



**FCC 47 CFR PART 15 SUBPART C
INDUSTRY (ISED) CANADA RSS-210 ISSUE 9**

CERTIFICATION TEST REPORT

FOR

AIR PURIFIER

MODEL NUMBER: 120539

FCC ID: 2ALC4120539

IC: 22487-120539

REPORT NUMBER: R11650973-E1

ISSUE DATE: 2017-05-01

Prepared for
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NVLAP LAB CODE 200246-0

Revision History

<u>Ver.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
1	2017-05-01	Initial Issue	Brian Kiewra

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY.....	6
5. EQUIPMENT UNDER TEST.....	7
5.1. DESCRIPTION OF EUT	7
5.2. MAXIMUM OUTPUT POWER.....	7
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	7
5.4. SOFTWARE AND FIRMWARE.....	7
5.5. WORST-CASE CONFIGURATION AND MODE.....	7
5.6. MODIFICATIONS	7
5.7. DESCRIPTION OF TEST SETUP.....	8
6. TEST AND MEASUREMENT EQUIPMENT	10
7. OCCUPIED BANDWIDTH	12
8. RADIATED EMISSION TEST RESULTS.....	13
8.1. LIMITS AND PROCEDURE.....	13
8.1.1. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.009 – 30 MHz)	15
8.1.2. TX SPURIOUS EMISSION 30 TO 1000 MHz	18
9. AC MAINS LINE CONDUCTED EMISSIONS	19
10. FREQUENCY STABILITY.....	24
11. SETUP PHOTOS	27

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Access Business Group, LLC
7575 Fulton St. E.
Ada, MI 49355-0001

EUT DESCRIPTION: Air Purifier

MODEL: 120539

SERIAL NUMBER: Non-Serialized

DATE TESTED: 2017-04-04 and 2017-05-01

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Pass
INDUSTRY CANADA RSS-210 Issue 9	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

UL LLC 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 LLC 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.

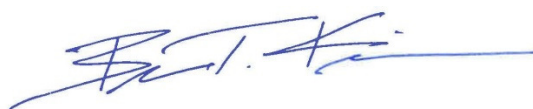
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this 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, or any agency of the U.S. Government.

Approved & Released
For UL LLC By:



Jeffrey Moser
EMC Program Manager
UL – Consumer Technology Division

Prepared By:



Brian Kiewra
EMC Engineer
UL – Consumer Technology Division

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 4, and RSS-210 Issue 9.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Dr., Research Triangle Park, NC 27709, USA.

12 Laboratory Dr., RTP, NC 27709
<input type="checkbox"/> Chamber A
<input type="checkbox"/> Chamber C

2800 Suite B Perimeter Park Dr., Morrisville, NC 27560
<input type="checkbox"/> Chamber NORTH
<input checked="" type="checkbox"/> Chamber SOUTH

The onsite chambers are covered under Industry (ISED) Canada company address code 2180C with site numbers 2180C -1 through 2180C-4, respectively.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0. The full scope of accreditation can be viewed at <http://www.nist.gov/nvlap/>.

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
RF output power, conducted	±0.45 dB
Power Spectral Density, conducted	±1.50 dB
Unwanted Emissions, conducted	±2.94 dB
All emissions, radiated	±5.36 dB
Conducted Emissions (0.150 – 30MHz)	±3.65 dB
Temperature	±0.07 °C
Humidity	±2.26 %
DC and Low Frequency Voltages	±1.27 %

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an RFID and Bluetooth air purifier.

5.2. MAXIMUM OUTPUT POWER

The testing was performed at 3 meter. The transmitter maximum E-field at 30 meter distance is 25.97 dBuV/m which has been converted from the 3 meter data.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a loop antenna.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was v1.1.7094.

5.5. 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 EUT is only intended to be operated in one orientation, standing upright. EUT also only supports one data rate of 26.48kb/s. Therefore all testing was performed in this orientation and at this data rate.

5.6. MODIFICATIONS

No modifications were made during testing.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
None				

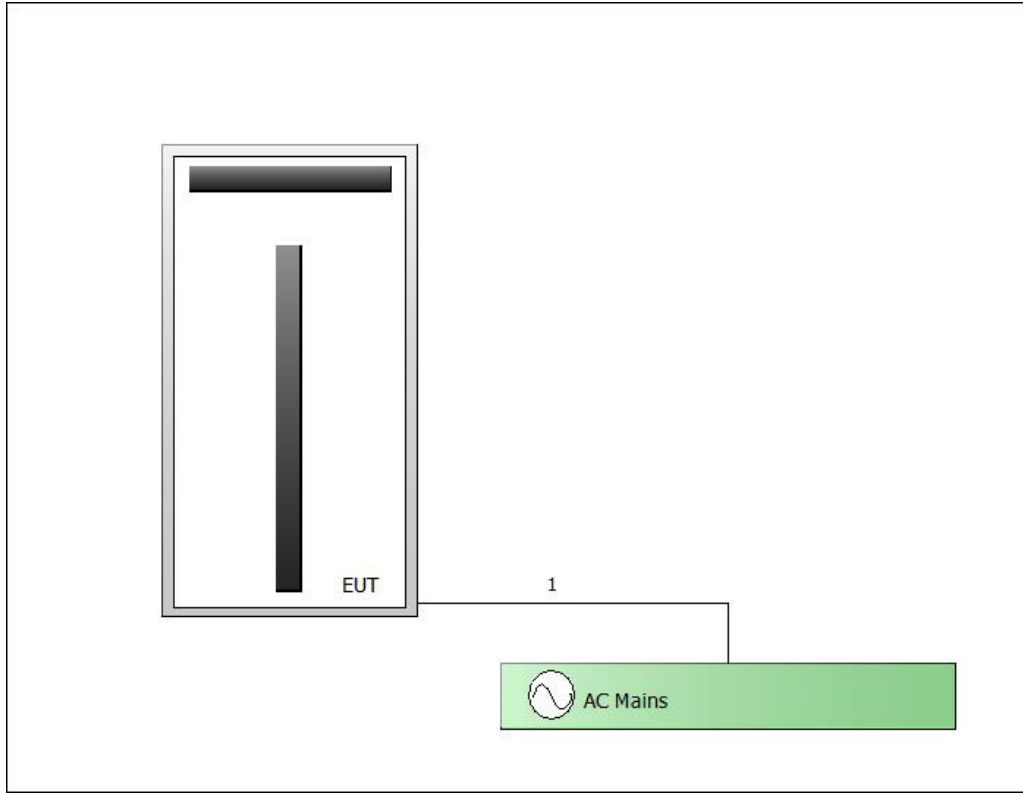
I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	AC	AC Mains	>3m	None

