUT POWER

The testing was performed at 3 meter. The transmitter maximum E-field at 30 meter distance is 19.71 dBuV/m which is converted from the 3 meter data.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a loop antenna on a PWB(printed wiring board), with a maximum gain of 0 dBi.

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was LineaRFControl v2.

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 Y-orientation was the worst-case orientation, therefore, all final radiated testing was performed with the EUT in the Y-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	-
Charging Cradle	Infinite Peripherals	-	-	-
Laptop	Lenovo	T420	PB-FBKHK 12/07	-
AC/DC Adapter	Lenovo	ADLX65NCC2A	-	-

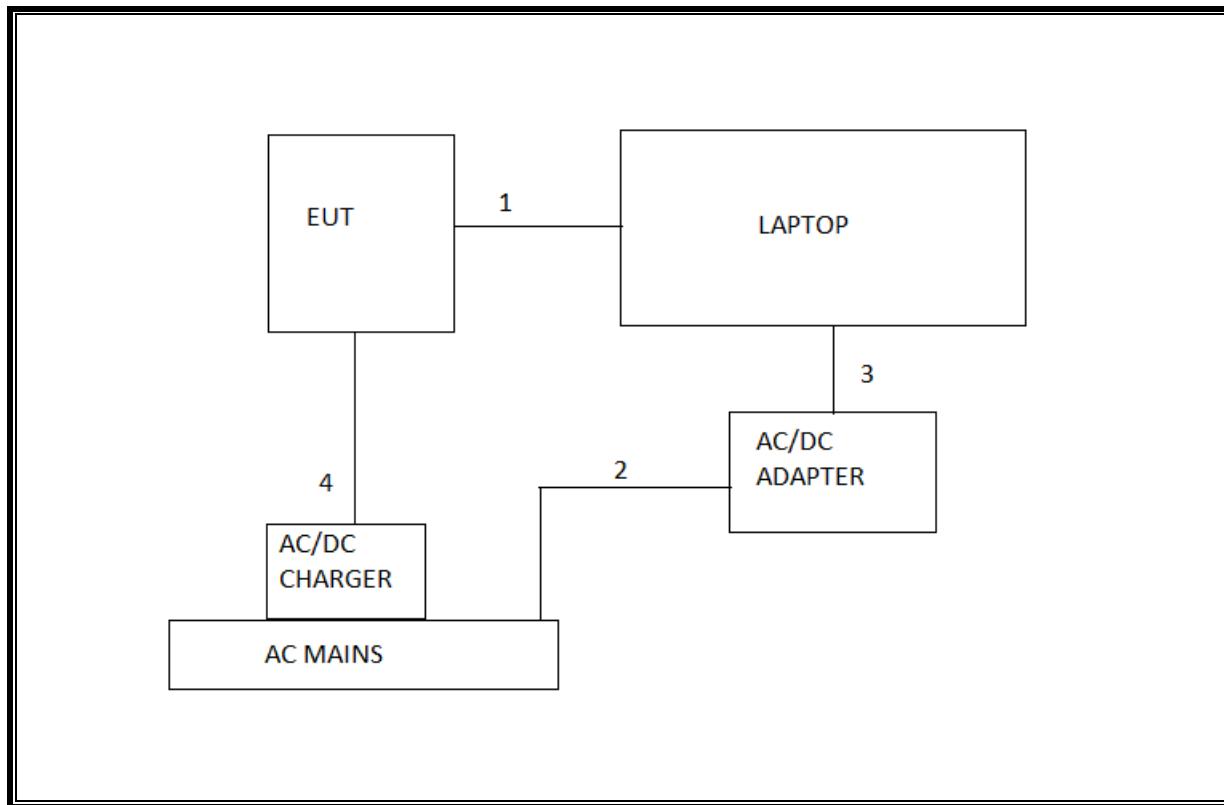
I/O CABLES

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 Laptop
2	AC Power	1	AC	Unshielded	1	
3	DC Power	1	DC	Unshielded	1	
4	USB	1	USB	Unshielded	1	Charging Cradle to AC/DC charger

TEST SETUP

The EUT is placed inside the charging cradle and is connected to the AC/DC Charger via USB cable. The EUT is connected to the laptop 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	Asset	Cal Due
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T477	06/22/2017
Antenna, Active Loop 9kHz-30MHz	ETS-Lindgren	6502	T1683	02/17/2018
Amplifier, 10kHz-1GHz	Agilent (Keysight) Technologies	8447D	T15	08/26/2017
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T907	01/23/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1450	01/10/2018
Temperature Chamber	Thermotron Industires	SE-600-10-10	T80	08/21/2017
EMI Test Receiver	Rohde & Schwarz	ESR	T1436	01/18/2018
LISN	Fischer Custom Communications	FCC-LISN-50/250-25-2-01	T1310	06/15/2018
Transient Limiter	COM-POWER	LIT-930	T1457	02/24/18
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.

