HCT CO.,LTD.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383.Rep. of KOREA
TEL: +82-31-645-6300 **FAX: +82-31-645-6401**

FCC NFC REPORT

FCC Certification

Applicant Name:
LG Electronics MobileComm U.S.A., Inc.

Address:
1000 Sylvan Avenue, Englewood Cliffs NJ 07632

Date of Issue:
November 08, 2016
Test Site/Location:
HCT CO., LTD., 74,Seoicheon-ro 578beon-gil,Majang-myeo,Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA
Report No.: HCT-R-1611-F005
HCT FRN: 0005866421

FCC ID	**: ZNFM200N**
APPLICANT	**: LG Electronics MobileComm U.S.A., Inc.**

Model(s):	LG-M200n
EUT Type:	Portable Handset
RF Output Field Strength:	14.59 dBuV/m @30 m
Frequency of Operation:	13.56 MHz
Modulation type:	ASK
FCC Classification:	Low Power Communication Device – Transmitter
FCC Rule Part(s):	FCC Part 15.225 Subpart C

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

Report prepared by
: Seul Ki Lee
Test Engineer of RF Team

Approved by
: Yong Hyun Lee
Manager of RF Team

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1611-F005	November 08, 2016	- First Approval Report

Table of Contents

1. GENERAL INFORMATION

Applicant:	LG Electronics MobileComm U.S.A., Inc.
Address:	1000 Sylvan Avenue, Englewood Cliffs NJ 07632
FCC ID:	ZNFM200N
EUT Type:	Portable Handset
Model (s):	LG-M200n
Date(s) of Tests:	September 30, 2016 ~ November 2, 2016
Place of Tests:	HCT Co., Ltd.
	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea

2. EUT DESCRIPTION

Model	LG-M200n
EUT Type	Portable Handset
Power Supply	DC 3.85 V
Battery Information	Model: BL-45F1F Type: Li-Ion
Frequency of Operation	13.56 MHz
Transmit Power	14.59 dBuV/m @30 m
Modulation Type	ASK
Antenna Specification	Manufacturer: KOMATECH Co., Ltd. Antenna type: Internal Antenna

3. TEST METHODOLOGY

The measurement procedure described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013) is used in the measurement of the test device.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.225 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2013) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 6.3 of ANSI C63.10. (Version: 2013).

3.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.
Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2006).

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The 10 m semi anechoic chamber used to collect the Conducted and Radiated data is located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4 (Version: 2014). Detailed description of test facilities was submitted to the Commission and accepted dated July 07, 2015 (Registration Number: 90661)

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned loop, dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.
Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.
All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

6. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

* The antennas of this E.U.T are permanently attached.
*The E.U.T Complies with the requirement of §15.203

7. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.82
Radiated Disturbance (9 kHz ~ 30 MHz)	3.40
Radiated Disturbance (30 MHz ~ 1 GHz)	4.80
Radiated Disturbance (1 GHz ~ 18 GHz)	6.07

8. TEST SUMMARY

The results in this report apply only to sample tested

Regulation	Test Type	Range	Result
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(a)	Radiated Electric Field Emissions	13.553MHz to 13.567MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(b)	Radiated Electric Field Emissions	13.410MHz to 13.553MHz and 13.567MHz to 13.710MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(c)	Radiated Electric Field Emission	13.110 MHz to 13.410 MHz and 13.710 MHz to 14.010 MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.209 (d)	Radiated Electric Field Emissions	9kHz to 30MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.209	Radiated Electric Field Emissions	30MHz to 1GHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.207	AC power conducted emissions	150kHz to 30MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(e)	Frequency Stability	0.01% of nominal	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.215(c)	20 dB Bandwidth	-	Pass

9. RADIATED EMISSION MEASUREMENT

Requirement(s): 15.209, 15.225

Except as provided elsewhere in this paragraph the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Minimum Standard: FCC Part 15.225 / 15.209

Rule Part	Frequency (MHz)	Limit
Part 15.209	0.009 ~ 0.490	2400/F(kHz) uV/m@300 m
	0.490 ~1.705	24000/F(kHz) uV/m@30 m
	1.705 ~ 30	30 uV/m@30 m
	30 ~ 88	100 ** uV/m@3 m
	88 ~ 216	150 ** uV/m@3 m
	216 ~ 960	200 ** uV/m@3 m
	Above 960	500 uV/m@3 m

** Except as provided in 15.209(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.

15.225 Operation within the band 13.110 MHz – 14.010 MHz

(a) The field strength of any emissions within the band 13.553 MHz-13.567 MHz shall not exceed 15,848 microvolts/meter (= 84 dBuV/m) at 30 meters.