TEST SETUP

The EUT is installed as a standalone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	(Loop Ant.)			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2016-12-28	2017-12-31
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2016-06-07	2017-06-30
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2016-10-04	2017-10-04
S-SAC02	Gain-loss string: 30-1000MHz	Various	Various	2016-06-26	2017-06-30
	Receiver & Software				
SA0026	Spectrum Analyzer	Agilent	N9030A	2017-02-17	2018-02-28
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
SN 161024887	Environmental Meter	Fisher Scientific	15-077-963	2016-12-23	2018-12-23

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL076	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3476-240	2016-06-15	2017-06-30
SN 161024885	Environmental Meter	Fisher Scientific	15-077-963	2016-12-23	2018-12-23
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2016-08-24	2017-08-24
PRE0101521 (75141)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2016-08-23	2017-08-23
TL001	Transient Limiter, 0.009-30MHz	Com-Power	LIT-930A	2016-06-09	2017-06-30
PS214	AC Power Source	Elgar	CW2501M (s/n 1523A02396)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Miscellaneous (if needed)				
MM0167	Multi-meter	Agilent	U1232A	2016-10-07	2017-10-31

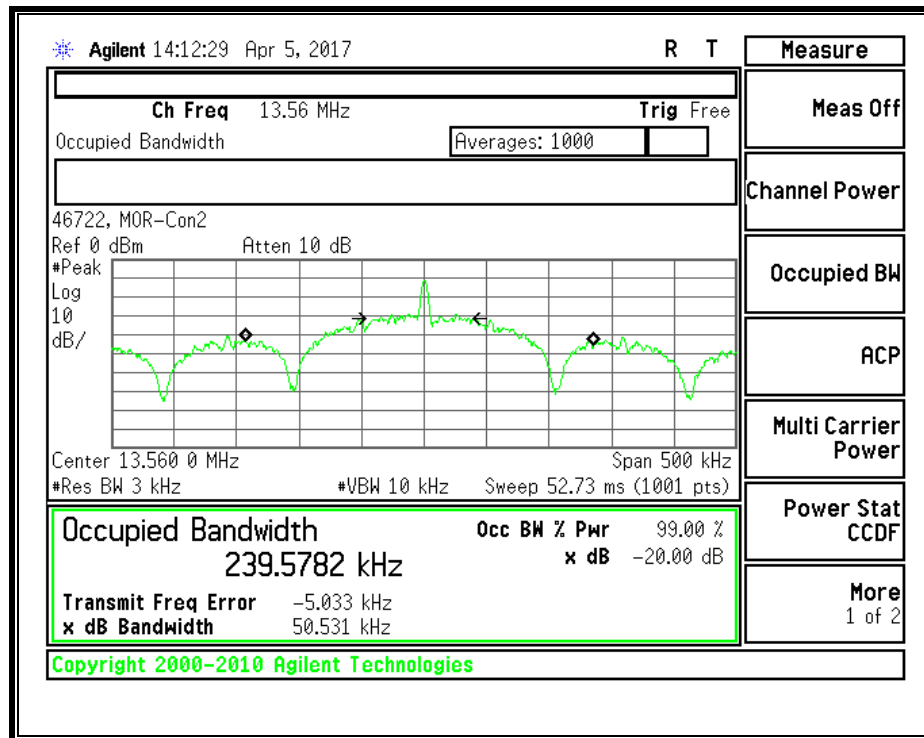
7. OCCUPIED BANDWIDTH

LIMITS

For reporting purposes only
 Tested per ANSI C63.10 (6.9.2, 6.9.3) and FCC 15.215, RSS-GEN Section 6.6

RESULTS

Channel	Frequency (MHz)	20dB Bandwidth (KHz)	99% Bandwidth (kHz)
Low	13.56	50.53	239.58



TEST INFORMATION

Date: 2017-04-05
 Project No: 11650973
 Tester: John Manser

8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMIT

§15.225

IC RSS-210, Annex B.6 (Transmitter)

(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.

Formula for converting the field strength from uV/m to dBuV/m is:

Limit (dBuV/m) = 20 log limit (uV/m)

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.