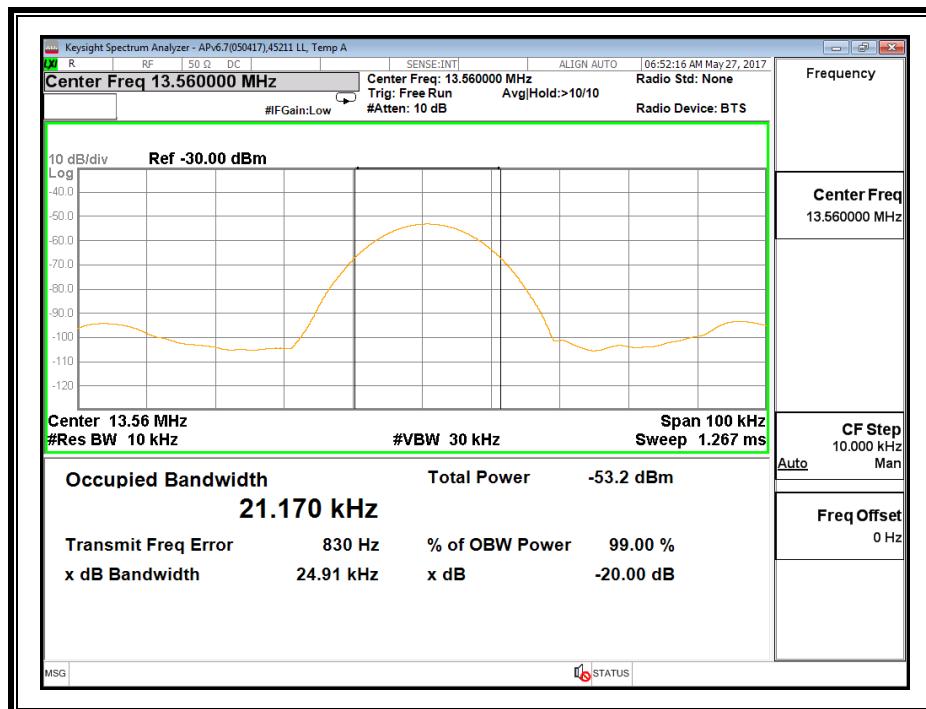
TEST PROCEDURE

§2.1049

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

RESULTS

Frequency (MHz)	20 dB Bandwidth (KHz)
13.56	21.17



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:	50818	Date:	5/10/17
------------	-------	--------------	---------

TEST INFORMATION

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply (Vdc)	Envir. Temp (°C)	Frequency Deviation Measured with Time Elapse								
		Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
5.0	50	13.5606579	2.744	13.5606542	3.021	13.5606506	3.283	13.5606496	3.357	± 100
5.0	40	13.5606448	3.713	13.5606443	3.748	13.5606438	3.789	13.5606433	3.823	± 100
5.0	30	13.5606729	1.639	13.5606725	1.671	13.5606721	1.697	13.5606715	1.744	± 100
5.0	20	13.5606951	0.000	13.5606948	0.023	13.5606945	0.045	13.5606943	0.062	± 100
5.0	10	13.5607063	-0.820	13.5607062	-0.818	13.5607062	-0.813	13.5607061	-0.810	± 100
5.0	0	13.5607064	-0.830	13.5607064	-0.830	13.5607064	-0.831	13.5607064	-0.831	± 100
5.0	-10	13.5607020	-0.509	13.5607040	-0.650	13.5607048	-0.712	13.5607051	-0.734	± 100
5.0	-20	13.5607199	-1.823	13.5607157	-1.517	13.5607096	-1.067	13.5607074	-0.905	± 100
4.25	20	13.5606379	4.222	13.5607873	-6.799	13.5607256	-2.243	13.5606219	5.404	± 100
5.75	20	13.5606374	4.255	13.5606781	1.254	13.5606106	6.232	13.5607264	-2.304	± 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 (μ V/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 (e) The provisions in §§ 15.31, 15.33, and 15.35 for 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.

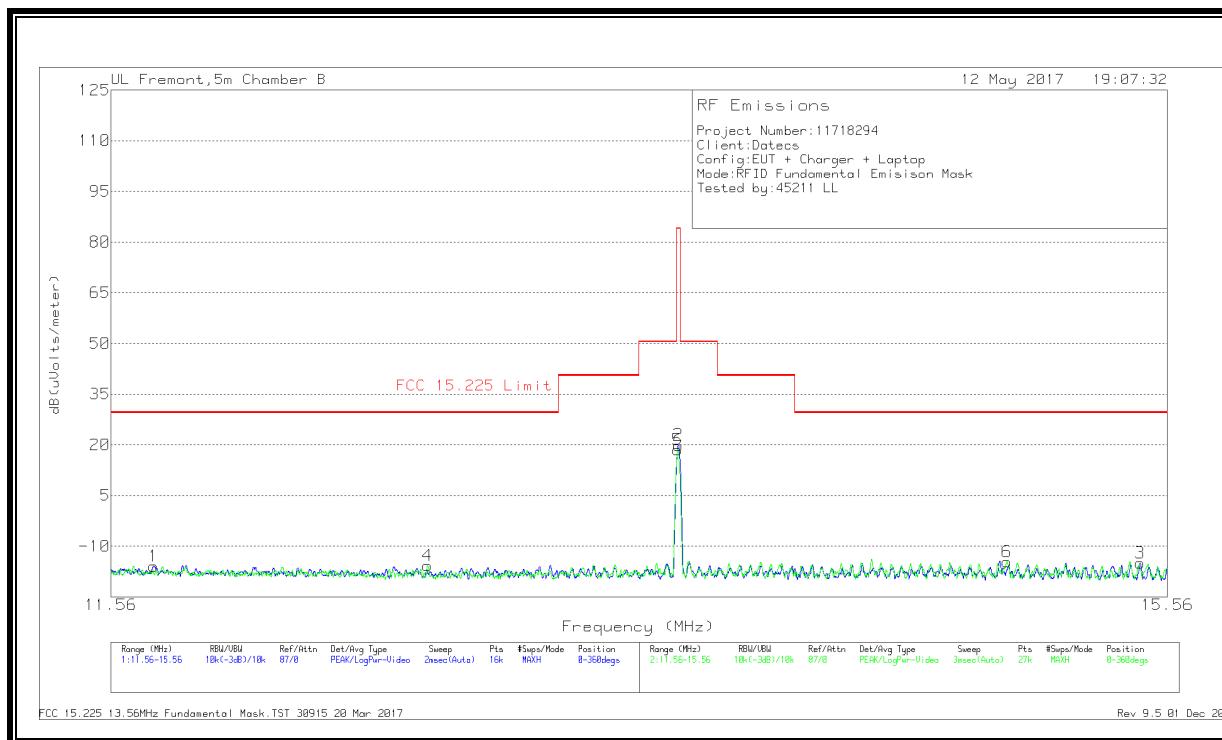
KDB 414788 OATS and Chamber Correlation Justification

