FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

FCC ID: PY7-55365J

REPORT NUMBER: 11589096D-E1V2

ISSUE DATE: 2017-03-23

Prepared for
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Revision History

Ver.	Issue Date	Revisions	Revised By
1	2017-03-17	Initial Issue	Richard Jankovics
2	2017-03-23	Corrected Grant Date from 9/23/2016 to 10/3/2016, Section 1.4 (Page 4)	Ana Aumentado

TABLE OF CONTENTS

1. DATA REUSE

1.1. INTRODUCTION

The 15.215 antenna port conducted and 15.207 Line Conducted Emissions for FCC ID: PY7-55365J are represented by FCC ID: PY7-43153G, test report 11589096B-E1. This report for FCC ID: PY7-55365J contains radiated field strength and emissions, and Frequency Stability.

SONY MOBILE COMMUNICATIONS, INC takes full responsibility that the data as referenced in FCC ID: PY7-30637Z, test report 16J23633Y-E7 represents compliance for this model.

1.2. DIFFERENCES

This C2PC application change from previous is the NFC antenna and matching circuit. And the design other than NFC is the same as FCC ID: PY7-30637Z.

According to manufacturer FCC ID: PY7-43153G and FCC ID: PY7-55365J NFC radios are electrically identical including Antenna. The FCC ID: PY7-43153G test data shall remain representative of FCC ID: PY7-55365J, so FCC ID: PY7-55365J leverages test data from FCC ID: PY7-43153G.

1.3. TESTING PERFORMED

Testing performed under this report for FCC ID: PY7-55365J contains radiated field strength and emissions, and Frequency Stability. All other data is referenced to FCC ID: PY7-43153G, test report 11589096B-E1 and FCC ID: PY7-30637Z, test report 16J23633Y-E7.

1.4. REFERENCE DETAIL SECTION

Equipment Class	Reference FCC ID	Type Grant	Grant Date	Report Title
DXX	FCC ID: PY7-30637Z	New	10/3/2016	16J23633Y-E7
DXX	FCC ID: PY7-43153G	New	3/9/2017	11589096B-E1

2. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS, INC.
4-12-3 Higashi-Shinagawa, Shinagawa-ku,
Tokyo, 140-0002, Japan

EUT DESCRIPTION: GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

SERIAL NUMBER: BH9000F76F

DATE TESTED: 2017-03-02

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	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:

Jeff Moser
EMC Program Manager
UL – Consumer Technology Division

Prepared By:

Richard Jankovics
WiSE Engineer
UL – Consumer Technology Division

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15.

4. 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 Drive, 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

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/

5. CALIBRATION AND UNCERTAINTY

5.1. 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.

5.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Total RF power, conducted	± 0.45
RF power density, conducted	± 1.50
Spurious emissions, conducted	± 2.94
All emissions, radiated up to 26 GHz	± 5.36
Temperature	± 0.07
Humidity	± 2.26
DC and low frequency voltages	± 1.27
Conducted Emissions (0.150-30MHz)	± 3.65
Frequency Stability	± 141 Hz

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

6.2. MAXIMUM FUNDAMENTAL ELECTRIC FIELD STRENGTH

The testing was performed at 3 meter. The transmitter maximum E-field at 30 meter distance is 19.86 dBuV/m which is converted from the 3 meter data.

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes loop antenna.

6.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 1.30

6.5. 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.

For testing performed with the NFC Tag, the fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, it was determined that Z-Axis orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z-Axis orientation. Modulation and data rate were fixed by the tag.

For testing performed with the NFC Test App, the fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, it was determined that Z-Axis orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z-Axis orientation. All modulations and data rates were investigated and it was determined that Type A, 106 Kbps was considered worst-case. Therefore, all testing was performed in Type A, 106 Kbps mode.

6.6. MODIFICATIONS

No modifications were made during testing.

6.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Desktop	Lenovo	ThinkCentre	MG00ADEN	NA
Headphones	Sony	MH410x	1625A87E00005E2	NA
PowerSupply	Sony	1300-7138.1	4016W34204581	NA