TEST PROCEDURE

ANSI C63.10-2013

The EUT is an intentional radiator that incorporates a digital device. The highest fundamental frequency generated or used in the device is 13.56 MHz. The frequency range was investigated from 0.15 MHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater (1000MHz)

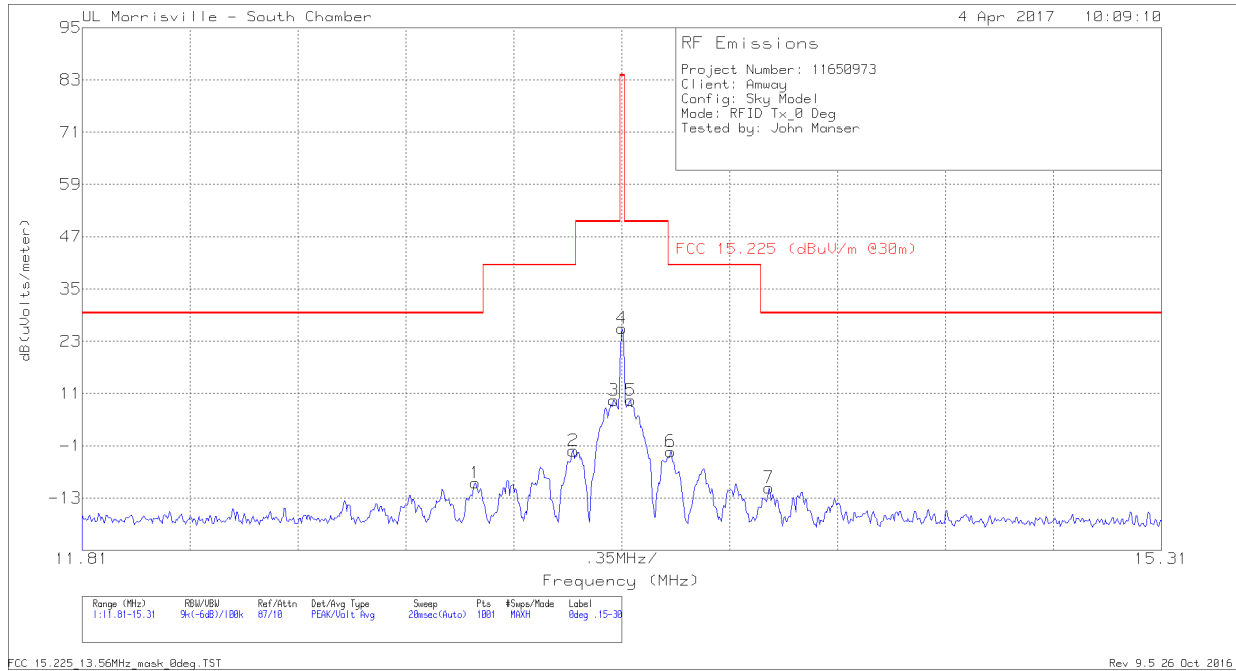
KDB 937606 OATS and Chamber Correlation Justification

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

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

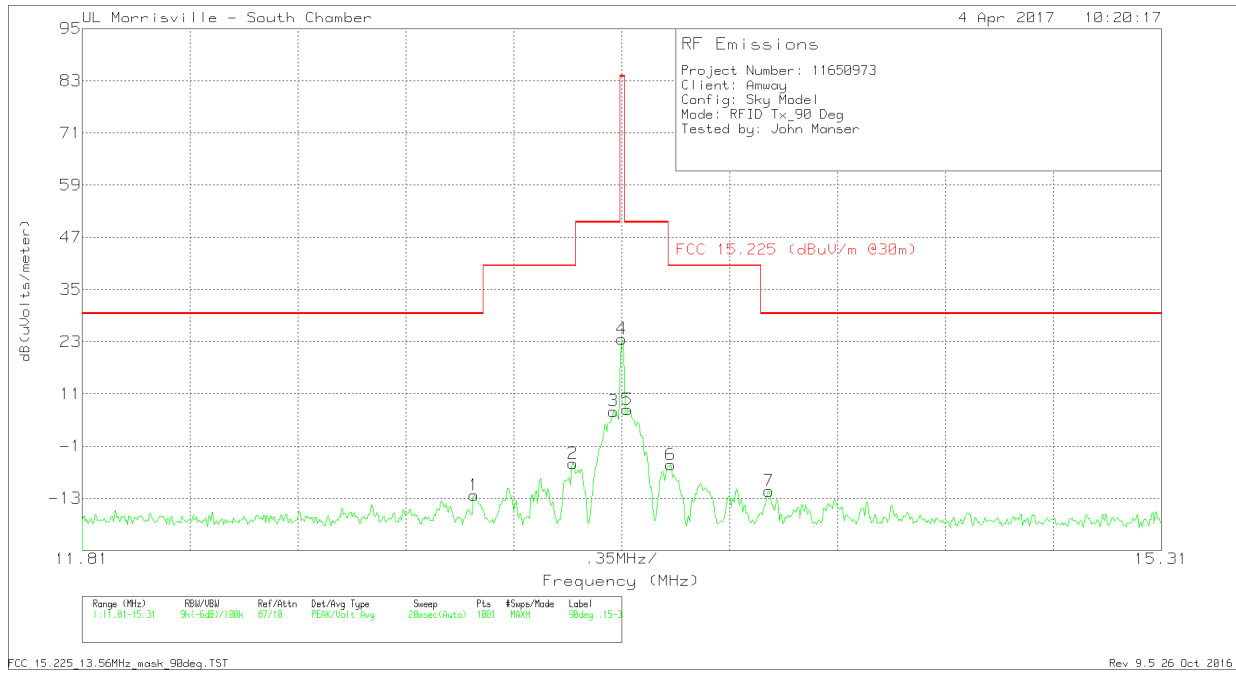
8.1.1. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.009 – 30 MHz)