- 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	11.70038	11.95	Pk	10.6	1.6	-40	-15.85	29.54	-45.39	0-360
4	12.63722	12.1	Pk	10.5	1.6	-40	-15.8	29.54	-45.34	0-360
5	13.55867	46.51	Pk	10.4	1.6	-40	18.51	84	-65.49	0-360
2	13.5605	47.92	Pk	10.4	1.6	-40	19.92	84	-64.08	0-360
6	14.87409	13.62	Pk	10.2	1.6	-40	-14.58	29.54	-44.12	0-360
3	15.44138	13.12	Pk	10.2	1.6	-40	-15.08	29.54	-44.62	0-360

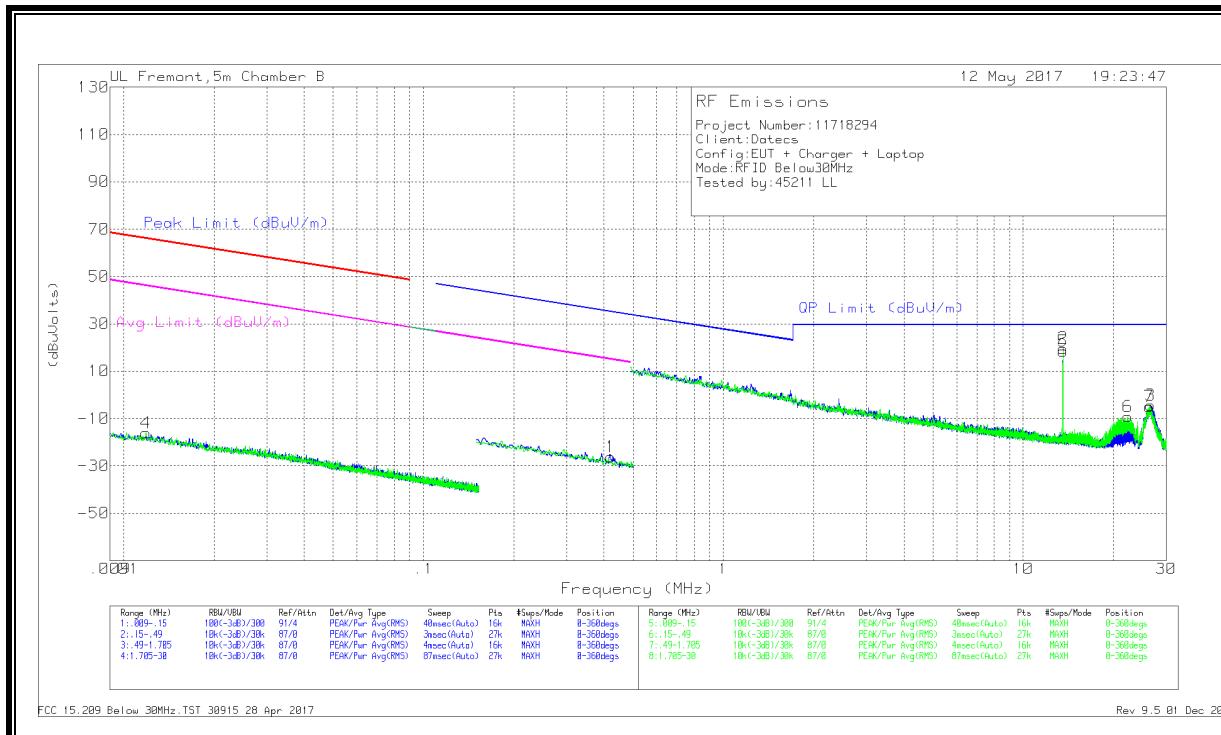
Pk - Peak detector

Fundamental

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)	Antenna Position
13.5603	47.71	Pk	10.4	1.6	-40	19.71	84	-64.29	41	Face On
13.5605	46.53	Pk	10.4	1.6	-40	18.53	84	-65.47	315	Face Off