(b) Within the bands 13.410-13.553 MHz and 13.567 MHz-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter (=50.5dBuV/m) at 30 meters.

(c) Within the bands 13.110-13.410 MHz and 13.710 MHz-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter (=40.5 dBuV/m) at 30 meters.

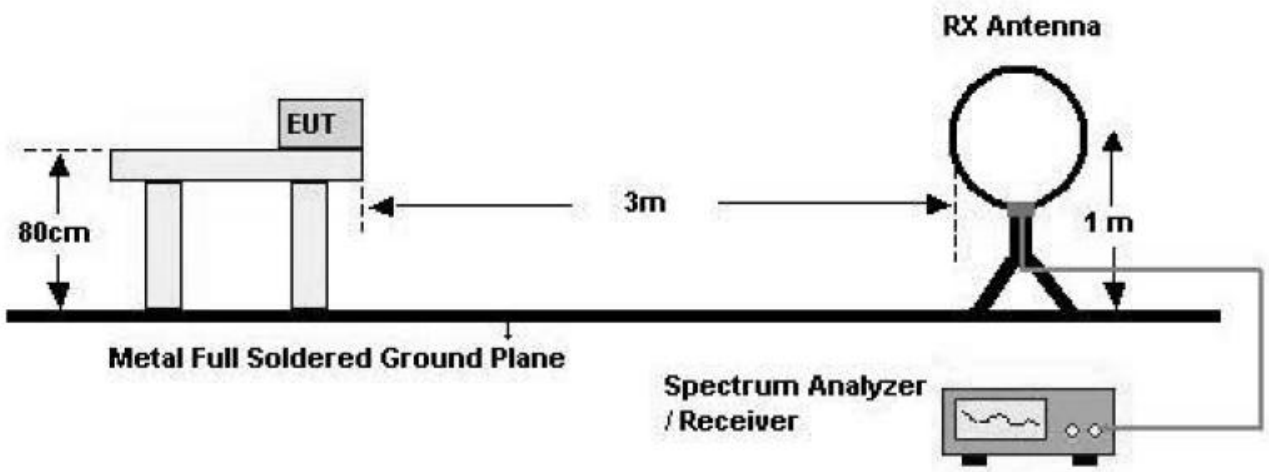
(d) The field strength of any emissions appearing outside of the 13.110 MHz-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

(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.

(f) In the case of radio frequency powered tags designed to operate with a device authorized under this section, the tag may be approved with the device or be considered as a separate device subject to its own authorization. Powered tags approved with a device under a single application shall be labeled with the same identification number as the device.

9.1. RADIATED EMISSION 9 kHz – 30 MHz

Test Set-up



Test Procedure

The EUT was placed on a non-conductive table located on semi-anechoic chamber.
The loop antenna was placed at a location 3m from the EUT. Radiated emissions were measured with the loop antenna both parallel and perpendicular to the plane of the EUT loop antenna and with x, y, z planes in EUT.

The limit is converted from microvolts/meter to decibel microvolts/meter. Sample Calculation:

Corrected Amplitude = Raw Amplitude(dBμV/m) + ACF(dB) + Cable Loss(dB) – Distance Correction Factor

The spectrum analyzer is set to:
Frequency Range = 9 kHz ~ 1 GHz

RBW = 9 kHz (9 kHz ~ 30 MHz)
= 120 kHz (30 MHz ~ 1 GHz)

Trace Mode = max hold
Detector Mode = peak / Quasi-peak
Sweep time = auto

▣ Test Results (Worst case : Y-H)

13.553 MHz-13.567 MHz						
Frequency (MHz)	Read Level (dBuV/m)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.5600(H)	33.26	21.33	-40	14.59	84.00	69.41
13.5588(V)	29.03	21.33	-40	10.36	84.00	73.64

13.410 MHz-13.553 MHz and 13.567 MHz-13.710 MHz						
Frequency (MHz)	Read Level (dBuV/m)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.5530	22.68	21.33	-40	4.01	50.47	46.46
13.6662	22.70	21.33	-40	4.03	50.47	46.44