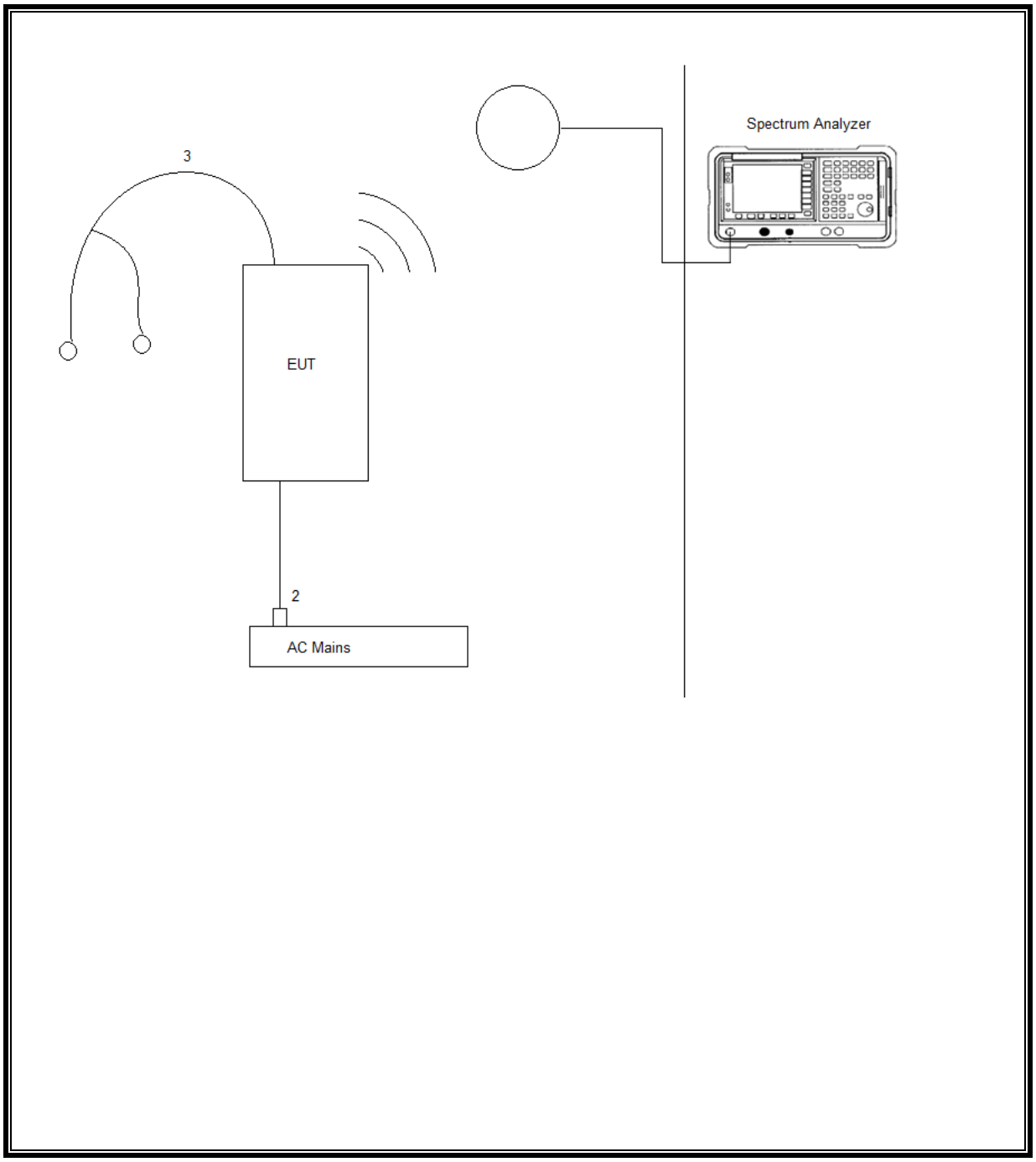
I/O CABLES

I/O Cable List					
Cable No	**Port**	**# of Identical ports**	**Connector Type**	**Cable Length (m)**	**Remarks**
2	DC Mains	1	AC	>1m	NA
3	Audio	1	3.5mm	>1m	Headphone

TEST SETUP

The EUT is setup as a standalone device. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



7. 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.
	0.009-30MHz	**(Loop Ant.)**			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2016-12-28	2017-12-31
	30-1000 MHz				
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2016-06-27	2017-06-30
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2016-10-04	2017-10-04
N-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

Test Equipment Used – Frequency Stability Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Conducted Room 2				
SA0020	Spectrum Analyzer	Agilent Technologies	E4446A	2016-03-22	2017-03-31
1100502	Temp/Humid Chamber	Cincinnati Sub-Zero	ZPH-8-3.5-SCT/AC	2016-06-06	2017-06-06
HI0081	Temp/Humid/Pressure Meter	Springfield	Precise Temp.	2016-04-26	2017-04-26
76021	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	N/A	N/A
	Additional Equipment used				
7405	E and B – Field Probes	EMCO	7405	N/A	N/A

8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMIT

§15.225, 15.209

(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 filed 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)

RESULTS

No non-compliance noted:

KDB 937606 OATS and Chamber Correlation Justification

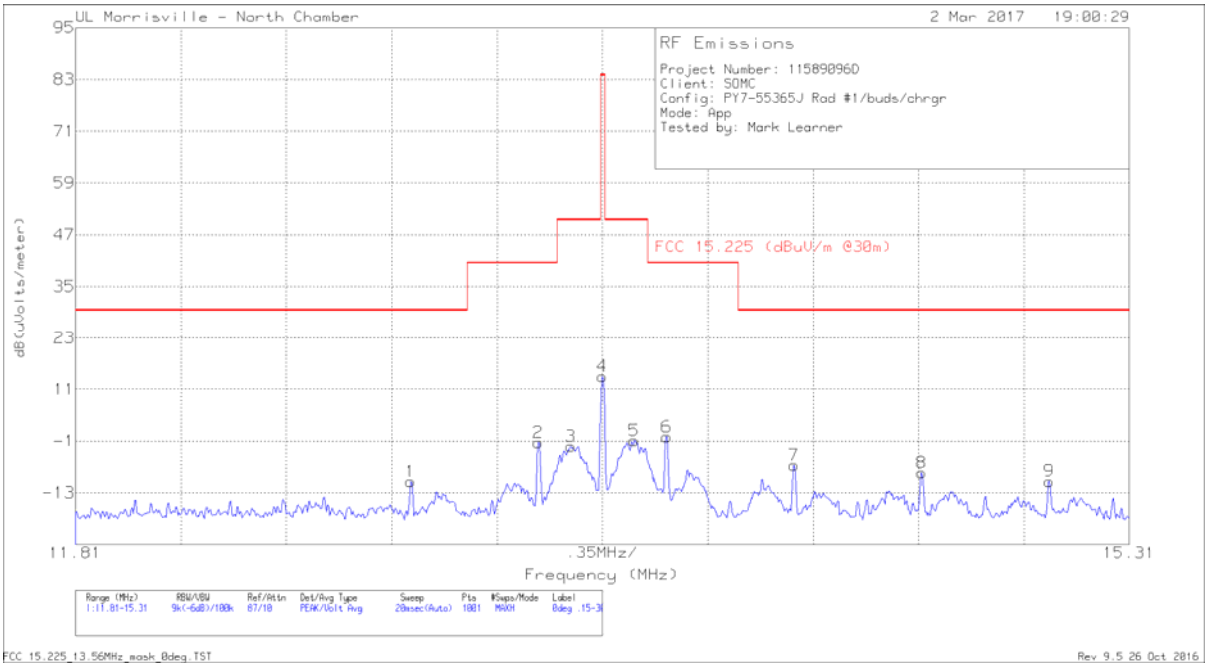
Device is a Smart Phone.

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 (0.15 – 30 MHz)

FUNDAMENTAL Type A, 106k, 0 deg (Test App Mode)

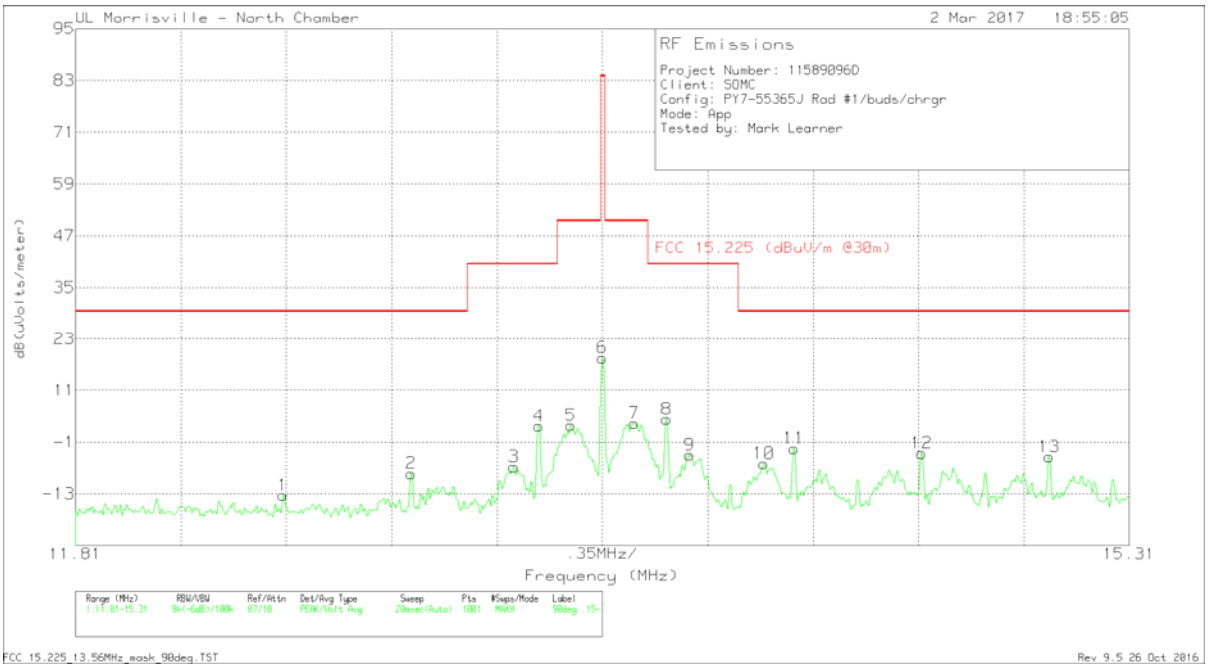


Trace Markers

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	12.923	18.57	Pk	10.4	.6	-40	-10.43	29.5	-39.93	251
2	13.3465	27.6	Pk	10.4	.6	-40	-1.4	40.5	-41.9	251
3	13.455	26.75	Pk	10.4	.6	-40	-2.25	50.5	-52.75	251
4	13.56	43.02	Pk	10.4	.6	-40	14.02	84	-69.98	251
5	13.665	28.08	Pk	10.4	.6	-40	-.92	50.5	-51.42	251
6	13.7735	28.92	Pk	10.4	.6	-40	-.08	40.5	-40.58	251
7	14.197	22.36	Pk	10.4	.6	-40	-6.64	29.5	-36.14	251
8	14.6205	20.75	Pk	10.3	.6	-40	-8.35	29.5	-37.85	251
9	15.044	18.78	Pk	10.3	.6	-40	-10.32	29.5	-39.82	251