Pk - Peak detector

8.1.2. SPURIOUS EMISSIONS (0.09 – 30 MHz)



Trace Markers

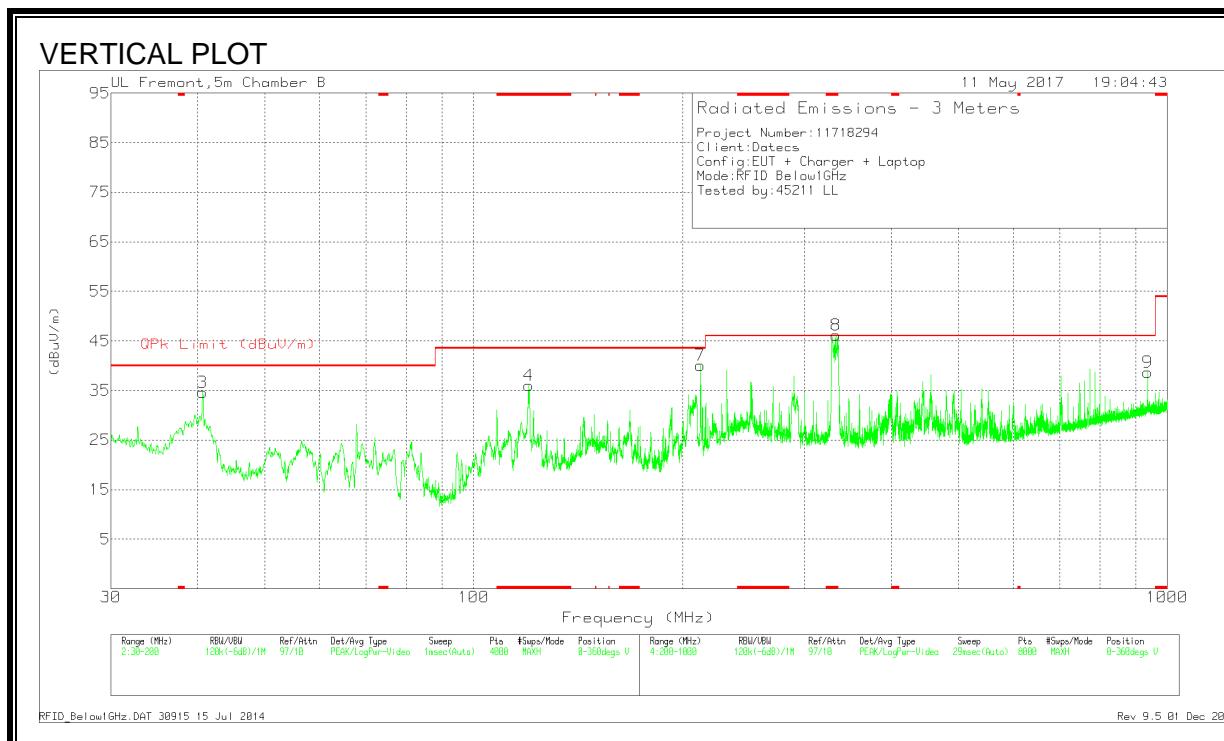
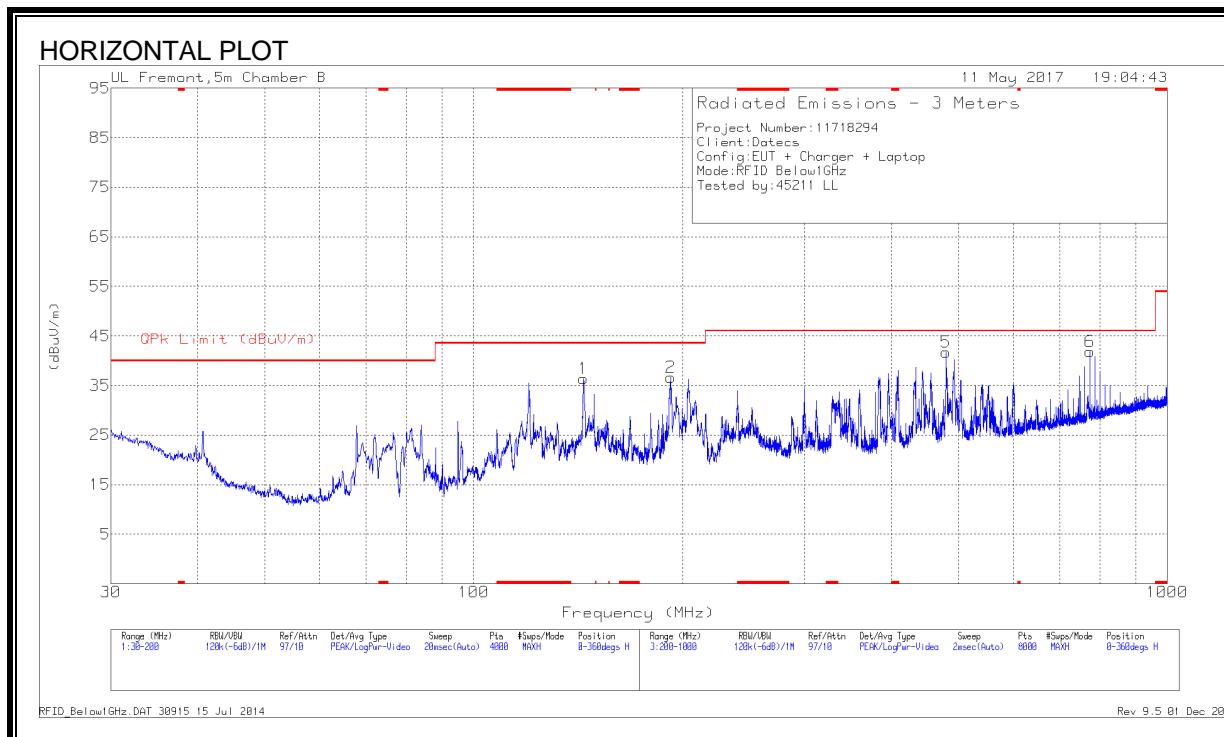
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	.01187	43.77	Pk	18.7	1.4	-80	-16.13	66.1	-82.23	46.1	-62.23	-	-	-	-	0-360
1	.42074	40.91	Pk	11.5	1.5	-80	-26.09	-	-	-	35.13	-61.22	15.13	-41.22	0-360	