15.225 Fundamental Emission Mask



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.225 (dBuV/m @30m)	Margin (dB)	Azimuth (Degs)
1	13.084	19.45	Pk	10.4	.6	-40	-9.55	29.5	-39.05	1
2	13.4025	26.86	Pk	10.4	.6	-40	-2.14	40.5	-42.64	1
3	13.53375	38.46	Pk	10.4	.6	-40	9.46	50.5	-41.04	1
4	13.56	54.97	Pk	10.4	.6	-40	25.97	84	-58.03	1
5	13.588	38.41	Pk	10.4	.6	-40	9.41	50.5	-41.09	1
6	13.7175	26.68	Pk	10.4	.6	-40	-2.32	40.5	-42.82	1
7	14.036	18.37	Pk	10.4	.6	-40	-10.63	29.5	-40.13	1

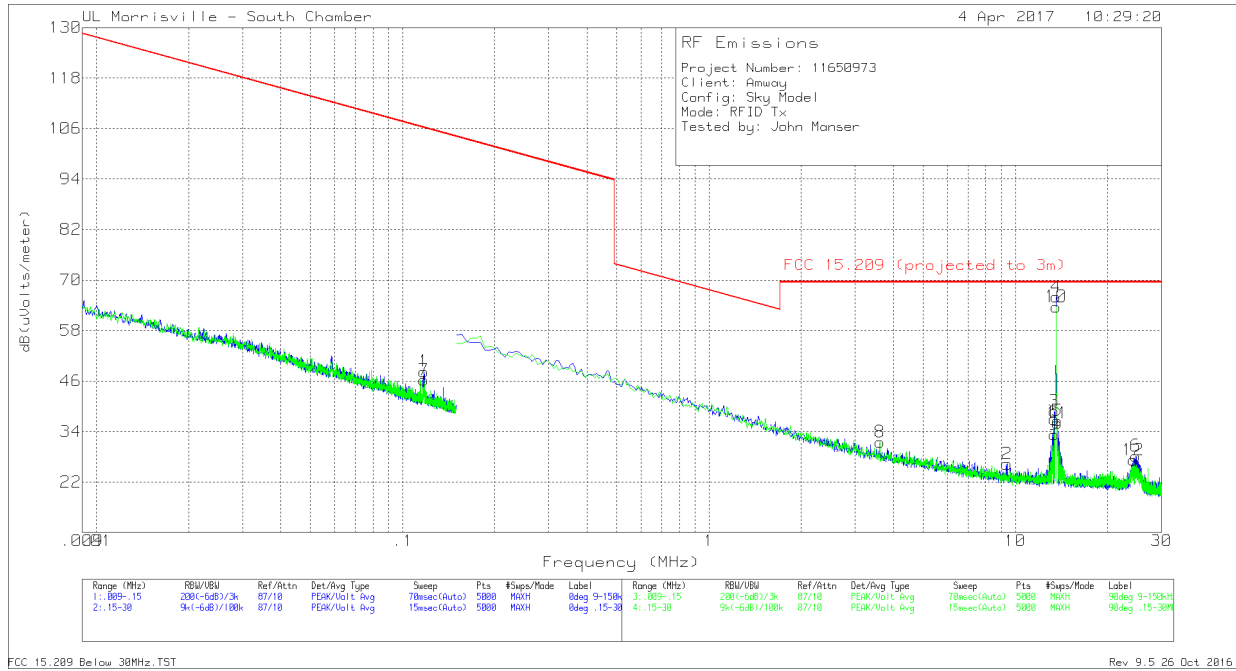
Pk - Peak detector



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.225 (dBuV/m @30m)	Margin (dB)	Azimuth (Degs)
1	13.0805	16.68	Pk	10.4	.6	-40	-12.32	29.5	-41.82	250
2	13.40075	24.01	Pk	10.4	.6	-40	-4.99	40.5	-45.49	250
3	13.532	36.04	Pk	10.4	.6	-40	7.04	50.5	-43.46	250
4	13.56	52.64	Pk	10.4	.6	-40	23.64	84	-60.36	250
5	13.5775	36.39	Pk	10.4	.6	-40	7.39	50.5	-43.11	250
6	13.7175	23.73	Pk	10.4	.6	-40	-5.27	40.5	-45.77	250
7	14.036	17.67	Pk	10.4	.6	-40	-11.33	29.5	-40.83	250