Pk - Peak detector

FUNDAMENTAL Type A, 106k, 90 deg (Test App Mode)

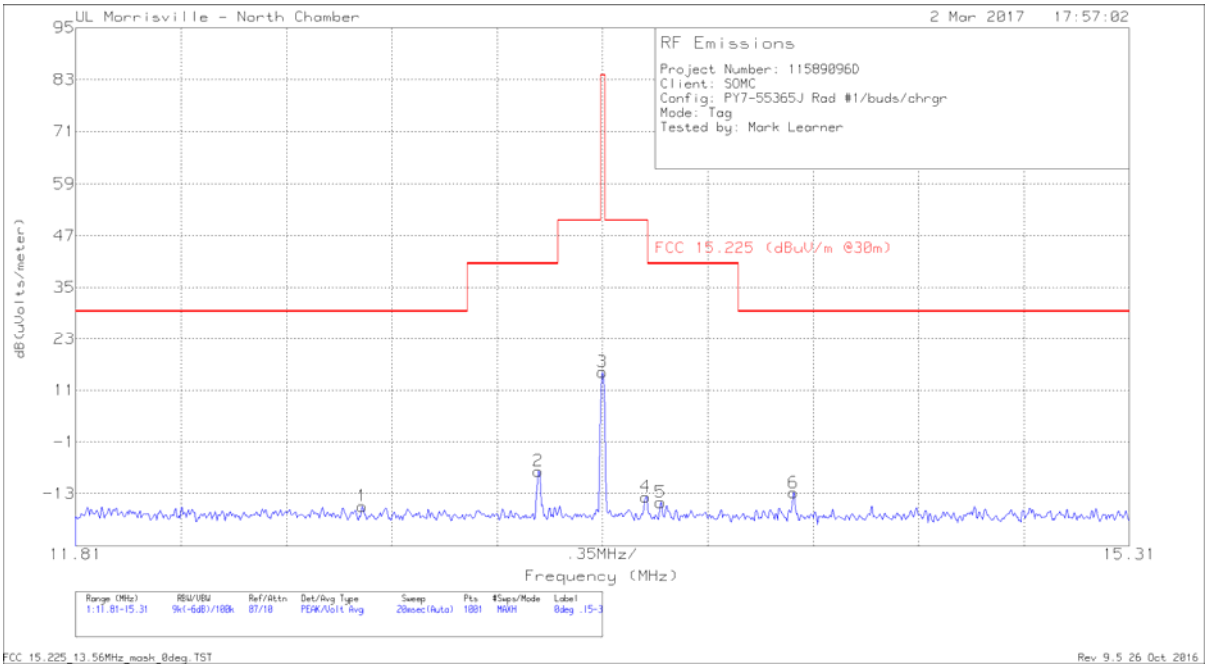


Trace Markers

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	12.4995	15.58	Pk	10.5	.6	-40	-13.32	29.5	-42.82	172
2	12.92475	20.72	Pk	10.4	.6	-40	-8.28	29.5	-37.78	172
3	13.266	22.31	Pk	10.4	.6	-40	-6.69	40.5	-47.19	172
4	13.34825	31.75	Pk	10.4	.6	-40	2.75	40.5	-37.75	172
5	13.455	31.83	Pk	10.4	.6	-40	2.83	50.5	-47.67	172
6	13.56	47.56	Pk	10.4	.6	-40	18.56	84	-65.44	172
7	13.66675	32.36	Pk	10.4	.6	-40	3.36	50.5	-47.14	172
8	13.7735	33.32	Pk	10.4	.6	-40	4.32	40.5	-36.18	172
9	13.8505	25.03	Pk	10.4	.6	-40	-3.97	40.5	-44.47	172
10	14.0955	23.03	Pk	10.4	.6	-40	-5.97	29.5	-35.47	172
11	14.197	26.53	Pk	10.4	.6	-40	-2.47	29.5	-31.97	172
12	14.6205	25.51	Pk	10.3	.6	-40	-3.59	29.5	-33.09	172
13	15.044	24.66	Pk	10.3	.6	-40	-4.44	29.5	-33.94	172

Pk - Peak detector

FUNDAMENTAL 0 deg (Tag)

