



**FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8**

MANUFACTURER'S TEST REPORT

FOR

WIRELESS ALARM CONSOLE

MODEL NUMBER: TSSC-VE

**FCC ID: CFS8DLTSSCBASE1
IC: 573F-TSSCBASE1**

REPORT NUMBER: R11070857-E1

ISSUE DATE: 2016-01-21

Prepared for
**HONEYWELL SECURITY
2 CORPORATE CENTER DR
SUITE 100 PO BOX 9040
MELVILLE, NY, 11747, USA**

Prepared by
**UL LLC
12 LABORATORY DR.
RESEARCH TRIANGLE PARK, NC 27709 USA
TEL: (919) 549-1400**



NVLAP Lab code: 200246-0

Revision History

Ver.	Issue Date	Revisions	Revised By
1	2016-01-20	Initial Issue	Mark Nolting
2	2016-01-21	Revised EUT description in Section 5.1.	Jeff Moser

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	4
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION.....	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION.....	6
4.3. MEASUREMENT UNCERTAINTY	7
5. EQUIPMENT UNDER TEST	8
5.1. DESCRIPTION OF EUT.....	8
5.2. DESCRIPTION OF AVAILABLE ANTENNAS	8
5.3. SOFTWARE AND FIRMWARE	8
5.4. WORST-CASE CONFIGURATION AND MODE.....	8
5.5. MODIFICATIONS.....	8
5.6. DESCRIPTION OF TEST SETUP.....	9
6. TEST AND MEASUREMENT EQUIPMENT	11
6.1. DUTY CYCLE.....	12
7. RADIATED EMISSION TEST RESULTS.....	13
7.1. TX RADIATED SPURIOUS EMISSION.....	13

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: HONEYWELL SECURITY
2 CORPORATE CENTER DR
SUITE 100 PO BOX 9040
MELVILLE, NY, 11747, USA

EUT DESCRIPTION: WIRELESS ALARM CONSOLE

MODEL: TSSC-VE

SERIAL NUMBER: Non-serialized samples: SRID 2072; SRID 9553 (FCC#3)

DATE TESTED: 12/03/2015, 12/29-12/31/2015, 01/03/2016

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C (Duty Cycle, fundamental and radiated spurious emissions only.)	PASS
INDUSTRY CANADA RSS-210 Issue 8, Annex 1 (Duty Cycle, fundamental and radiated spurious emissions only.)	PASS
INDUSTRY CANADA RSS-GEN Issue 4 (Duty Cycle, fundamental and radiated spurious emissions only.)	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, any agency of the Federal Government, or any agency of any government.

Approved & Released
For UL LLC By:



Jeff Moser
EMC Program Manager
UL – Consumer Technology Division

Prepared By:



Mark Nolting
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 8. This report is a manufacturer's specification report that contains only duty-cycle, fundamental and radiated spurious data.

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 and 2800 Suite B Perimeter Park Dr., Morrisville, NC 27560.

12 Laboratory Dr., RTP, NC 27709	
☐	Chamber A
☐	Chamber C

2800 Suite B Perimeter Park Dr., Morrisville, NC 27560	
☒	Chamber NORTH
☐	Chamber SOUTH

The onsite chambers are covered under Industry 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
Radiated Disturbance 0.009 to 30 MHz	+/- 3.15
Radiated Disturbance, 30 to 1000 MHz	+/- 5.36
Radiated Emissions, 1-6 GHz	+/- 4.32

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a wireless alarm console that contains a 344.94 MHz radio, 802.11 b/g/n (HT20) radio and Z-Wave (908.4 MHz) radio. This report covers the 344.94 MHz radio.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two monopole antennas (for diversity), with each having a maximum gain of 2 dBi.

5.3. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was standard production panel firmware, rev. 2.0.

5.4. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated in two orientations as follows: Table-top and Wall-mount. Additionally, both antennas associated with the device's 344.94MHz transmission were evaluated. For both antennas, the table-top orientation produced the highest emission and, therefore, was deemed the worst-case orientation. Hence, all final radiated testing was performed with the EUT in a table-top orientation.

5.5. MODIFICATIONS

No modifications by the test house were made during testing to achieve compliance.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
EUT AC adapter	Honeywell	300-05763V1	15060548099	N/A