13.110 MHz – 13.410 MHz and 13.710 MHz-14.010 MHz						
Frequency (MHz)	Read Level (dBuV/m)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.3494	15.74	21.33	-40	-2.93	40.51	43.44
13.7718	16.92	21.33	-40	-1.75	40.51	42.26

9 kHz -30 MHz						
Frequency (MHz)	Read Level (dBuV/m)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
9.0493	8.88	21.39	-40	-9.73	29.54	39.27
14.0892	10.76	21.35	-40	-7.89	29.54	37.43
27.1466	6.91	21.75	-40	-11.34	29.54	40.88
27.1752	6.43	21.75	-40	-11.82	29.54	41.36

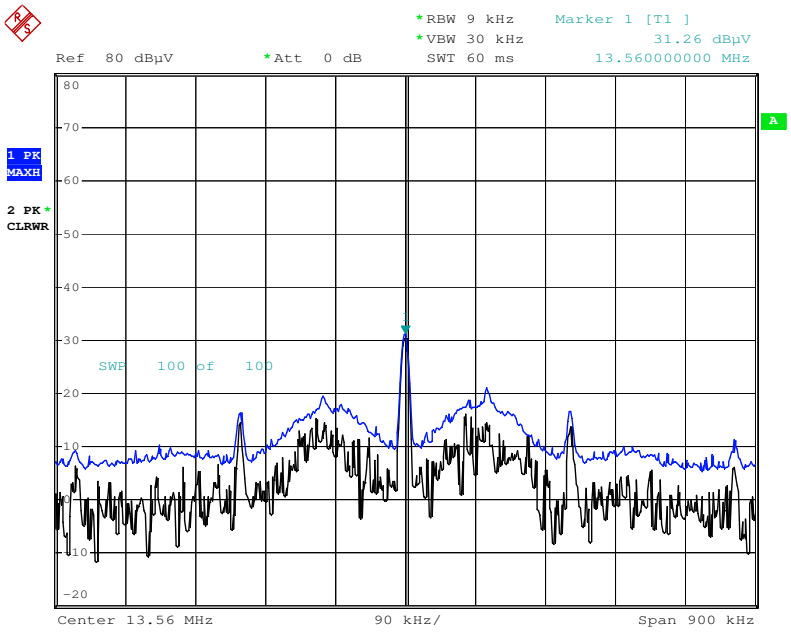
Note : The test results for below 30 MHz is correlated to an open site.

The result on OATS is about 2 dB higher than semi-anechoic chamber(10 m chamber)

1. Distance Correction Below 30 MHz = 40log(3 m/30 m) = - 40 dB
   Measurement Distance : 3 m (Below 30 MHz)
2. Factor = Antenna Factor + Cable Loss
3. Result Level = Read Level + Factor + Distance Correction
4. Margin = Limit – Result Level
5. We have done x, y, z planes in EUT
6. Antenna rotated about its vertical/horizontal axis for maximum response at each azimuth position around the EUT.
7. Worst case of operating mode is type A, analog mode and 106 kbps.

▣ RESULT PLOTS

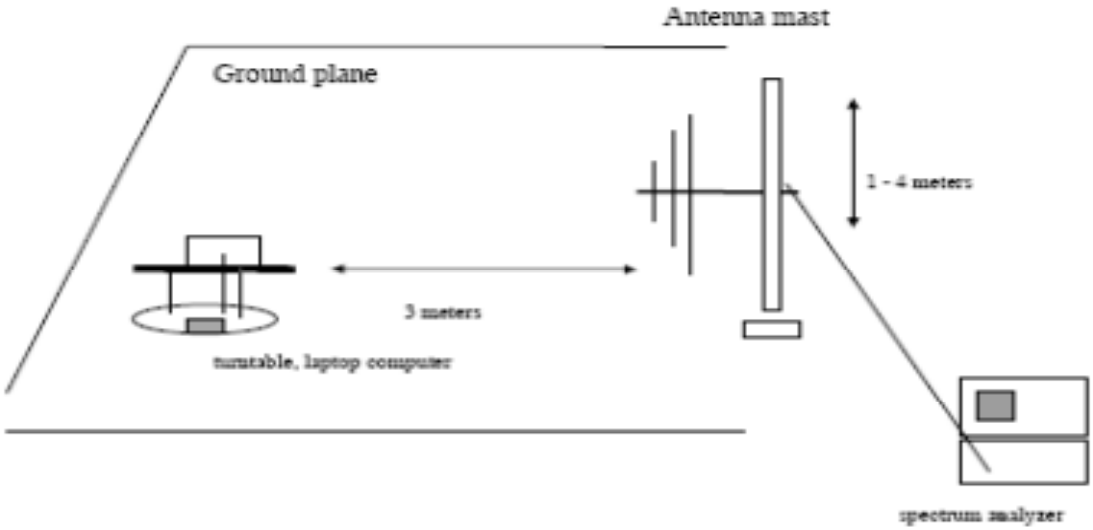
Worst plot for Radiated Emissions.