Pk - Peak detector

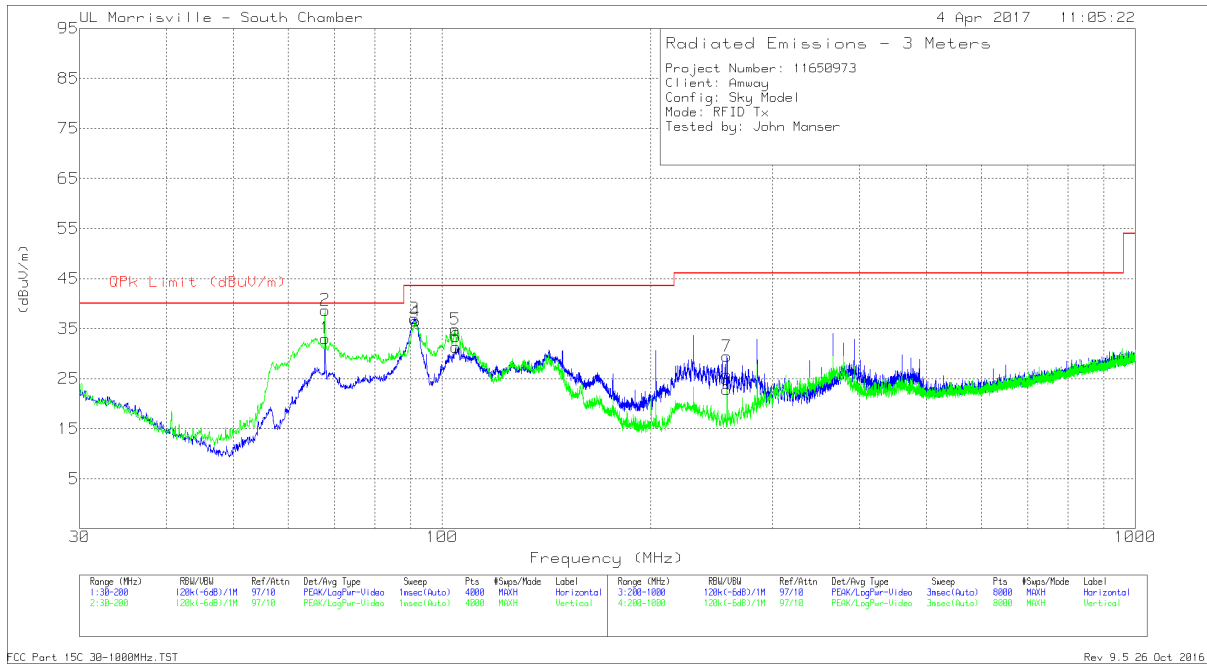
15.209 Spurious Emissions



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 (projected to 3m)	Margin (dB)	Azimuth (Degs)
0 Deg_Face On									
1	.11756	37.38	Pk	10.8	.1	48.28	106.2	-57.92	0-360
2	9.38714	15.38	Pk	10.4	.5	26.28	69.54	-43.26	0-360
3	13.39965	27.83	Pk	10.4	.6	38.83	69.54	-30.71	0-360
5	13.71611	25.56	Pk	10.4	.6	36.56	69.54	-32.98	0-360
6	24.72067	18.31	Pk	9.1	.8	28.21	69.54	-41.33	0-360
90 Deg_Face Off									
7	.11747	35.36	Pk	10.8	.1	46.26	106.21	-59.95	0-360
8	3.61318	20.11	Pk	11.1	.3	31.51	69.54	-38.03	0-360
9	13.39965	22.33	Pk	10.4	.6	33.33	69.54	-36.21	0-360
11	13.7191	24.97	Pk	10.4	.6	35.97	69.54	-33.57	0-360
12	24.21313	17.28	Pk	9.2	.8	27.28	69.54	-42.26	0-360

Pk - Peak detector

8.1.2. TX SPURIOUS EMISSION 30 TO 1000 MHz



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	* 257.6377	42.19	Qp	16.6	-29.8	28.99	46.02	-17.03	132	103	H
8	* 257.6363	35.86	Qp	16.6	-29.8	22.66	46.02	-23.36	189	116	V
1	67.7923	52.06	Pk	12.3	-31.3	33.06	40	-6.94	0-360	299	H
2	67.8048	56.35	Qp	12.3	-31.3	37.35	40	-2.65	26	104	V
3	91.1733	56.35	Pk	11.8	-31.1	37.05	43.52	-6.47	0-360	198	H
4	91.641	55.7	Pk	11.9	-31.1	36.5	43.52	-7.02	0-360	101	V
5	104.4368	50.16	Pk	15.7	-31	34.86	43.52	-8.66	0-360	101	V
6	104.6918	46.51	Pk	15.8	-31	31.31	43.52	-12.21	0-360	299	H

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

Pk - Peak detector

Qp - Quasi-Peak detector

9. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

§15.207
IC RSS-GEN, Section 7.2.2

(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.

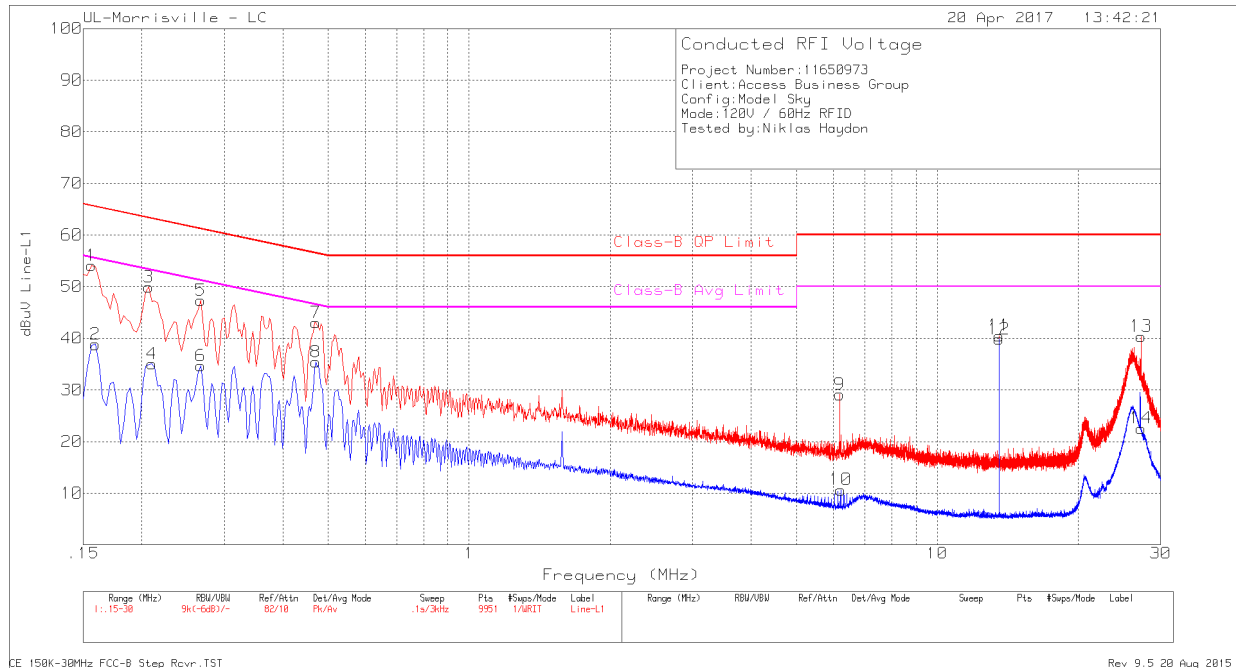
TEST PROCEDURE

ANSI C63.10

RESULTS

No non-compliance noted:

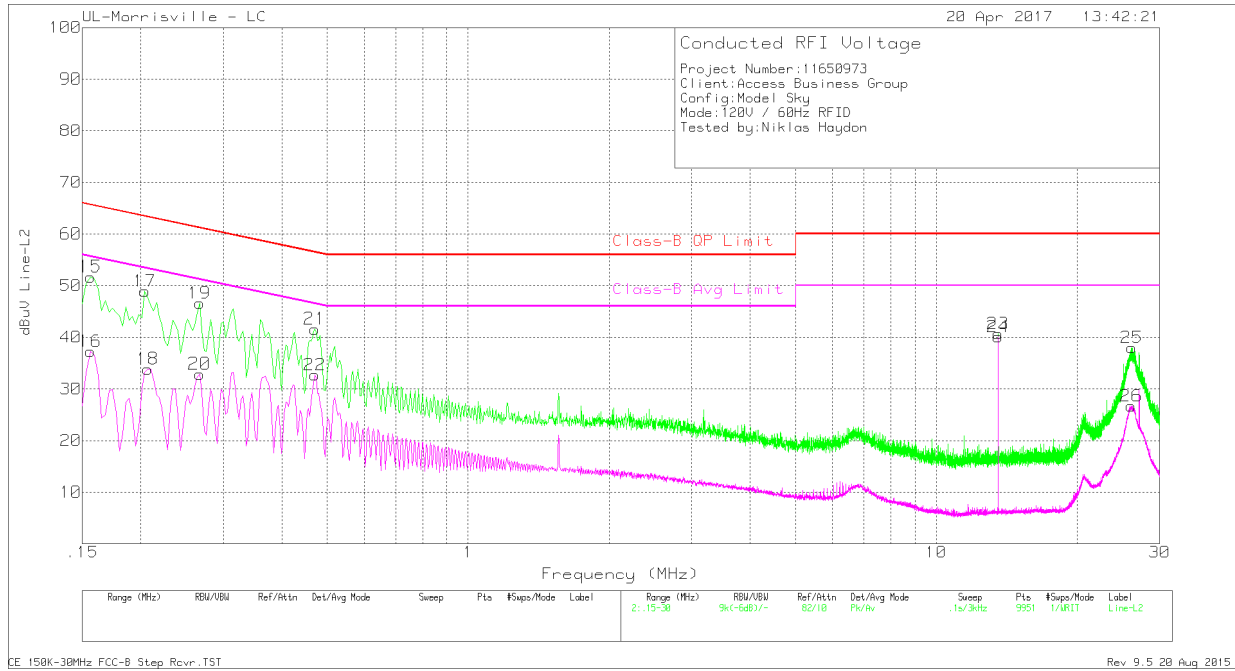
LINE 1 RESULTS - TERMINATED



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	Class-B QP Limit	Margin (dB)	Class-B Avg Limit	Margin (dB)
1	.156	43.93	Pk	.2	10	54.13	65.67	-11.54	-	-
2	.159	28.62	Av	.2	10	38.82	-	-	55.52	-16.7
3	.207	39.82	Pk	.1	10	49.92	63.32	-13.4	-	-
4	.21	24.96	Av	.1	10	35.06	-	-	53.21	-18.15
5	.267	37.24	Pk	.1	10	47.34	61.21	-13.87	-	-
6	.267	24.61	Av	.1	10	34.71	-	-	51.21	-16.5
7	.471	33.05	Pk	0	10	43.05	56.5	-13.45	-	-
8	.471	25.43	Av	0	10	35.43	-	-	46.5	-11.07
9	6.192	18.81	Pk	.1	10.2	29.11	60	-30.89	-	-
10	6.219	.36	Av	.1	10.2	10.66	-	-	50	-39.34
11	13.56	30.02	Pk	.1	10.4	40.52	60	-19.48	-	-
12	13.56	29.37	Av	.1	10.4	39.87	-	-	50	-10.13
13	27.279	29.39	Pk	.3	10.7	40.39	60	-19.61	-	-
14	27.219	11.58	Av	.3	10.7	22.58	-	-	50	-27.42