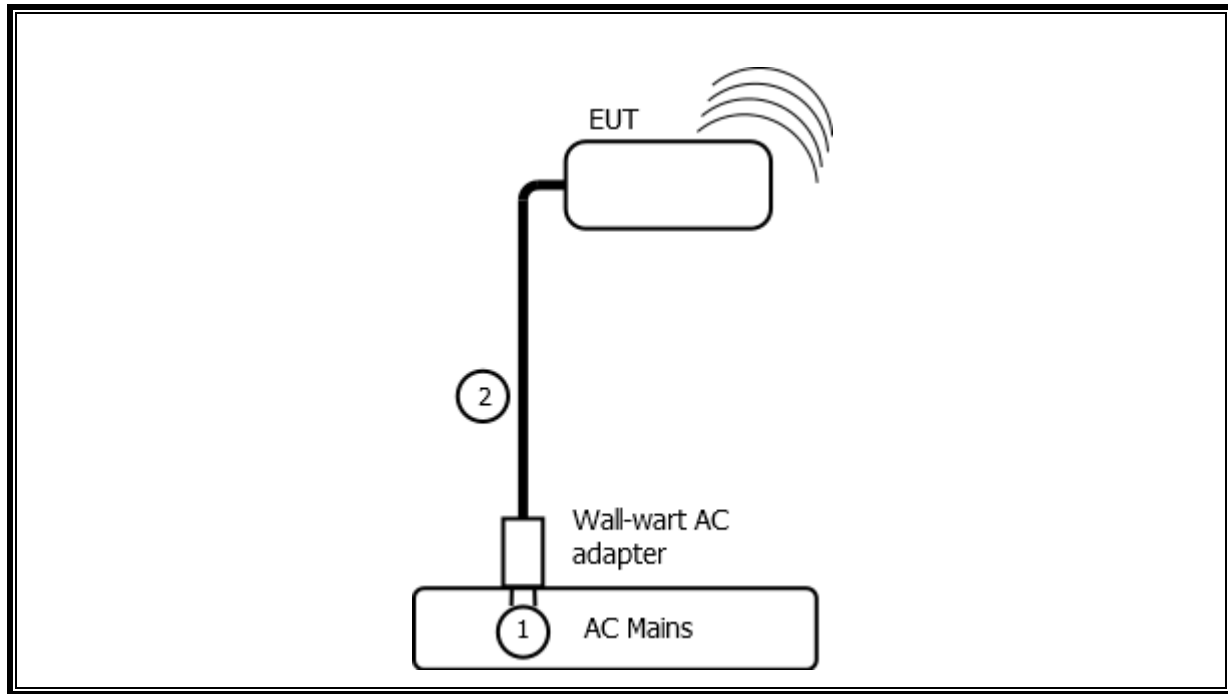
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	2C AC	N/A	0	Wall-wart AC adapter's AC input.
2	DC (9V)	1	2C DC	Unshielded	2.4	Wall-wart AC adapter DC output to EUT. Non-detachable.

TEST SETUP

The EUT was configured as a table-top device. Test software internal to the device exercised its radio card.

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 - North Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
AT0059	Active Shielded Loop Antenna	EMCO	6502	2015-03-17	2016-03-31
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2015-02-17	2016-02-29
AT0073	Hybrid Broadband Antenna, 30-1000MHz	Sunol Sciences Corp.	JB3	2015-06-10	2016-06-30
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2015-10-07	2016-10-31
N-SAC02	Gain-loss string: 30-1000MHz	Various	Various	2015-06-04	2016-06-30
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2015-09-29	2016-09-30
PRE0101521 (75141)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2015-08-26	2016-08-31
SA0026	Spectrum Analyzer	Agilent	N9030A	2015-03-27	2016-03-31
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
HI0079	Temp/Humid/Pressure Meter	Springfield Precision	PreciseTemp	2015-07-01	2016-07-31

6.1. DUTY CYCLE

LIMITS

FCC §15.35 (c)

The measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 100 kHz and the VBW is set to 100 kHz. The sweep time is coupled and the span is set to 0 Hz. The number of pulses is measured and calculated in a 100 ms scan.

CALCULATION

Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is $(\# \text{ of long pulses} * \text{long pulse width}) + (\# \text{ of short pulses} * \text{short pulse width}) / 100$ or T

RESULTS

The manufacturer declared the worst-case duty cycle to be 10%, which translates into a duty cycle correction factor of -20.0dB.

Duty-cycle measurements of device and supporting information to be supplied in a separate document by Honeywell.

7. RADIATED EMISSION TEST RESULTS

7.1. TX RADIATED SPURIOUS EMISSION

LIMITS

FCC §15.231 (b)
IC A1.1.2

In addition to the provisions of § 15.205, the field strength of emissions from Intentional radiators operated under this section shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental Frequency (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66 - 40.70	2,250	225
70 - 130	1,250	125
130 - 174	1,250 to 3,750	125 to 375
174 - 260	3,750	375
260 - 470	3,750 to 12,500	375 to 1,250
Above 470	12,500	1,250

1 Linear interpolation

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
2 Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§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:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
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., Sections 15.231 and 15.241.

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

Note: This is a manufacturer's specification report. Verification of restrictions noted in 15.231 (a)(3) and RSS-210 Annex A1.1.1 were not performed. Duty cycle measurements were also not performed.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz measurements and 1.5 m above the ground plane for above 1GHz measurements. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For peak measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz. For average measurements, the resolution and video bandwidths are set as described in ANSI 63.10:2013 for the applicable average measurement.

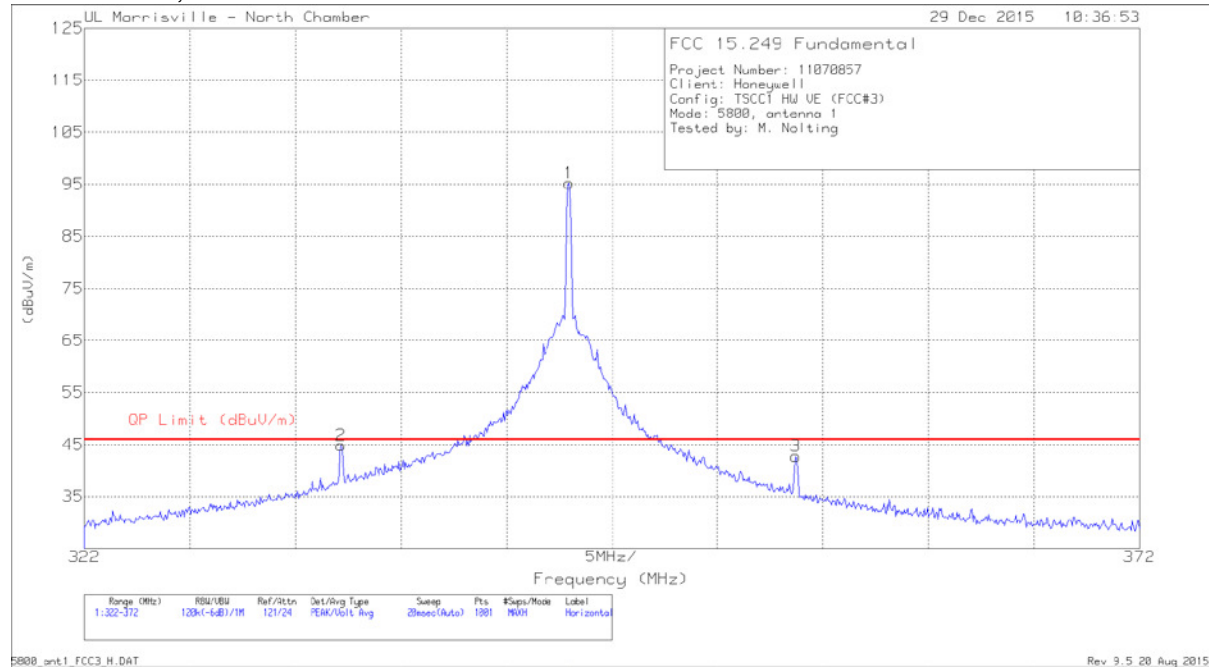
The spectrum from 9 kHz to 4 GHz is investigated with the transmitter on.