Note : Only the worst case plots for Radiated Emissions.

9.2. RADIATED EMISSION 30 MHz – 1000 MHz

Test Set-up



Test Procedures: Radiated emissions were measured according to ANSI C63.10.

The EUT was set to transmit at the highest output power.

The EUT was set 3 meter away from the measuring antenna.

▣ Test Results

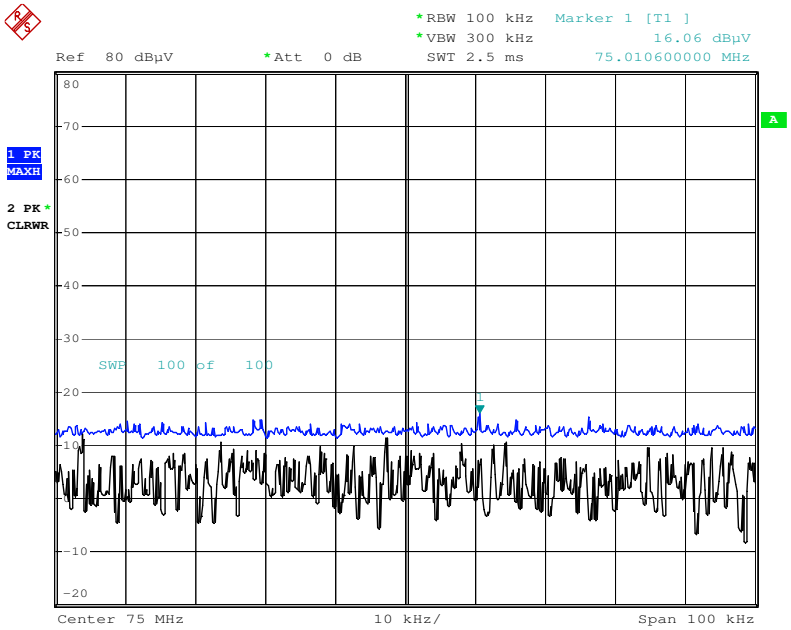
Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV	dB/m	dB	(H/V)	dBuV/m	dBuV/m	dB
32.047	14.94	11.36	0.58	H	26.88	40	13.12
54.3122	14.55	12.1	0.72	H	27.37	40	12.63
*75.0106	16.06	9.25	0.77	V	26.08	40	13.92
*112.385	15.29	10.45	0.79	H	26.53	43.5	16.97
*134.1228	14.81	12.84	0.88	H	28.53	43.5	14.97
160.6612	15.33	13.41	0.95	V	29.69	43.5	13.81

Remark

1. Result Level = Read Level + (Antenna Factor+ Cable Loss)
2. Margin = Limit – Result Level
3. '*' is the result for restricted band.

▣ RESULT PLOTS

Worst plot for Radiated Emissions.



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Note : Only the worst case plots for Radiated Emissions.

10. EMISSION BANDWIDTH PLOT.

Requirement(s):

Test Set-up: The EUT was connected to a spectrum analyzer.

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

RBW = Auto

VBW = Auto

Span = Adequately in the operating Tx.

Detector = Peak

Trace mode = Max hold

Allow the trace to stabilize

11. FREQUENCY TOLERANCE

Procedure: Part 15.225, ANSI 63.10(Version : 2013)

If required, the operating or transmitting frequency of an intentional radiator should be measured in accordance with the following procedure to ensure that the device operates outside certain precluded frequency bands and within the frequency range. No modulation needs to be supplied to the intentional radiator during these tests, unless modulation is required to produce an output, e.g., single-sideband suppressed carrier transmitters.