Pk - Peak detector
 Av - Average detection

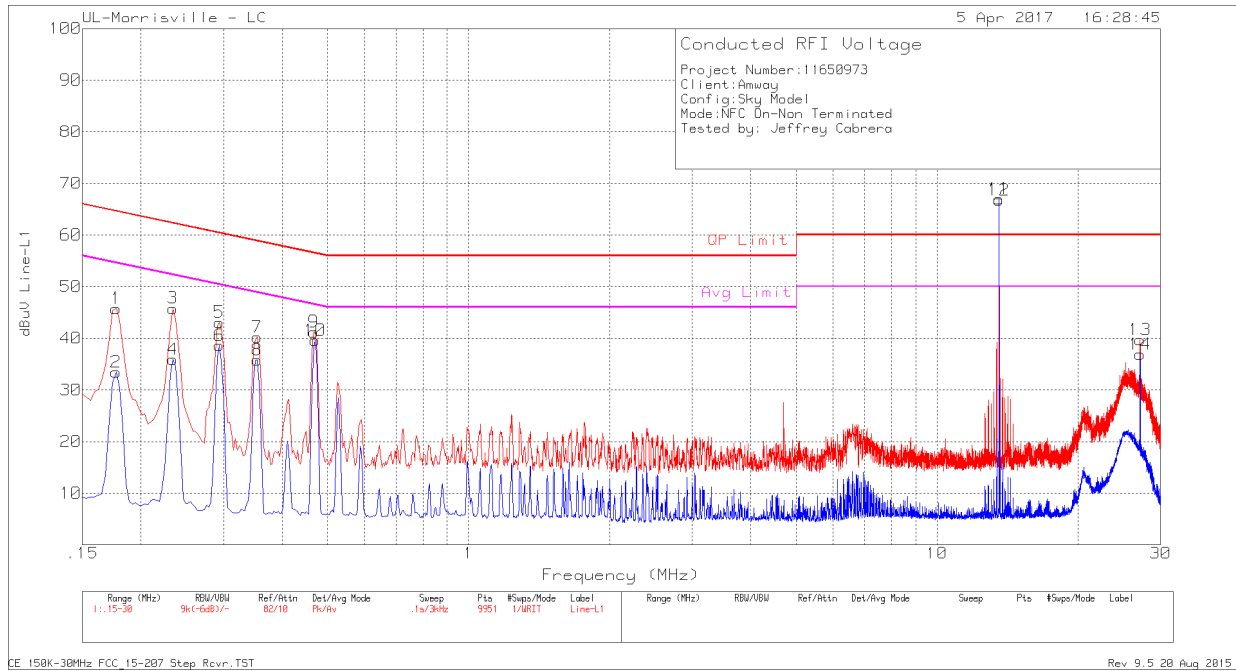
LINE 2 RESULTS - TERMINATED



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	Class-B QP Limit	Margin (dB)	Class-B Avg Limit	Margin (dB)
15	.156	41.5	Pk	.2	10	51.7	65.67	-13.97	-	-
16	.156	27.08	Av	.2	10	37.28	-	-	55.67	-18.39
17	.204	38.83	Pk	.1	10	48.93	63.45	-14.52	-	-
18	.207	23.76	Av	.1	10	33.86	-	-	53.32	-19.46
19	.267	36.51	Pk	.1	10	46.61	61.21	-14.6	-	-
20	.267	22.79	Av	.1	10	32.89	-	-	51.21	-18.32
21	.471	31.52	Pk	.1	10	41.62	56.5	-14.88	-	-
22	.471	22.62	Av	.1	10	32.72	-	-	46.5	-13.78
23	13.56	30.2	Pk	.1	10.4	40.7	60	-19.3	-	-
24	13.56	29.62	Av	.1	10.4	40.12	-	-	50	-9.88
25	26.154	27	Pk	.3	10.7	38	60	-22	-	-
26	26.106	15.72	Av	.3	10.7	26.72	-	-	50	-23.28