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

FUNDAMENTAL

ANTENNA 1; HORIZONTAL



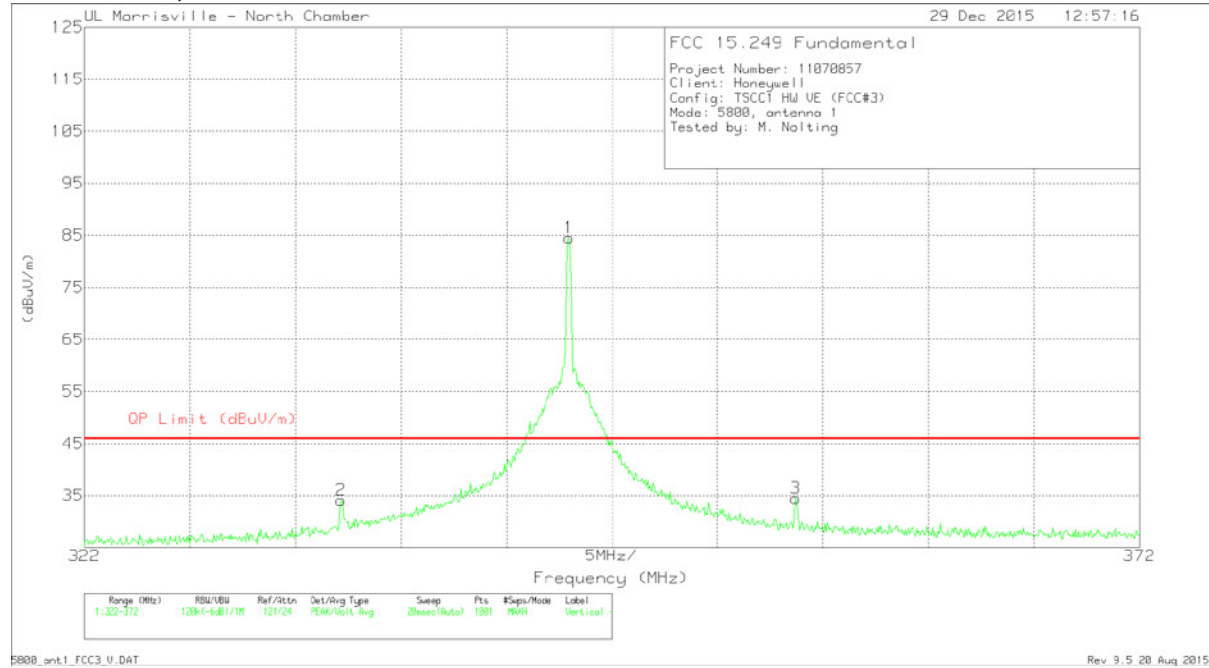
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	QPk/Pk Limit (dBuV/m)	QP/Pk Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	344.9472	105.39	Pk	19.1	-29.3	0	95.19	97.25	-2.06	-	-	199	102	H
	344.9472	105.39	Pk	19.1	-29.3	-20	75.19	-	-	77.25	-2.06	199	102	H
2	* 334.1637	53.96	Qp	18.7	-29.3	0	43.36	46	-2.64	-	-	199	102	H
3	355.7225	53.27	Pk	19.5	-29.2	0	43.57	77.25	-33.68	-	-	199	102	H
	355.7225	53.27	Pk	19.5	-29.2	-20	23.57	-	-	57.25	-33.68	199	102	H