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)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
2	**13.55998	47.64	Pk	10.4	1.6	-40	19.64	-	-	-	-	-	-	-	-	0-360
5	**13.55998	46.52	Pk	10.4	1.6	-40	18.52	-	-	-	-	-	-	-	-	0-360
6	22.32126	19.71	Pk	9.3	1.7	-40	-9.29	29.5	-38.79	-	-	-	-	-	-	0-360
7	26.36339	24.77	Pk	8.7	1.7	-40	-4.83	29.5	-34.33	-	-	-	-	-	-	0-360
3	26.60024	25.19	Pk	8.6	1.7	-40	-4.51	29.5	-34.01	-	-	-	-	-	-	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 T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 119.9958	46.05	Pk	17.7	-27.7	36.05	43.52	-7.47	0-360	100	V
8	* 332.8173	54.01	Pk	17.9	-25.7	46.21	46.02	.19	0-360	100	V
3	40.6703	45.87	Pk	17.5	-28.7	34.67	40	-5.33	0-360	100	V
1	144.0995	47.08	Pk	16.7	-27.4	36.38	43.52	-7.14	0-360	200	H
2	192.2645	48.02	Pk	15.5	-26.9	36.62	43.52	-6.9	0-360	200	H
7	212.3016	52.34	Pk	14.4	-26.7	40.04	43.52	-3.48	0-360	100	V
5	480.0364	45.99	Pk	21.6	-25.9	41.69	46.02	-4.33	0-360	200	H
6	772.9745	41.22	Pk	25	-24.4	41.82	46.02	-4.2	0-360	100	H
9	937.4959	35.08	Pk	26.8	-23.2	38.68	46.02	-7.34	0-360	100	V

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

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 332.8619	40.36	Qp	17.9	-25.7	32.56	46.02	-13.46	217	103	V
40.6938	44.12	Qp	17.5	-28.7	32.92	40	-7.08	130	108	V
212.4941	32.41	Qp	14.4	-26.7	20.11	43.52	-23.41	192	100	V
480.0282	39.17	Qp	21.6	-25.9	34.87	46.02	-11.15	230	199	H
772.963	41.22	Qp	25	-24.4	41.82	46.02	-4.2	170	106	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 μ 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 μ 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.