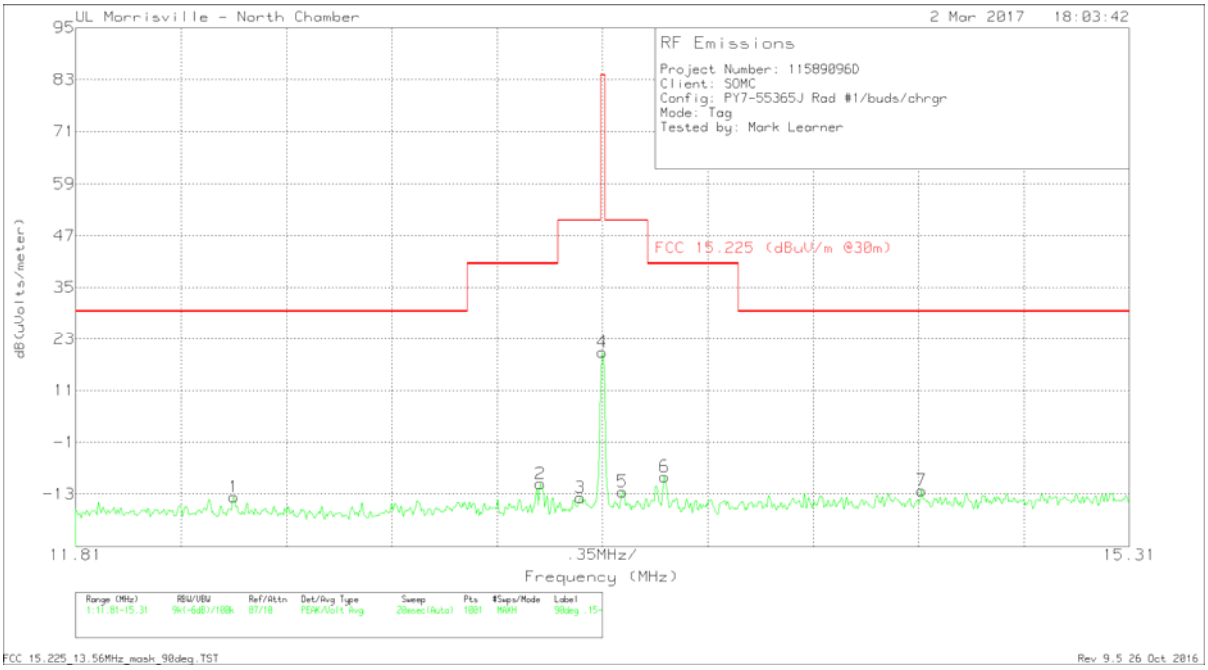


Trace Markers

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	12.762	13.16	Pk	10.4	.6	-40	-15.84	29.5	-45.34	248
2	13.3465	21.22	Pk	10.4	.6	-40	-7.78	40.5	-48.28	248
3	13.56	44.24	Pk	10.4	.6	-40	15.24	84	-68.76	248
4	13.7035	15.25	Pk	10.4	.6	-40	-13.75	50.5	-64.25	248
5	13.7525	14	Pk	10.4	.6	-40	-15	40.5	-55.5	248
6	14.1935	16.22	Pk	10.4	.6	-40	-12.78	29.5	-42.28	248

Pk - Peak detector

FUNDAMENTAL 90 deg (Tag)