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

Pk - Peak detector

Qp - Quasi-Peak detector

ANTENNA 1; VERTICAL

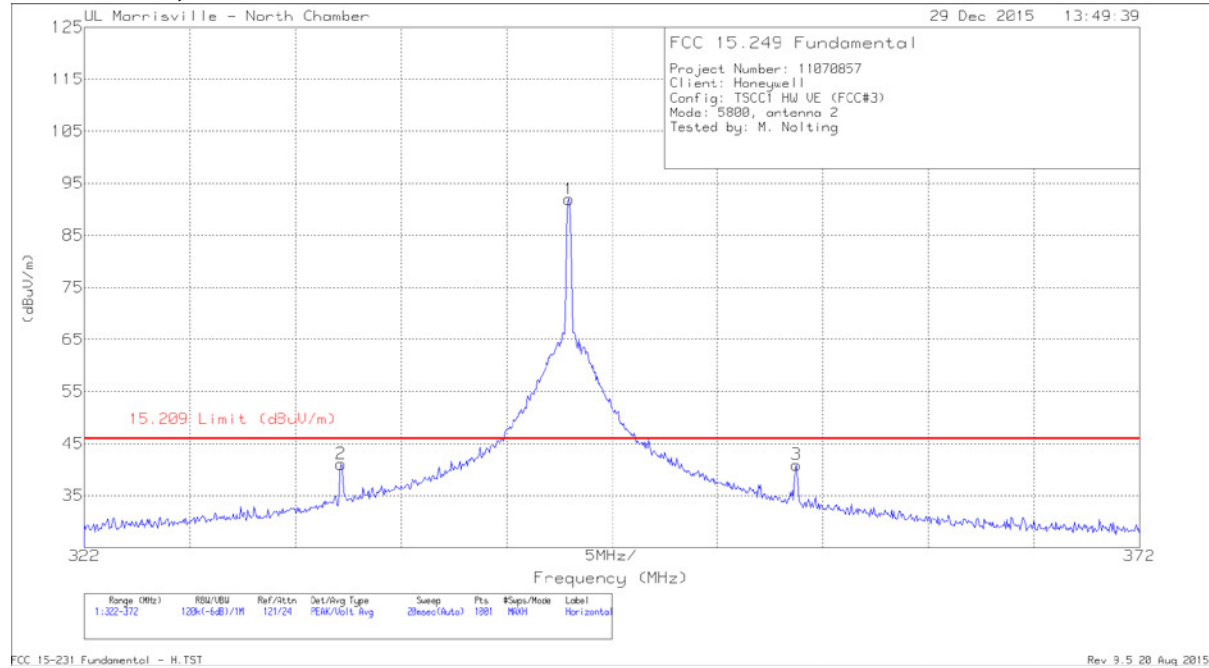


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	QPk/Pk Limit (dBuV/m)	QP/Pk Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	344.9452	94.7	Pk	19.1	-29.3	0	84.5	97.25	-12.8	-	-	292	302	V
	344.9452	94.7	Pk	19.1	-29.3	-20	64.5	-	-	77.25	-12.75	292	302	V
2	* 334.15	44.67	Pk	18.7	-29.3	0	34.07	46	-11.93	-	-	292	302	V
3	355.7	44.18	Pk	19.5	-29.2	0	34.48	77.25	-42.77	-	-	292	302	V
	355.7	44.18	Pk	19.5	-29.2	-20	14.48	-	-	57.25	-42.77	292	302	V

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

Pk - Peak detector

ANTENNA 2; HORIZONTAL



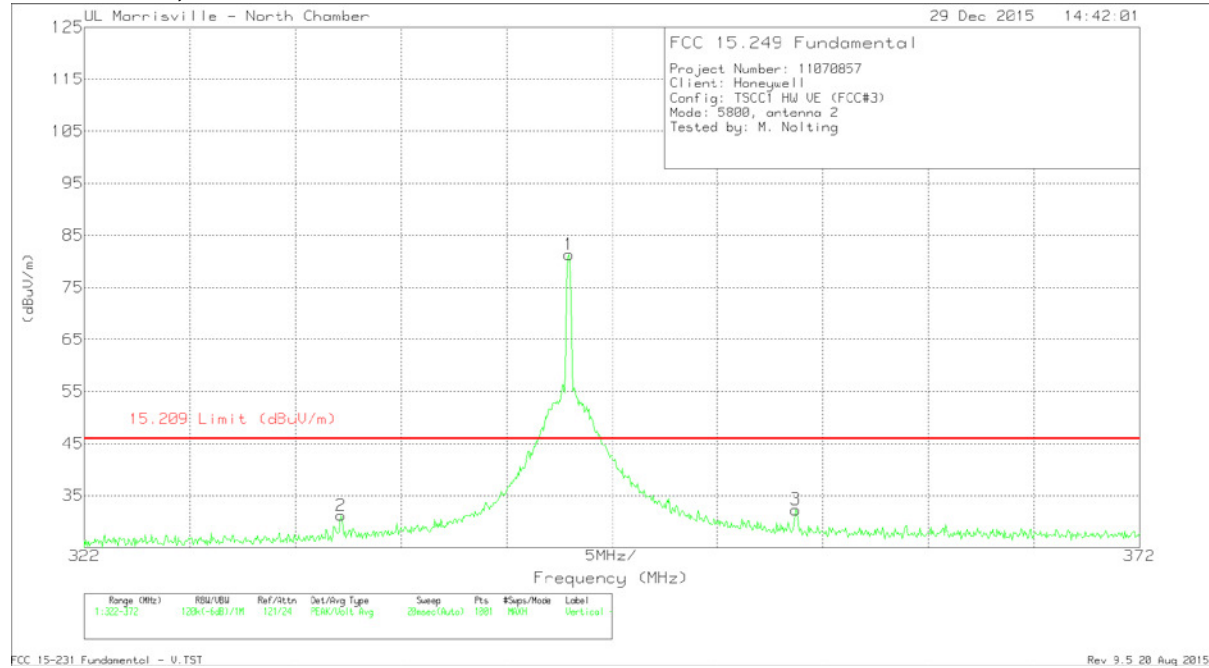
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	QPk/Pk Limit (dBuV/m)	QP/Pk Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	344.95	102.13	Pk	19.1	-29.3	0	91.93	97.25	-5.32	-	-	82	102	H
	344.95	102.13	Pk	19.1	-29.3	-20	71.93	-	-	77.25	-5.32	82	102	H
2	* 334.1634	49.83	Qp	18.7	-29.3	0	39.23	46	-6.77	-	-	82	102	H
3	355.7224	51.36	Pk	19.5	-29.2	0	41.66	77.25	-35.59	-	-	82	102	H
	355.7224	51.36	Pk	19.5	-29.2	-20	21.66	-	-	57.25	-35.59	82	102	H