The frequency stability of the transmitter is measured by:

a) Temperature: The temperature is varied from -20°C to + 50°C using an environmental chamber.
b) For battery operated equipment, the equipment tests shall be performed using a new battery.
c) Test Procedure
- Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- Set the temperature control on the chamber to the highest specified in the regulatoryrequirements for the type of device and allow the oscillator heater and the chamber temperatureto stabilize.
- While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

d) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

Note : Below the measurement result is worst value of the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes afterthe EUT is energized

Startup

Measurement Result:

PERATING FREQUENCY: 13.56 MHz

REFERENCE VOLTAGE: 3.8 VDC

DEVIATION LIMIT: 0.01 % = 1356 Hz

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (MHz)	Frequency Dev. (Hz)	Frequency Dev (%)
100	3.85	-20	13.559395	-605	-0.0044617
100		-10	13.559391	-609	-0.0044912
100		0	13.559386	-614	-0.0045280
100		+10	13.559383	-617	-0.0045501
100		+20(Ref.)	13.559379	-621	-0.0045796
100		+30	13.559376	-624	-0.0046018
100		+40	13.559372	-628	-0.0046313
100		+50	13.559369	-631	-0.0046534
Maximum	4.3	+20	13.559378	-622	-0.0045870
End point	3.6	+20	13.559376	-624	-0.0046018

2 minutes

Measurement Result:

PERATING FREQUENCY: 13.56 MHz

REFERENCE VOLTAGE: 3.8 VDC

DEVIATION LIMIT: 0.01 % = 1356 Hz

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (MHz)	Frequency Dev. (Hz)	Frequency Dev (%)
100	3.85	-20	13.559392	-608	-0.0044838
100		-10	13.559389	-611	-0.0045059
100		0	13.559382	-618	-0.0045575
100		+10	13.559375	-625	-0.0046091
100		+20(Ref.)	13.559371	-629	-0.0046386
100		+30	13.559368	-632	-0.0046608
100		+40	13.559367	-633	-0.0046681
100		+50	13.559363	-637	-0.0046976
Maximum	4.3	+20	13.559370	-630	-0.0046460
End point	3.6	+20	13.559368	-632	-0.0046608

5 minutes

Measurement Result:

PERATING FREQUENCY: 13.56 MHz

REFERENCE VOLTAGE: 3.8 VDC

DEVIATION LIMIT: 0.01 % = 1356 Hz

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (MHz)	Frequency Dev. (Hz)	Frequency Dev (%)
100	3.85	-20	13.559389	-611	-0.0045059
100		-10	13.559386	-614	-0.0045280
100		0	13.559381	-619	-0.0045649
100		+10	13.559375	-625	-0.0046091
100		+20(Ref.)	13.559369	-631	-0.0046534
100		+30	13.559366	-634	-0.0046755
100		+40	13.559363	-637	-0.0046976
100		+50	13.559359	-641	-0.0047271
Maximum	4.3	+20	13.559370	-630	-0.0046460
End point	3.6	+20	13.559373	-627	-0.0046239

10 minutes

Measurement Result:

PERATING FREQUENCY: 13.56 MHz

REFERENCE VOLTAGE: 3.8 VDC

DEVIATION LIMIT: 0.01 % = 1356 Hz

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (MHz)	Frequency Dev. (Hz)	Frequency Dev (%)
100	3.85	-20	13.559389	-611	-0.0045059
100		-10	13.559385	-615	-0.0045354
100		0	13.559380	-620	-0.0045723
100		+10	13.559371	-629	-0.0046386
100		+20(Ref.)	13.559363	-637	-0.0046976
100		+30	13.559359	-641	-0.0047271
100		+40	13.559353	-647	-0.0047714
100		+50	13.559348	-652	-0.0048083
Maximum	4.3	+20	13.559367	-633	-0.0046681
End point	3.6	+20	13.559363	-637	-0.0046976

12. POWERLINE CONDUCTE EMISSIONS

LIMIT

For an intentional radiator which 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 250 microvolt (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	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

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.
5. The EUT is the device operating below 30 MHz.
   - For unterminated the Antenna, the AC line conducted tests are performed with the antenna connected
   - For terminated the Antenna, the AC line conducted tests are performed with a dummy load connected to the EUT antenna output terminal.