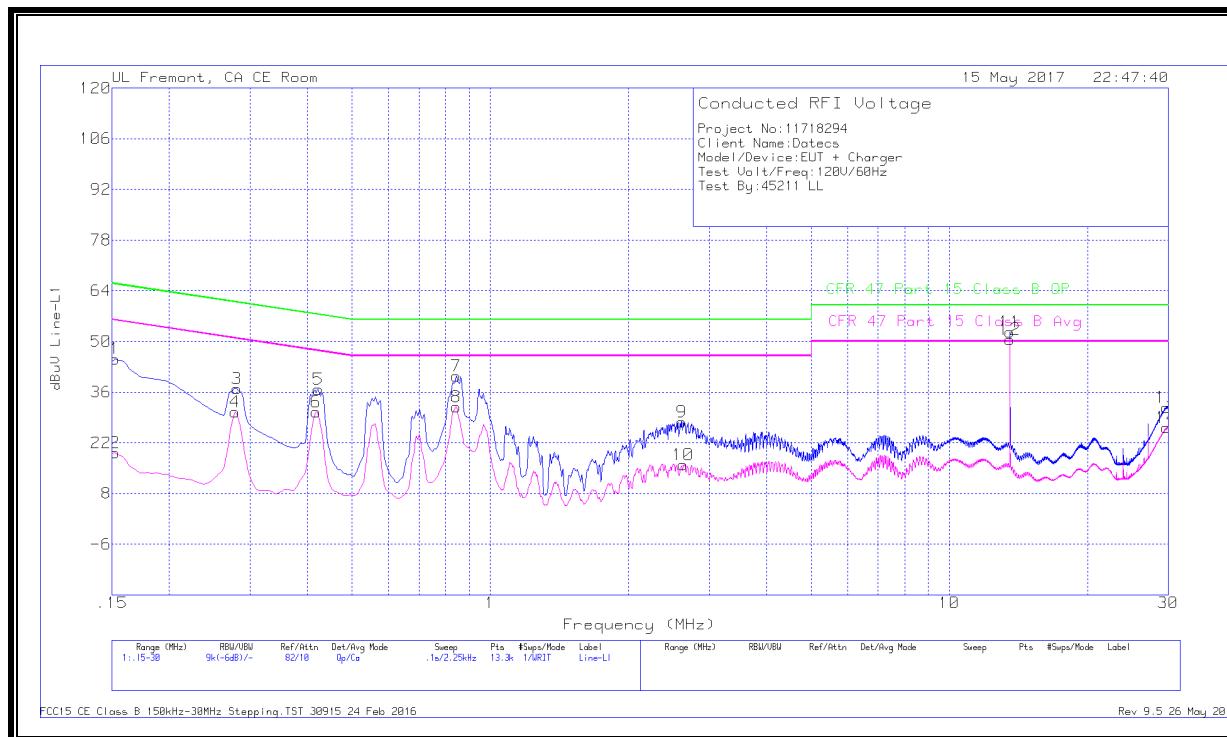
TEST PROCEDURE

ANSI C63.10

RESULTS

9.1. NORMAL OPERATION

LINE 1 RESULTS



Trace Markers

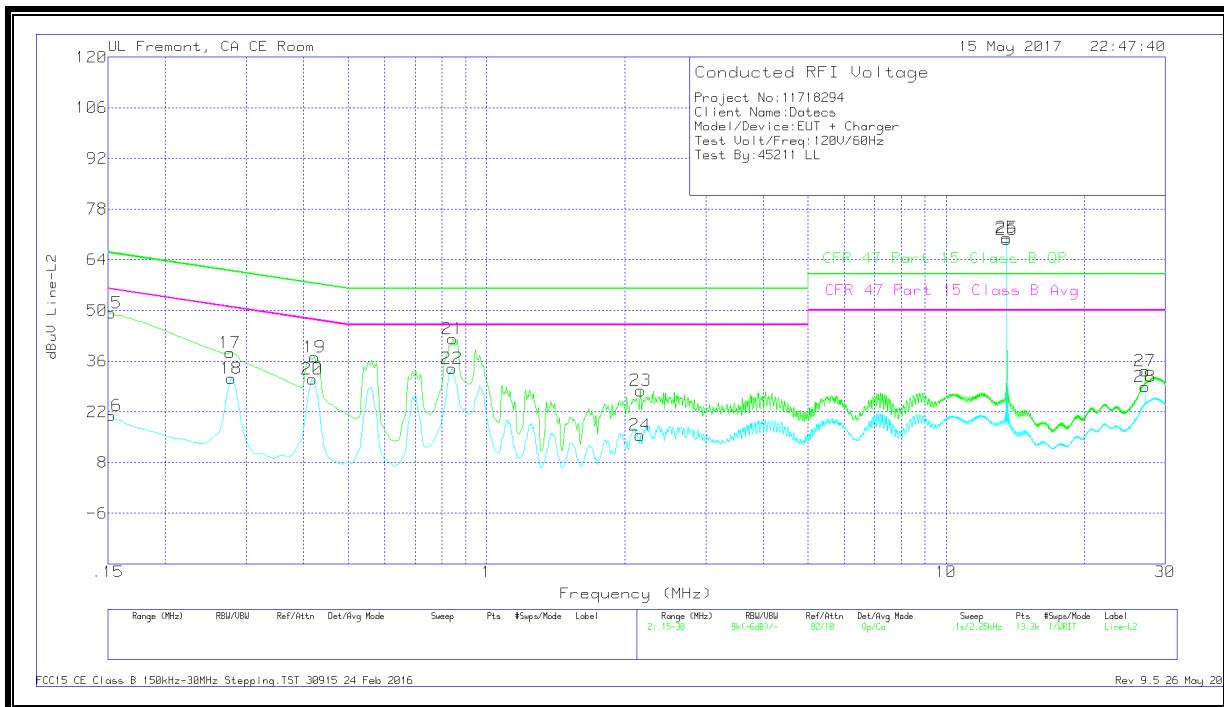
Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.15225	34.92	Qp	.1	.1	10.1	45.22	65.88	-20.66	-	-
2	.15225	8.95	Ca	.1	.1	10.1	19.25	-	-	55.88	-36.63
3	.2805	26.76	Qp	0	.1	10.1	36.96	60.8	-23.84	-	-
4	.27825	20.26	Ca	0	.1	10.1	30.46	-	-	50.87	-20.41
5	.42225	26.6	Qp	0	.1	10.1	36.8	57.4	-20.6	-	-
6	.41775	20.4	Ca	0	.1	10.1	30.6	-	-	47.49	-16.89
7	.843	30.24	Qp	0	.1	10.1	40.44	56	-15.56	-	-
8	.843	21.76	Ca	0	.1	10.1	31.96	-	-	46	-14.04
9	2.6115	17.53	Qp	0	.1	10.1	27.73	56	-28.27	-	-
10	2.634	5.66	Ca	0	.1	10.1	15.86	-	-	46	-30.14
11	**13.56	42.08	Qp	.1	.2	10.2	52.58	-	-	-	-
12	**13.56	40.1	Ca	.1	.2	10.2	50.6	-	-	-	-
13	29.70375	21.01	Qp	.1	.3	10.4	31.81	60	-28.19	-	-
14	29.71275	15.34	Ca	.1	.3	10.4	26.14	-	-	50	-23.86