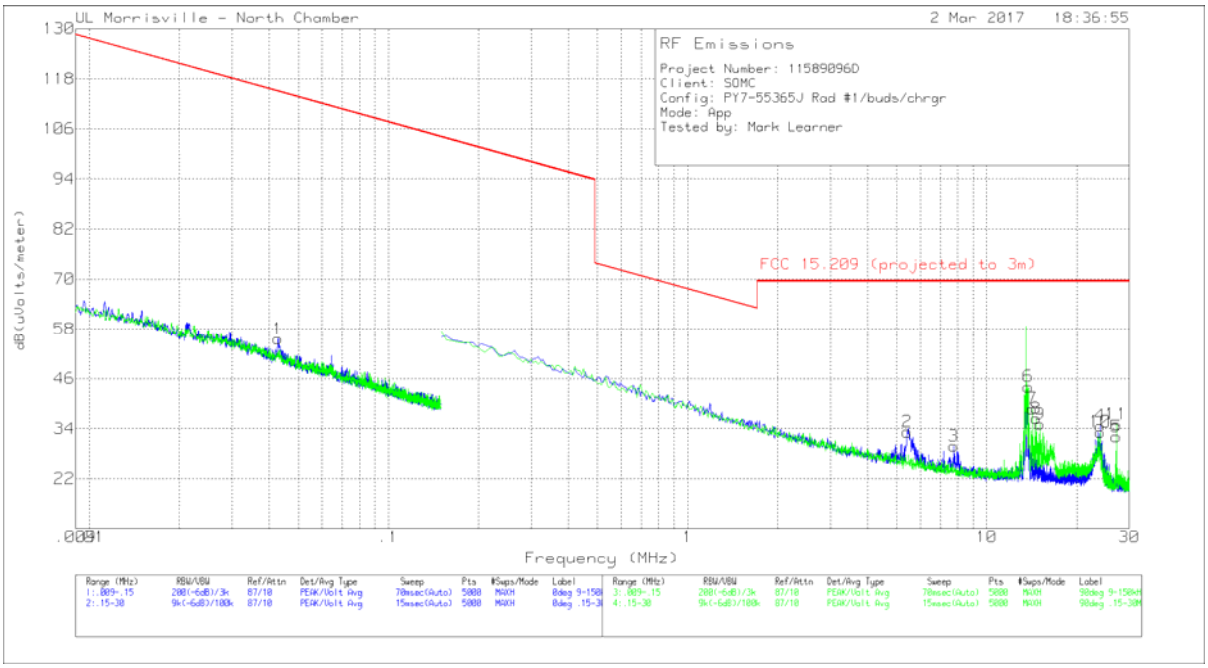


Trace Markers

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	12.335	15.2	Pk	10.5	.6	-40	-13.7	29.5	-43.2	161
2	13.3535	18.39	Pk	10.4	.6	-40	-10.61	40.5	-51.11	161
3	13.4865	15.16	Pk	10.4	.6	-40	-13.84	50.5	-64.34	161
4	13.56	48.86	Pk	10.4	.6	-40	19.86	84	-64.14	161
5	13.6265	16.54	Pk	10.4	.6	-40	-12.46	50.5	-62.96	161
6	13.7665	20.02	Pk	10.4	.6	-40	-8.98	40.5	-49.48	161
7	14.6205	16.95	Pk	10.3	.6	-40	-12.15	29.5	-41.65	161

Pk - Peak detector

SPURIOUS EMISSION (0.009-30 MHz) Type A, 106k

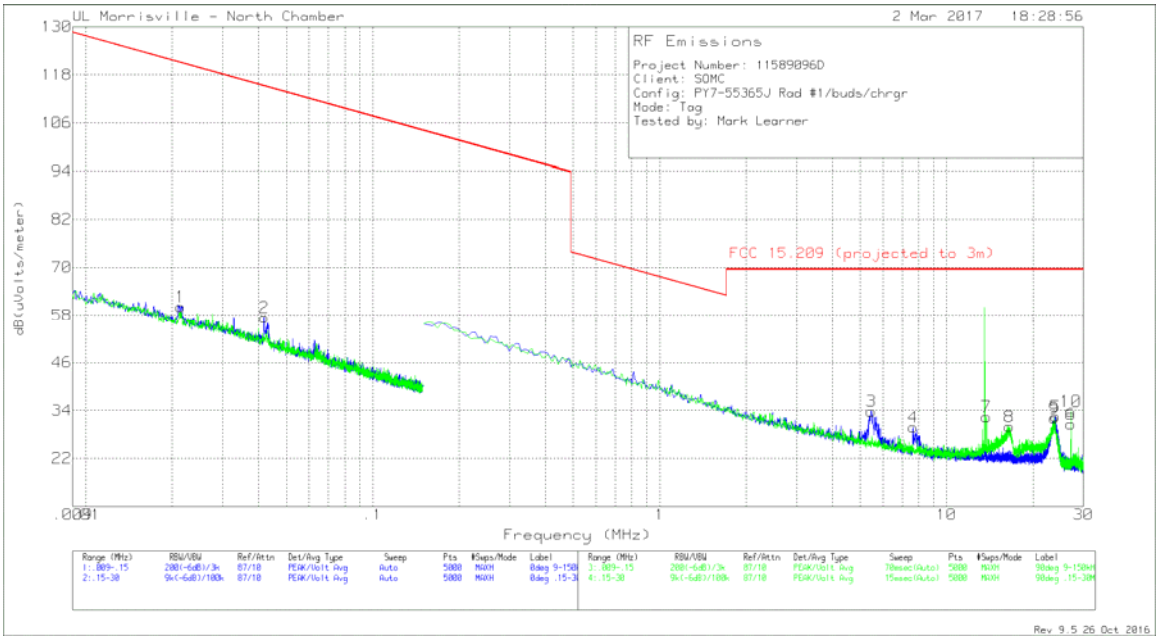


Trace Markers

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)	Polarity
1	.0428	43.39	Pk	12.1	.1	55.59	114.98	-59.39	0-360	Face On
2	5.42836	21.82	Pk	11	.4	33.22	69.54	-36.32	0-360	Face On
3	7.76303	18.61	Pk	10.7	.5	29.81	69.54	-39.73	0-360	Face On
4	23.93846	24.71	Pk	9.2	.8	34.71	69.54	-34.83	0-360	Face On
5	27.12101	22.59	Pk	8.6	.9	32.09	69.54	-37.45	0-360	Face On
6	13.76985	33.06	Pk	10.4	.6	44.06	69.54	-25.48	0-360	Face Off
7	14.19379	27.75	Pk	10.4	.6	38.75	69.54	-30.79	0-360	Face Off
8	14.61773	25.51	Pk	10.3	.6	36.41	69.54	-33.13	0-360	Face Off
9	15.04167	24.22	Pk	10.3	.6	35.12	69.54	-34.42	0-360	Face Off
10	23.93846	23.2	Pk	9.2	.8	33.2	69.54	-36.34	0-360	Face Off
11	27.12101	25.52	Pk	8.6	.9	35.02	69.54	-34.52	0-360	Face Off