Pk - Peak detector
 Av - Average detection

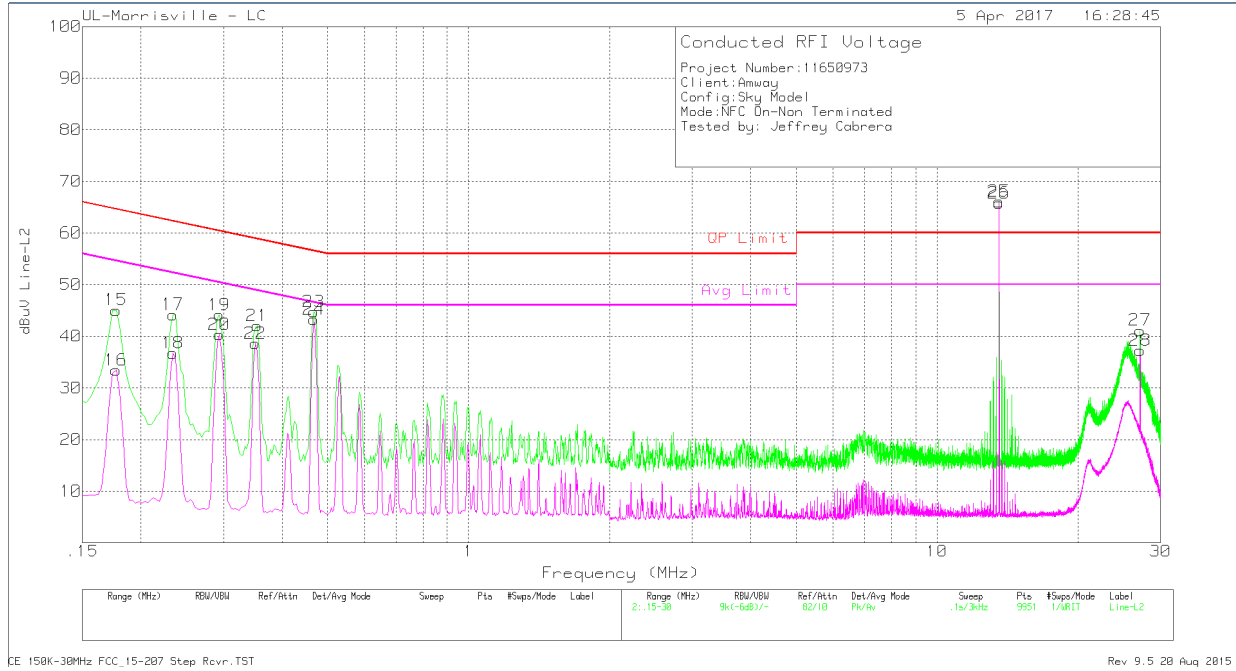
LINE 1 RESULTS - UNTERMINATED



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit	Margin (dB)	Avg Limit	Margin (dB)
1	.177	35.58	Pk	.2	10	45.78	64.63	-18.85	-	-
2	.177	23.23	Av	.2	10	33.43	-	-	54.63	-21.2
3	.234	35.71	Pk	.1	10	45.81	62.31	-16.5	-	-
4	.234	25.84	Av	.1	10	35.94	-	-	52.31	-16.37
5	.294	32.98	Pk	.1	10	43.08	60.41	-17.33	-	-
6	.294	28.53	Av	.1	10	38.63	-	-	50.41	-11.78
7	.354	30.14	Pk	.1	10	40.24	58.87	-18.63	-	-
8	.354	25.69	Av	.1	10	35.79	-	-	48.87	-13.08
9	.468	31.23	Pk	0	10	41.23	56.55	-15.32	-	-
10	.471	29.56	Av	0	10	39.56	-	-	46.5	-6.94
11	13.56	56.48	Pk	.1	10.4	66.98	60	6.98	-	-
12	13.56	56.27	Av	.1	10.4	66.77	-	-	50	16.77
13	27.12	28.71	Pk	.3	10.7	39.71	60	-20.29	-	-
14	27.12	25.91	Av	.3	10.7	36.91	-	-	50	-13.09

Pk - Peak detector
 Av - Average detection

LINE 2 RESULTS - UNTERMINATED



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit	Margin (dB)	Avg Limit	Margin (dB)
15	.177	34.87	Pk	.2	10	45.07	64.63	-19.56	-	-
16	.177	23.23	Av	.2	10	33.43	-	-	54.63	-21.2
17	.234	34.09	Pk	.1	10	44.19	62.31	-18.12	-	-
18	.234	26.63	Av	.1	10	36.73	-	-	52.31	-15.58
19	.294	34.05	Pk	.1	10	44.15	60.41	-16.26	-	-
20	.294	30.21	Av	.1	10	40.31	-	-	50.41	-10.1
21	.354	31.92	Pk	.1	10	42.02	58.87	-16.85	-	-
22	.351	28.49	Av	.1	10	38.59	-	-	48.94	-10.35
23	.468	34.64	Pk	.1	10	44.74	56.55	-11.81	-	-
24	.468	33.23	Av	.1	10	43.33	-	-	46.55	-3.22
25	13.56	55.6	Pk	.1	10.4	66.1	60	6.1	-	-
26	13.56	55.25	Av	.1	10.4	65.75	-	-	50	15.75
27	27.12	30.14	Pk	.3	10.7	41.14	60	-18.86	-	-
28	27.12	26.27	Av	.3	10.7	37.27	-	-	50	-12.73

Pk - Peak detector
 Av - Average detection

10. 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.

RSS-210 Annex B.6: Carrier frequency stability shall be maintained to $\pm 0.01\%$ (± 100 ppm).

TEST PROCEDURE

ANSI C63.10

TEST INFORMATION

Date: 2017-04-04

Project No: 11650973

Tester: Jeffrey Cabrera

RESULTS

No non-compliance noted.

Startup

Reference Frequency: EUT Channel 13.56 MHz @ 20°C				
Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
115.00	50	13.5618000	0.000	± 100
115.00	40	13.5615000	22.121	± 100
115.00	30	13.5610000	58.989	± 100
115.00	20	13.5618000	0.000	± 100
115.00	10	13.5610000	58.989	± 100
115.00	0	13.5610300	56.777	± 100
115.00	-10	13.5610000	58.989	± 100
115.00	-20	13.5611000	51.616	± 100
97.15	20	13.5638000	-147.473	± 100
132.25	20	13.5639000	-154.847	± 100

2 Minutes

Reference Frequency: EUT Channel 13.56 MHz @ 20°C				
Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
115.00	50	13.5625000	-95.862	± 100
115.00	40	13.5615000	-22.122	± 100
115.00	30	13.5611000	7.374	± 100
115.00	20	13.5612000	0.000	± 100
115.00	10	13.5610000	14.748	± 100
115.00	0	13.5610300	12.536	± 100
115.00	-10	13.5603000	66.366	± 100
115.00	-20	13.5600100	87.750	± 100
97.15	20	13.5614000	-14.748	± 100
132.25	20	13.5619000	-51.618	± 100

5 minutes

Reference Frequency: EUT Channel 13.56 MHz @ 20°C				
Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
115.00	50	13.5622000	-51.617	± 100
115.00	40	13.5615000	0.000	± 100
115.00	30	13.5611700	24.334	± 100
115.00	20	13.5615000	0.000	± 100
115.00	10	13.5611700	24.334	± 100
115.00	0	13.5612300	19.909	± 100
115.00	-10	13.5613400	11.798	± 100
115.00	-20	13.5614300	5.162	± 100
97.15	20	13.5613000	14.748	± 100
132.25	20	13.5619000	-29.495	± 100

10 Minutes

Reference Frequency: EUT Channel 13.56 MHz @ 20°C				
Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
115.00	50	13.5618300	-2.212	± 100
115.00	40	13.5611000	51.616	± 100
115.00	30	13.5615000	22.121	± 100
115.00	20	13.5618000	0.000	± 100
115.00	10	13.5617000	7.374	± 100
115.00	0	13.5613400	33.919	± 100
115.00	-10	13.5611200	50.141	± 100
115.00	-20	13.5611100	50.878	± 100
97.15	20	13.5616000	14.747	± 100
132.25	20	13.5611000	51.616	± 100