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)	
15	.15225	39.16	Qp	0	0	10.1	49.26	65.88	-16.62	-	-	
16	.15225	10.8	Ca	0	0	10.1	20.9	-	-	55.88	-34.98	
17	.276	28.31	Qp	0	0	10.1	38.41	60.94	-22.53	-	-	
18	.27825	21.01	Ca	0	.1	10.1	31.21	-	-	50.87	-19.66	
19	.42225	26.97	Qp	0	.1	10.1	37.17	57.4	-20.23	-	-	
20	.41775	20.84	Ca	0	.1	10.1	31.04	-	-	47.49	-16.45	
21	.843	31.94	Qp	0	.1	10.1	42.14	56	-13.86	-	-	
22	.84075	23.73	Ca	0	.1	10.1	33.93	-	-	46	-12.07	
23	2.1615	17.64	Qp	0	.1	10.1	27.84	56	-28.16	-	-	
24	2.15925	5.3	Ca	0	.1	10.1	15.5	-	-	46	-30.5	
25	**13.56	59.67	Qp	.1	.2	10.2	70.17	-	-	-	-	
26	**13.56	59.19	Ca	.1	.2	10.2	69.69	-	-	-	-	
27	27.12075	22.34	Qp	.1	.3	10.5	33.24	60	-26.76	-	-	
28	27.12075	18.1	Ca	.1	.3	10.5	29	-	-	50	-21	

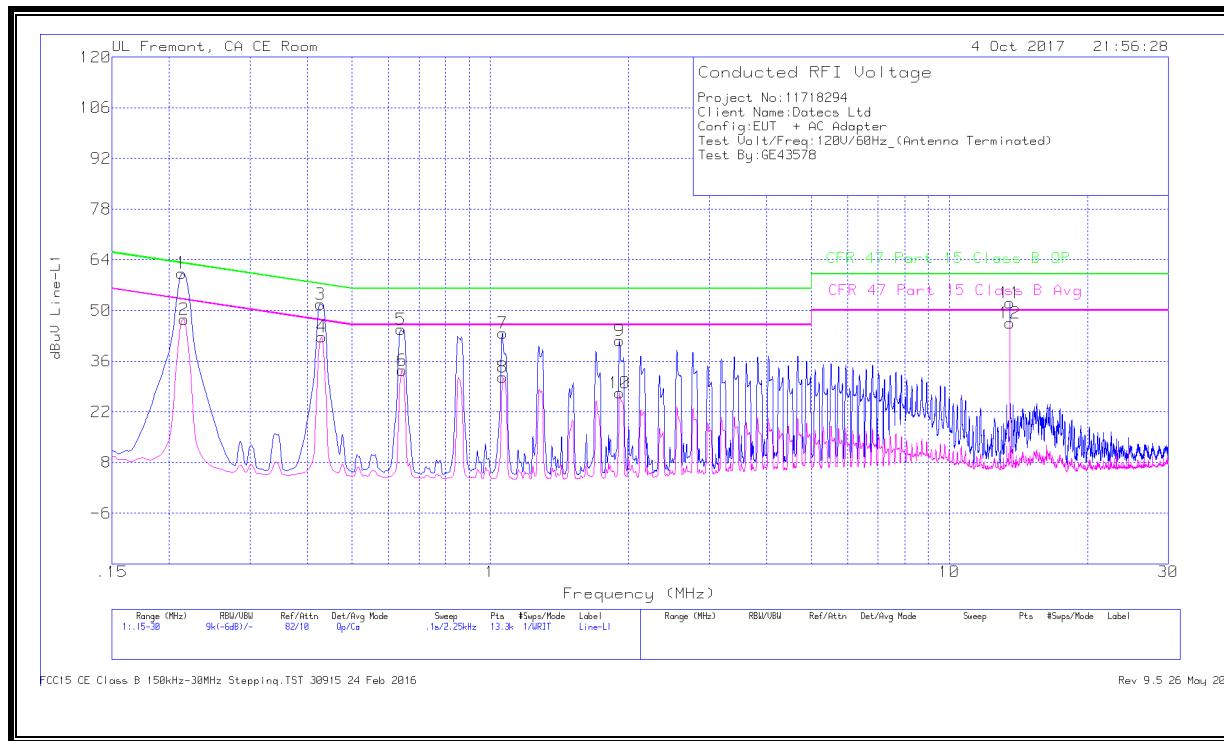
Qp - Quasi-Peak detector

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	.213	50.24	Qp	0	0	10.1	60.34	63.09	-2.75	-	-
2	.21525	37.46	Ca	0	0	10.1	47.56	-	-	53	-5.44
3	.42675	41.63	Qp	0	0	10.1	51.73	57.32	-5.59	-	-
4	.429	32.68	Ca	0	0	10.1	42.78	-	-	47.27	-4.49
5	.63825	34.61	Qp	0	0	10.1	44.71	56	-11.29	-	-
6	.64275	23.32	Ca	0	0	10.1	33.42	-	-	46	-12.58
7	1.0635	33.52	Qp	0	.1	10.1	43.72	56	-12.28	-	-
8	1.06575	21.36	Ca	0	.1	10.1	31.56	-	-	46	-14.44
9	1.914	31.38	Qp	0	.1	10.1	41.58	56	-14.42	-	-
10	1.914	17.03	Ca	0	.1	10.1	27.23	-	-	46	-18.77
11	**13.56	41.59	Qp	.1	.2	10.2	52.09	60	-7.91	-	-
12	**13.56	36.01	Ca	.1	.2	10.2	46.51	-	-	50	-3.49