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

Pk - Peak detector

Qp - Quasi-Peak detector

ANTENNA 2; VERTICAL



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	QPk/Pk Limit (dBuV/m)	QP/Pk Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	344.9427	91.51	Pk	19.1	-29.3	0	81.31	97.25	-15.94	-	-	358	118	V
	344.9427	91.51	Pk	19.1	-29.3	-20	61.31	-	-	77.25	-15.94	358	118	V
2	* 334.15	41.76	Pk	18.7	-29.3	0	31.16	46	-14.84	-	-	358	118	V
3	355.7	42.03	Pk	19.5	-29.2	0	32.33	77.25	-44.92	-	-	358	118	V
	355.7	42.03	Pk	19.5	-29.2	-20	12.33	-	-	57.25	-44.92	358	118	V

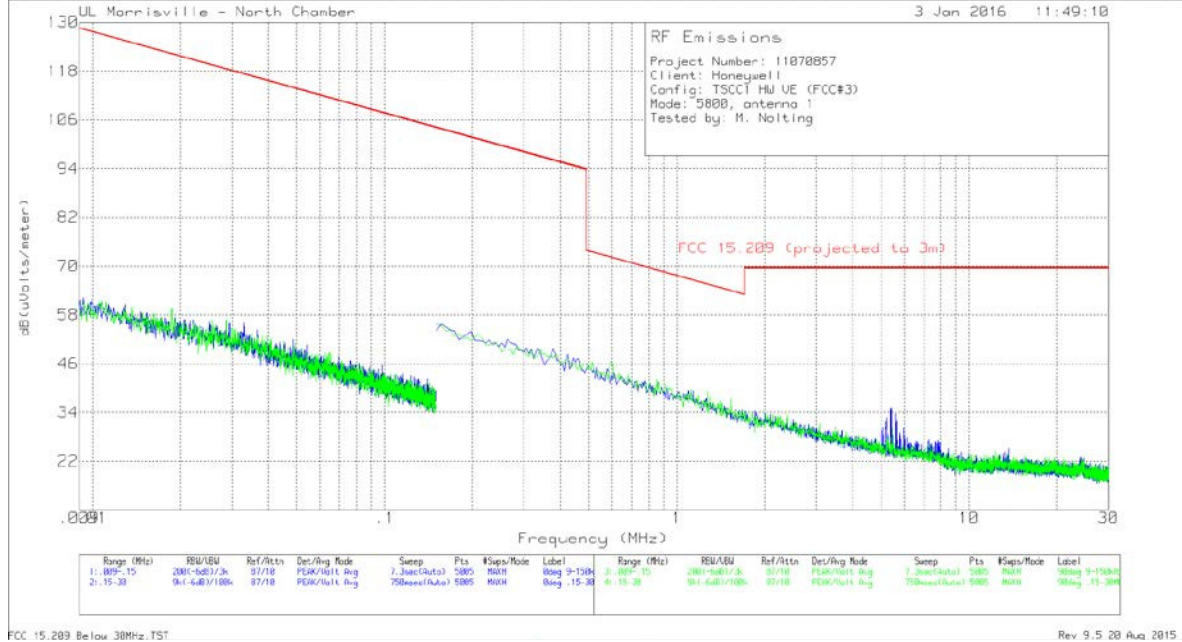
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

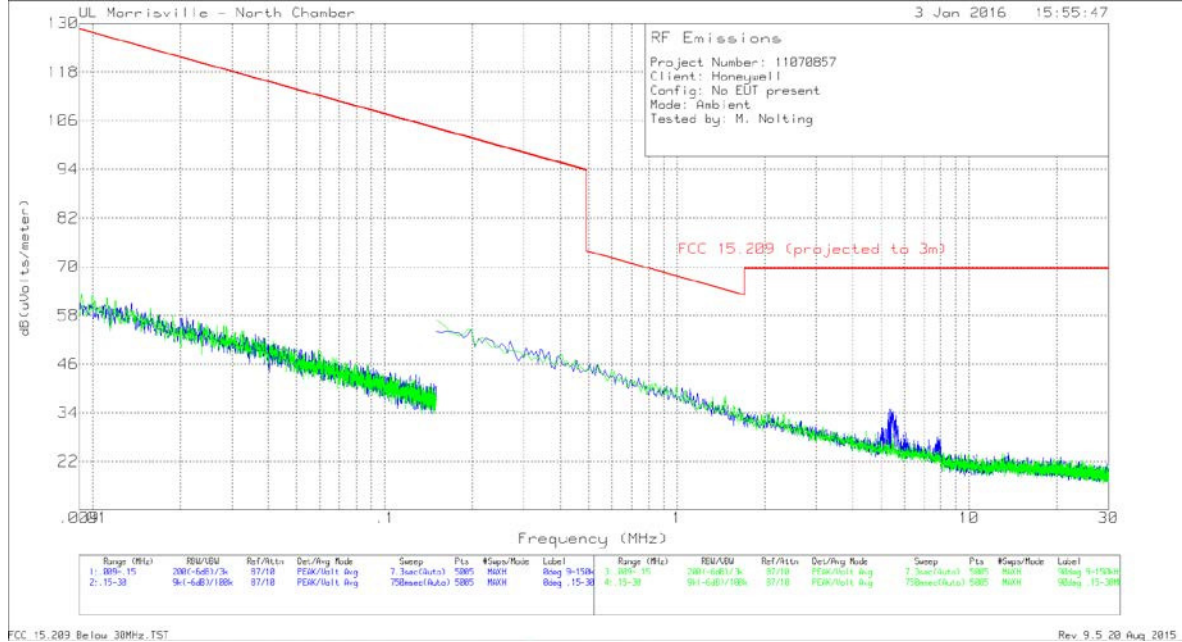
TX SPURIOUS EMISSIONS (0.009-30MHz)