Pk - Peak detector

SPURIOUS EMISSION (0.009-30 MHz) Tag Mode



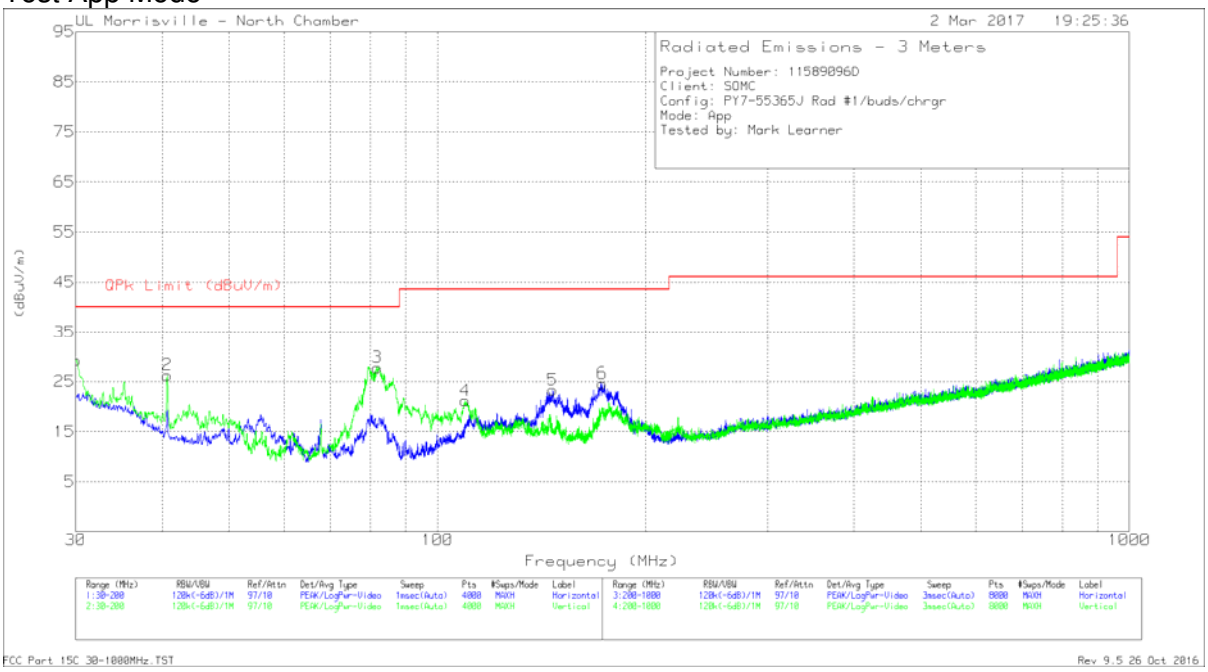
Trace Markers

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)	Polarity
1	.0214	46.17	Pk	13.9	.1	60.17	120.99	-60.82	0-360	Face On
2	.04182	45.16	Pk	12.2	.1	57.46	115.18	-57.72	0-360	Face On
3	5.46419	22.41	Pk	11	.4	33.81	69.54	-35.73	0-360	Face On
4	7.64361	18.64	Pk	10.7	.5	29.84	69.54	-39.7	0-360	Face On
5	23.93249	22.49	Pk	9.2	.8	32.49	69.54	-37.05	0-360	Face On
6	27.12101	21.04	Pk	8.6	.9	30.54	69.54	-39	0-360	Face On
7	13.76985	21.44	Pk	10.4	.6	32.44	69.54	-37.1	0-360	Face Off
8	16.55234	19.08	Pk	10.2	.7	29.98	69.54	-39.56	0-360	Face Off
9	23.69365	21.95	Pk	9.3	.8	32.05	69.54	-37.49	0-360	Face Off
10	27.12101	24.28	Pk	8.6	.9	33.78	69.54	-35.76	0-360	Face Off