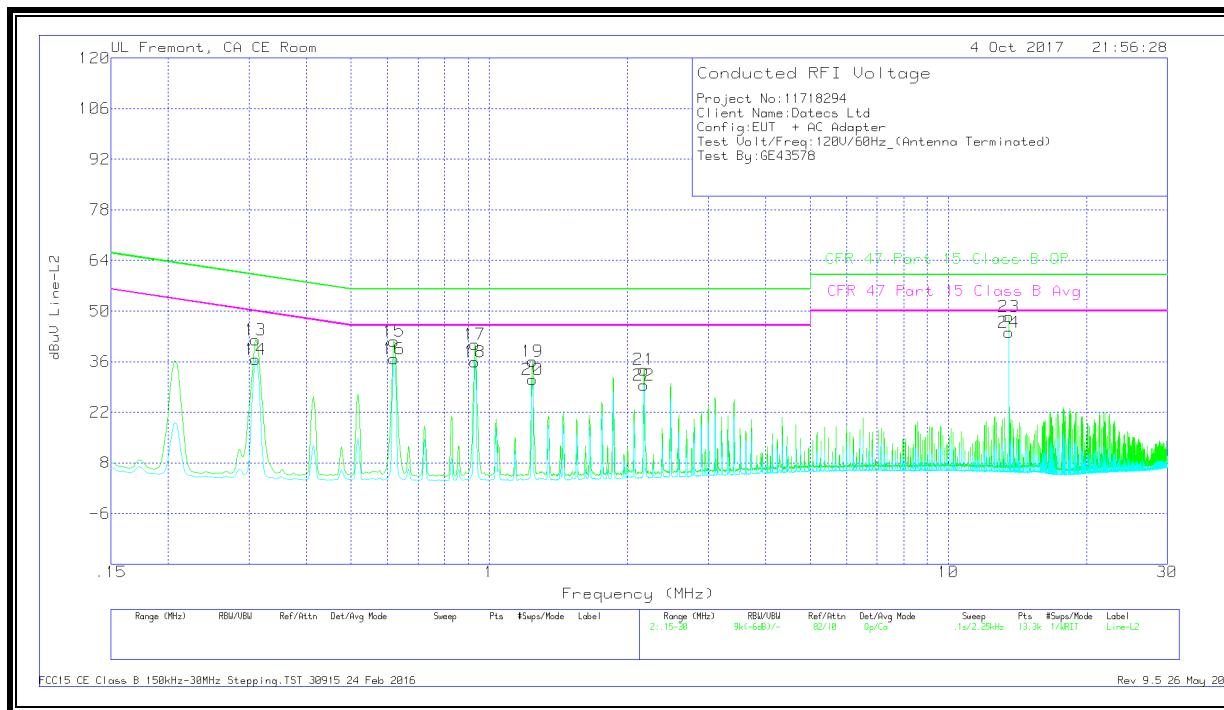
Qp - Quasi-Peak detector

Ca - CISPR average detection

** - Fundamental frequency, 13.56MHz.

Note: From KDB 174176 D01 Line Conducted FAQ v01r01, the terminated result is within the transmitter's fundamental emission band.

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	.30975	31.97	Qp	0	0	10.1	42.07	59.98	-17.91	-	-
14	.30975	26.47	Ca	0	0	10.1	36.57	-	-	49.98	-13.41
15	.62025	31.61	Qp	0	0	10.1	41.71	56	-14.29	-	-
16	.62025	26.7	Ca	0	0	10.1	36.8	-	-	46	-9.2
17	.93075	30.63	Qp	0	.1	10.1	40.83	56	-15.17	-	-
18	.93075	25.68	Ca	0	.1	10.1	35.88	-	-	46	-10.12
19	1.24125	25.9	Qp	0	.1	10.1	36.1	56	-19.9	-	-
20	1.24125	20.79	Ca	0	.1	10.1	30.99	-	-	46	-15.01
21	2.17275	23.55	Qp	0	.1	10.1	33.75	56	-22.25	-	-
22	2.17275	19.34	Ca	0	.1	10.1	29.54	-	-	46	-16.46
23	**13.56	37.98	Qp	.1	.2	10.2	48.48	60	-11.52	-	-
24	**13.56	33.52	Ca	.1	.2	10.2	44.02	-	-	50	-5.98

Qp - Quasi-Peak detector

Ca - CISPR average detection

** - Fundamental frequency, 13.56MHz.

Note: From KDB 174176 D01 Line Conducted FAQ v01r01, the terminated result is within the transmitter's fundamental emission band.