Note: All measurements were made at a test distance of 3 m. The limits in the plots and tabular data are the FCC/IC limits extrapolated from the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to the measurement distance to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were $40 \cdot \log(\text{specification distance} / \text{test distance})$ per FCC 15.31 (f) (2).

EUT PLOT (Antenna-1 results presented here. The results are similar for antenna 2.)



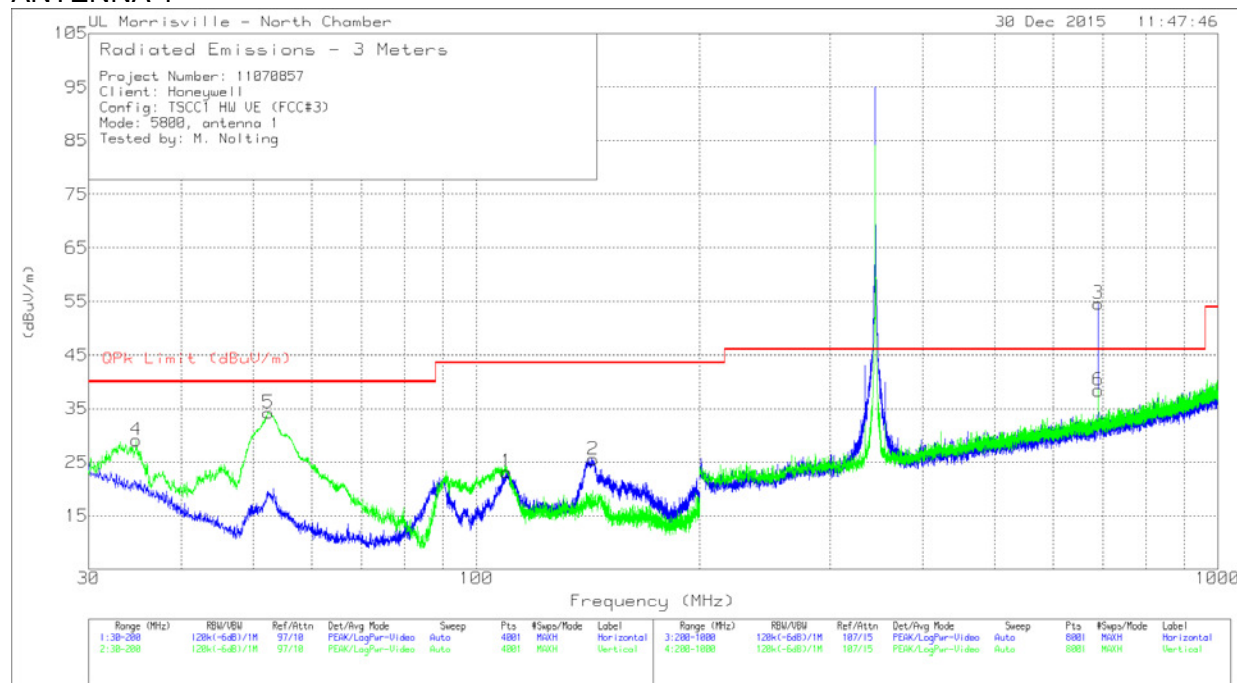
NOISE-FLOOR PLOT



The above plots demonstrate there were no EUT-related emissions of interest relative to the FCC 15.209 limit below 30MHz.

HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz)