Pk - Peak detector

8.1.2. TX SPURIOUS EMISSION 30 TO 1000 MHz (HORIZONTAL)

Test App Mode

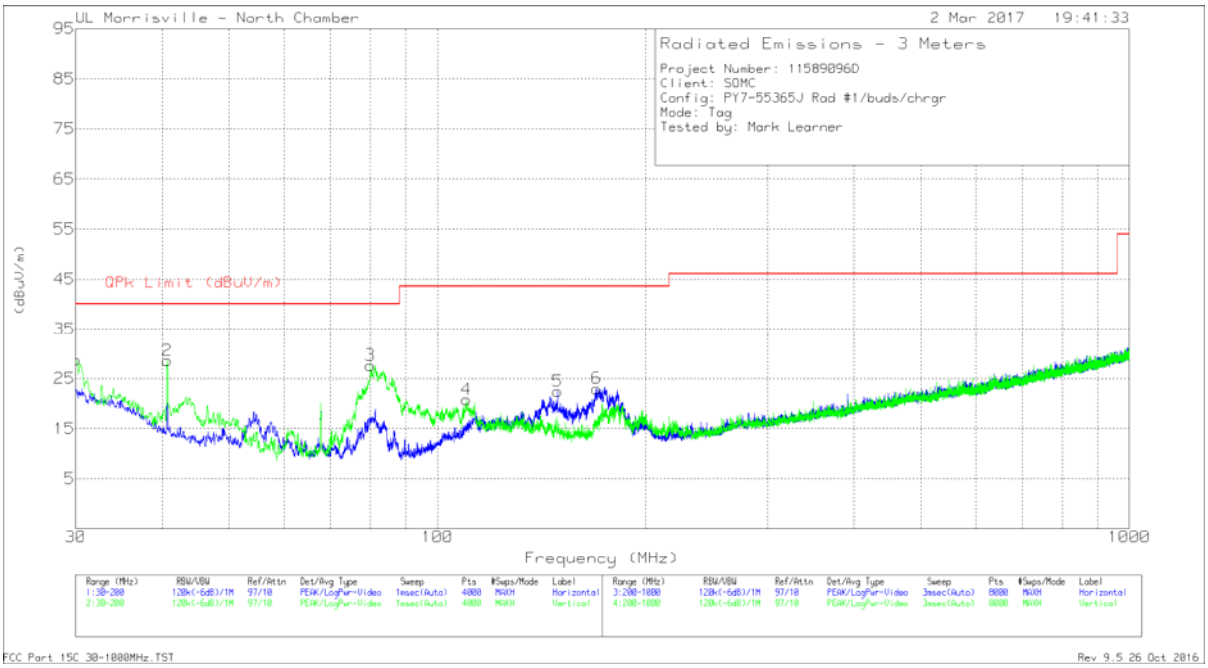


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 172.9645	38.83	Pk	16.1	-30.3	24.63	43.52	-18.89	0-360	199	H
4	* 109.7081	35.1	Pk	16.9	-30.8	21.2	43.52	-22.32	0-360	102	V
1	30.0425	34.83	Pk	26.1	-31.7	29.23	40	-10.77	0-360	102	V
2	40.6703	39.98	Pk	17.9	-31.6	26.28	40	-13.72	0-360	102	V
3	81.8634	47.08	Pk	11.8	-31.1	27.78	40	-12.22	0-360	102	V
5	146.8415	36.8	Pk	17	-30.5	23.3	43.52	-20.22	0-360	199	H

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

Tag Mode



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 169.7337	36.91	Pk	16.4	-30.3	23.01	43.52	-20.51	0-360	98	H
4	* 110.2608	34.57	Pk	17	-30.8	20.77	43.52	-22.75	0-360	102	V
1	30.0425	34.39	Pk	26.1	-31.7	28.79	40	-11.21	0-360	102	V
2	40.6703	42.3	Pk	17.9	-31.6	28.6	40	-11.4	0-360	102	V
3	79.9929	46.84	Pk	12	-31.2	27.64	40	-12.36	0-360	102	V
5	149.1583	36.04	Pk	16.9	-30.5	22.44	43.52	-21.08	0-360	199	H

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

9. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within ±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 C63.10-2013

RESULTS

No non-compliance noted.

Startup

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
			Delta (ppm)	Limit (ppm)
5.00	50	13.5599230	4.646	± 100
5.00	40	13.5599410	3.319	± 100
5.00	30	13.5599830	0.221	± 100
5.00	***20***	***13.5599860***	***0.000***	***± 100***
5.00	10	13.5600380	-3.835	± 100
5.00	0	13.5600850	-7.301	± 100
5.00	-10	13.5600850	-7.301	± 100
5.00	-20	13.5600420	-4.130	± 100
4.25	20	13.5599850	0.074	± 100
5.75	20	13.5600010	-1.106	± 100

2 minutes

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
			Delta (ppm)	Limit (ppm)
5.00	50	13.5599310	5.973	± 100
5.00	40	13.5599590	3.909	± 100
5.00	30	13.5599980	1.032	± 100
5.00	***20***	***13.5600120***	***0.000***	***± 100***
5.00	10	13.5600620	-3.687	± 100
5.00	0	13.5600840	-5.310	± 100
5.00	-10	13.5600860	-5.457	± 100
5.00	-20	13.5600860	-5.457	± 100
4.25	20	13.5599850	1.991	± 100
5.75	20	13.5600310	-1.401	± 100

5 minutes

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
			Delta (ppm)	Limit (ppm)
5.00	50	13.5599310	7.080	± 100
5.00	40	13.5599620	4.794	± 100
5.00	30	13.5600000	1.991	± 100
5.00	***20***	***13.5600270***	***0.000***	***± 100***
5.00	10	13.5600660	-2.876	± 100
5.00	0	13.5600830	-4.130	± 100
5.00	-10	13.5600840	-4.204	± 100
5.00	-20	13.5600750	-3.540	± 100
4.25	20	13.5599910	2.655	± 100
5.75	20	13.5600320	-0.369	± 100

10 minutes

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
			Delta (ppm)	Limit (ppm)
5.00	50	13.5599310	5.310	± 100
5.00	40	13.5599600	3.171	± 100
5.00	30	13.5599980	0.369	± 100
5.00	***20***	***13.5600030***	***0.000***	***± 100***
5.00	10	13.5600640	-4.499	± 100
5.00	0	13.5600850	-6.047	± 100
5.00	-10	13.5600830	-5.900	± 100
5.00	-20	13.5600720	-5.088	± 100
4.25	20	13.5599950	0.590	± 100
5.75	20	13.5600340	-2.286	± 100

TEST INFORMATION

Date 3/2/2017
Project No: 11589096
Tester: Niklas Haydon/John Manser