Sample Calculation

Quasi-peak(Final Result) = Reading Value + Correction Factor

Test Plots

Unterminate the Antenna

Conducted Emissions (Line 1)

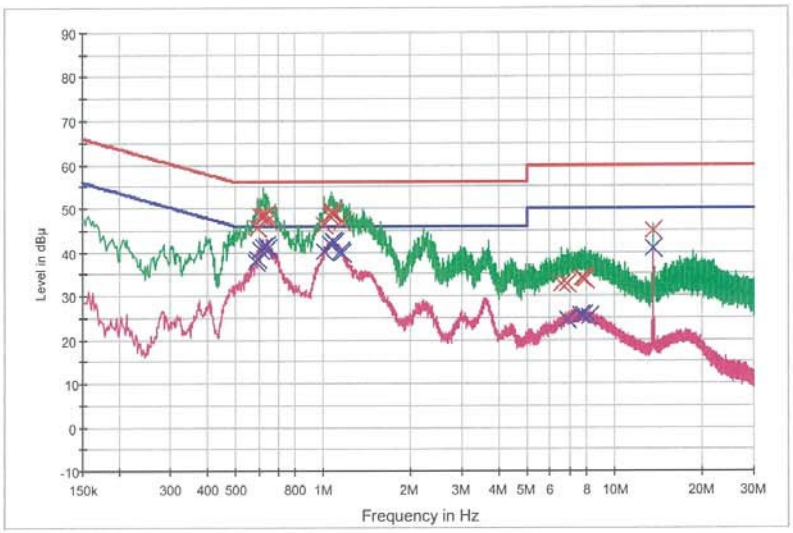
NFC MODE _ UNTERM _L1 1 / 2

HCT TEST Report

Common Information

EUT:	LG-M200n
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE _UNTERMINATION

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.598000	45.7	9.000	Off	L1	9.7	10.3	56.0
0.614000	48.5	9.000	Off	L1	9.7	7.5	56.0
0.624000	48.4	9.000	Off	L1	9.7	7.6	56.0
0.634000	48.3	9.000	Off	L1	9.7	7.7	56.0
0.638000	48.5	9.000	Off	L1	9.7	7.5	56.0
0.648000	47.3	9.000	Off	L1	9.7	8.7	56.0
1.008000	46.3	9.000	Off	L1	9.8	9.7	56.0
1.052000	48.3	9.000	Off	L1	9.8	7.7	56.0
1.066000	48.9	9.000	Off	L1	9.8	7.1	56.0
1.072000	48.0	9.000	Off	L1	9.8	8.0	56.0
1.080000	49.2	9.000	Off	L1	9.8	6.8	56.0
1.166000	47.1	9.000	Off	L1	9.8	8.9	56.0
6.590000	32.8	9.000	Off	L1	10.0	27.2	60.0
6.850000	32.8	9.000	Off	L1	10.0	27.2	60.0
7.762000	34.0	9.000	Off	L1	10.0	26.0	60.0
7.778000	33.9	9.000	Off	L1	10.0	26.1	60.0
7.896000	33.7	9.000	Off	L1	10.0	26.3	60.0
13.560000	44.9	9.000	Off	L1	10.2	15.1	60.0

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NFC MODE _ UNTERM _L1 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.588000	37.8	9.000	Off	L1	9.7	8.2	46.0
0.598000	38.3	9.000	Off	L1	9.7	7.7	46.0
0.614000	40.7	9.000	Off	L1	9.7	5.3	46.0
0.624000	41.2	9.000	Off	L1	9.7	4.8	46.0
0.638000	41.5	9.000	Off	L1	9.7	4.5	46.0
0.650000	40.8	9.000	Off	L1	9.7	5.2	46.0
1.008000	40.2	9.000	Off	L1	9.8	5.8	46.0
1.056000	41.9	9.000	Off	L1	9.8	4.1	46.0
1.078000	42.6	9.000	Off	L1	9.8	3.4	46.0
1.098000	42.1	9.000	Off	L1	9.8	3.9	46.0
1.150000	40.3	9.000	Off	L1	9.8	5.7	46.0
1.166000	39.9	9.000	Off	L1	9.8	6.1	46.0
6.850000	24.7	9.000	Off	L1	10.0	25.3	50.0
7.674000	25.6	9.000	Off	L1	10.0	24.4	50.0
7.778000	25.7	9.000	Off	L1	10.0	24.3	50.0
7.806000	25.7	9.000	Off	L1	10.0	24.3	50.0
8.168000	25.1	9.000	Off	L1	10.0	24.9	50.0
13.560000	40.7	9.000	Off	L1	10.2	9.3	50.0

2016-10-31 오후 8:56:33

Conducted Emissions (Line 2)