ANTENNA 1



5880_ant1_FCC3_30-1000MHz.DAT

Rev 9.5 20 Aug 2015

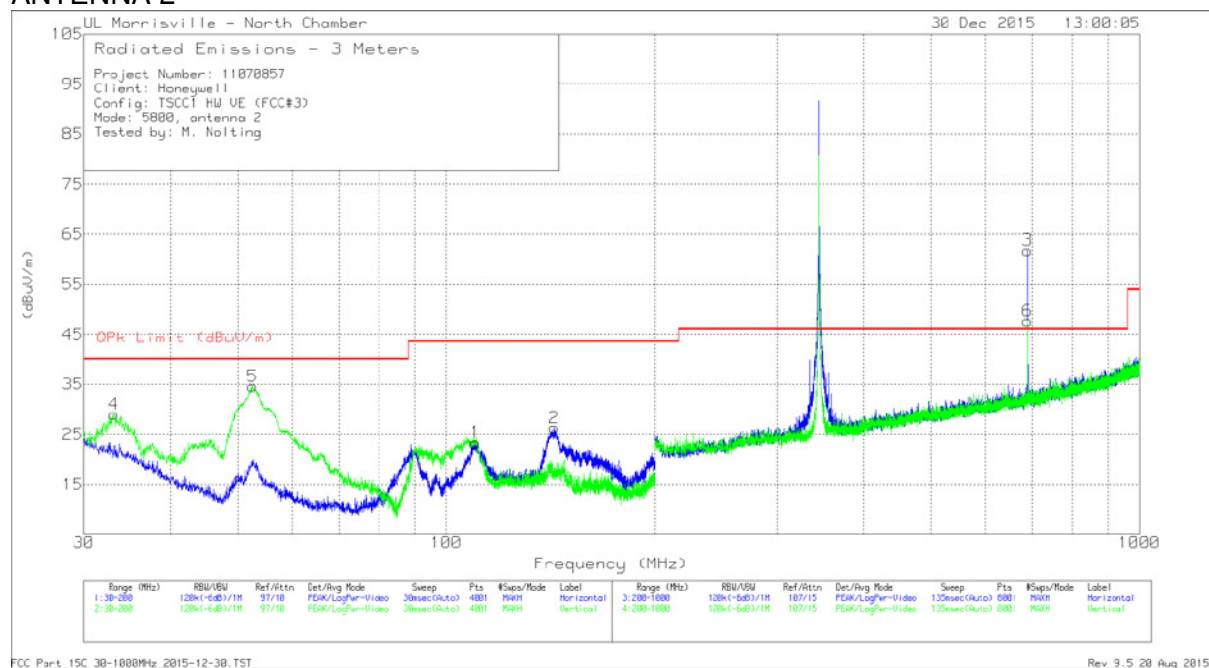
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	QP/Pk Limit (dBuV/m)	QP/Pk Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 109.9425	37.01	Pk	16.9	-30.7	0	23.21	43.52	-20.31	-	-	0-360	300	H
4	34.8025	38.32	Pk	22.4	-31.6	0	29.12	40	-10.88	-	-	0-360	102	V
5	52.766	51.43	Qp	12	-31.4	0	32.03	40	-7.97	-	-	291	102	V
2	143.645	38.84	Pk	17.2	-30.5	0	25.54	43.52	-17.98	-	-	0-360	199	H
3	689.8851	58.82	Pk	24.7	-28.1	0	55.42	77.25	-21.83	-	-	202	102	H
	689.8851	58.82	Pk	24.7	-28.1	-20	35.42	-	-	57.25	-21.83	202	102	H
6	689.8851	42	Pk	24.7	-28.1	0	38.6	77.25	-38.65	-	-	10	121	V
	689.8851	42	Pk	24.7	-28.1	-20	18.6	-	-	57.25	-38.65	10	121	V

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

Pk - Peak detector

Qp - Quasi-Peak detector

ANTENNA 2



FCC Part 15C 30-1000MHz 2015-12-30.TST

Rev 9.5 20 Aug 2015

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	QP/Pk Limit (dBuV/m)	QP/Pk Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 110.155	37.15	Pk	16.9	-30.7	0	23.35	43.52	-20.17	-	-	0-360	300	H
4	33.145	37.05	Pk	23.7	-31.7	0	29.05	40	-10.95	-	-	0-360	102	V
5	52.77	51.52	Qp	12	-31.4	0	32.12	40	-7.88	-	-	287	100	V
2	143.22	39.37	Pk	17.3	-30.4	0	26.27	43.52	-17.25	-	-	0-360	199	H
3	689.885	66.87	Pk	24.7	-28.1	0	63.47	77.25	-13.78	-	-	27	118	H
	689.885	66.87	Pk	24.7	-28.1	-20	43.47	-	-	57.25	-13.78	27	118	H
6	689.885	54.32	Pk	24.7	-28.1	0	50.92	77.25	-26.33	-	-	97	126	V
	689.885	54.32	Pk	24.7	-28.1	-20	30.92	-	-	57.25	-26.33	97	126	V

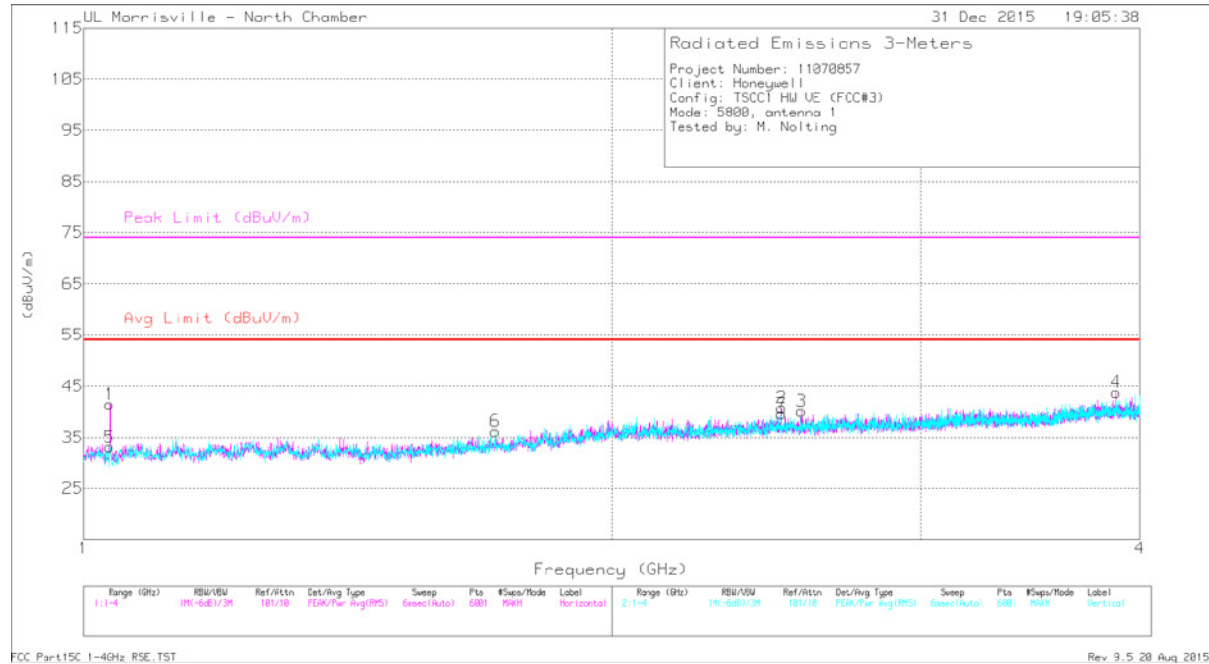
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz

ANTENNA 1



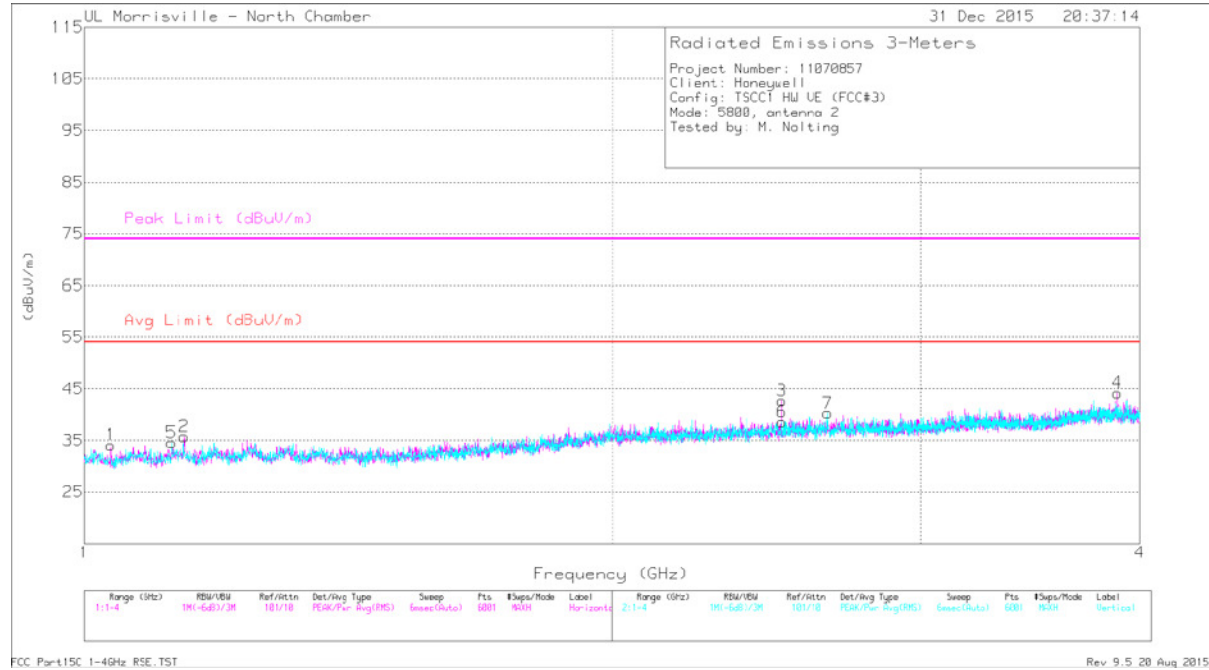
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.035	53.54	Pk	28	-37.8	0	43.74	-	-	74	-30.26	252	143	H
	* 1.035	53.54	Pk	28	-37.8	-20	23.74	54	-30.26	-	-	252	143	H
4	* 3.88	43.92	Pk	33.6	-33.7	0	43.82	54	-10.18	74	-30.18	0-360	101	H
5	* 1.035	51.65	Pk	28	-37.8	0	41.85	-	-	74	-32.15	206	344	V
	* 1.035	51.65	Pk	28	-37.8	-20	21.85	54	-32.15	-	-	206	344	V
6	1.717	43.3	Pk	29.3	-36.4	0	36.2	54	-17.8	74	-37.8	0-360	199	V
2	* 2.5	48.43	Pk	32.1	-35.2	0	45.33	-	-	74	-28.67	115	107	H
	* 2.5	42.87	Av	32.1	-35.2	0	39.77	54	-14.23	-	-	115	107	H
7	* 2.5	42.73	Pk	32.1	-35.2	0	39.63	54	-14.37	74	-34.37	0-360	199	V
3	2.566	42.94	Pk	32.2	-35	0	40.14	54	-13.86	74	-33.86	0-360	199	H

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

Pk - Peak detector

Av - Average detection

ANTENNA 2



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.035	47.81	Pk	28	-37.8	0	38.01	-	-	74	-35.99	350	188	H
	* 1.035	47.81	Pk	28	-37.8	-20	18.01	54	-35.99	-	-	350	188	H
2	* 1.14	44.75	Pk	28.5	-37.5	0	35.75	54	-18.25	74	-38.25	0-360	200	H
4	* 3.885	44.39	Pk	33.6	-33.8	0	44.19	54	-9.81	74	-29.81	0-360	101	H
5	* 1.121	43.76	Pk	28.4	-37.6	0	34.56	54	-19.44	74	-39.44	0-360	200	V
3	* 2.5	48.2	Pk	32.1	-35.2	0	45.1	-	-	74	-28.9	112	107	H
	* 2.5	42.86	Av	32.1	-35.2	0	39.76	54	-14.24	-	-	112	107	H
6	* 2.5	41.68	Pk	32.1	-35.2	0	38.58	54	-15.42	74	-35.42	0-360	200	V
7	2.655	42.75	Pk	32.3	-34.8	0	40.25	54	-13.75	74	-33.75	0-360	101	V

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

Pk - Peak detector

Av - Average detection

END OF REPORT