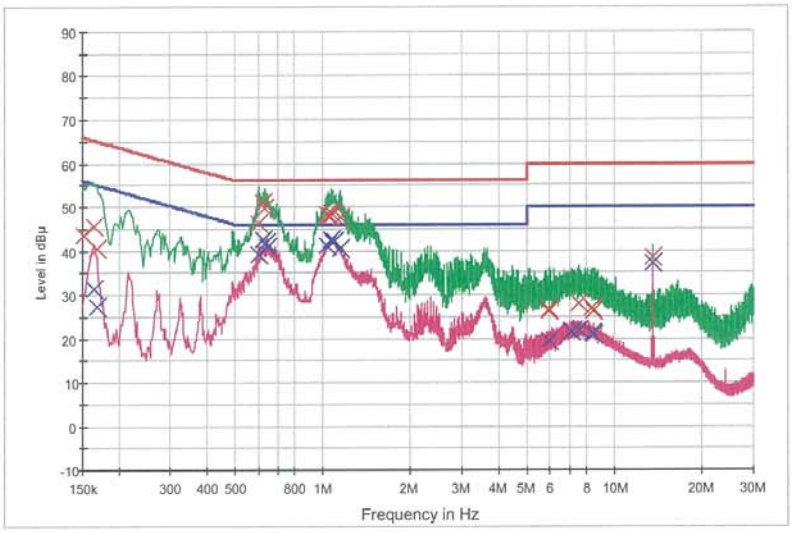
NFC MODE _ UNTERM _N 1 / 2

HCT TEST Report

Common Information

EUT:	LG-M200n
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE _UNTERMINATION

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.152000	43.5	9.000	Off	N	9.7	22.4	65.9
0.164000	45.4	9.000	Off	N	9.7	19.8	65.3
0.168000	40.6	9.000	Off	N	9.7	24.4	65.1
0.600000	46.4	9.000	Off	N	9.7	9.6	56.0
0.626000	50.9	9.000	Off	N	9.7	5.1	56.0
0.634000	49.7	9.000	Off	N	9.7	6.3	56.0
1.032000	48.2	9.000	Off	N	9.7	7.8	56.0
1.050000	48.1	9.000	Off	N	9.7	7.9	56.0
1.062000	48.0	9.000	Off	N	9.7	8.0	56.0
1.068000	48.6	9.000	Off	N	9.7	7.4	56.0
1.082000	48.2	9.000	Off	N	9.7	7.8	56.0
1.142000	47.7	9.000	Off	N	9.7	8.3	56.0
5.970000	26.6	9.000	Off	N	9.9	33.4	60.0
5.982000	26.3	9.000	Off	N	9.9	33.7	60.0
7.540000	27.8	9.000	Off	N	10.0	32.2	60.0
8.354000	27.1	9.000	Off	N	10.0	32.9	60.0
8.526000	26.3	9.000	Off	N	10.0	33.7	60.0
13.560000	38.4	9.000	Off	N	10.1	21.6	60.0

2016-10-31 오후 8:44:55

NFC MODE _ UNTERM _N 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.164000	31.5	9.000	Off	N	9.7	23.8	55.3
0.168000	27.3	9.000	Off	N	9.7	27.8	55.1
0.600000	39.0	9.000	Off	N	9.7	7.0	46.0
0.624000	42.5	9.000	Off	N	9.7	3.5	46.0
0.636000	41.9	9.000	Off	N	9.7	4.1	46.0
0.648000	40.9	9.000	Off	N	9.7	5.1	46.0
1.032000	41.0	9.000	Off	N	9.7	5.0	46.0
1.068000	42.4	9.000	Off	N	9.7	3.6	46.0
1.072000	42.5	9.000	Off	N	9.7	3.5	46.0
1.082000	42.0	9.000	Off	N	9.7	4.0	46.0
1.100000	42.1	9.000	Off	N	9.7	3.9	46.0
1.150000	40.7	9.000	Off	N	9.7	5.3	46.0
5.982000	19.7	9.000	Off	N	9.9	30.3	50.0
7.120000	21.7	9.000	Off	N	10.0	28.3	50.0
7.540000	22.0	9.000	Off	N	10.0	28.0	50.0
8.354000	21.2	9.000	Off	N	10.0	28.8	50.0
8.526000	20.7	9.000	Off	N	10.0	29.3	50.0
13.560000	37.1	9.000	Off	N	10.1	12.9	50.0

2016-10-31 오후 8:44:55

Terminate the Antenna

Conducted Emissions (Line 1)

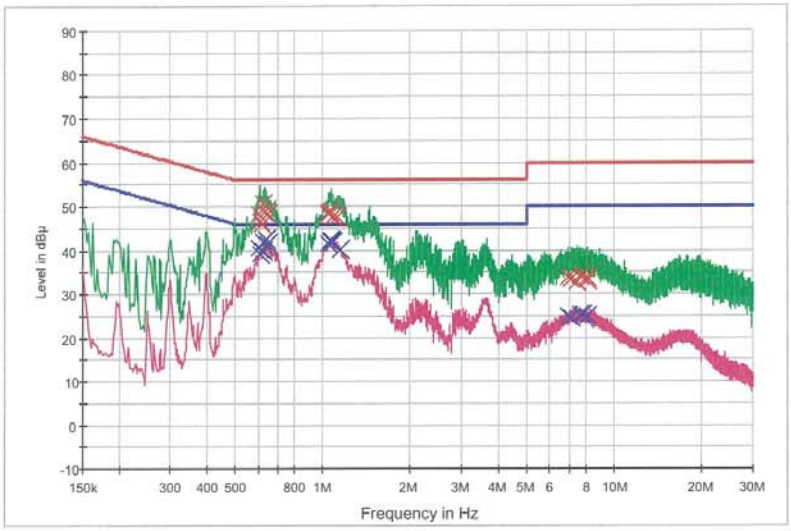
NFC MODE _ TERM _L1 1 / 2

HCT TEST Report

Common Information

EUT:	LG-M200n
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE _TERMINATION

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.600000	48.1	9.000	Off	L1	9.7	7.9	56.0
0.608000	46.5	9.000	Off	L1	9.7	9.5	56.0
0.618000	46.1	9.000	Off	L1	9.7	9.9	56.0
0.624000	50.7	9.000	Off	L1	9.7	5.3	56.0
0.634000	48.6	9.000	Off	L1	9.7	7.4	56.0
0.648000	48.3	9.000	Off	L1	9.7	7.7	56.0
1.042000	48.8	9.000	Off	L1	9.8	7.2	56.0
1.048000	48.2	9.000	Off	L1	9.8	7.8	56.0
1.062000	48.7	9.000	Off	L1	9.8	7.3	56.0
1.066000	49.1	9.000	Off	L1	9.8	6.9	56.0
1.084000	47.5	9.000	Off	L1	9.8	8.5	56.0
1.120000	47.6	9.000	Off	L1	9.8	8.5	56.0
6.988000	33.7	9.000	Off	L1	10.0	26.3	60.0
7.126000	33.4	9.000	Off	L1	10.0	26.6	60.0
7.466000	32.8	9.000	Off	L1	10.0	27.2	60.0
7.640000	34.2	9.000	Off	L1	10.0	25.8	60.0
8.048000	33.8	9.000	Off	L1	10.0	26.2	60.0
8.064000	33.0	9.000	Off	L1	10.0	27.0	60.0

2016-10-31 오후 9:31:45

NFC MODE _ TERM _L1 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.600000	40.4	9.000	Off	L1	9.7	5.6	46.0
0.608000	39.1	9.000	Off	L1	9.7	6.9	46.0
0.624000	41.9	9.000	Off	L1	9.7	4.1	46.0
0.628000	39.9	9.000	Off	L1	9.7	6.1	46.0
0.636000	42.5	9.000	Off	L1	9.7	3.5	46.0
0.648000	41.7	9.000	Off	L1	9.7	4.3	46.0
1.042000	41.5	9.000	Off	L1	9.8	4.5	46.0
1.062000	42.1	9.000	Off	L1	9.8	3.9	46.0
1.066000	42.1	9.000	Off	L1	9.8	3.9	46.0
1.074000	42.0	9.000	Off	L1	9.8	4.0	46.0
1.084000	42.0	9.000	Off	L1	9.8	4.0	46.0
1.154000	40.2	9.000	Off	L1	9.8	5.8	46.0
6.988000	24.8	9.000	Off	L1	10.0	25.2	50.0
7.126000	24.5	9.000	Off	L1	10.0	25.5	50.0
7.640000	25.1	9.000	Off	L1	10.0	24.9	50.0
7.836000	25.3	9.000	Off	L1	10.0	24.7	50.0
8.048000	25.0	9.000	Off	L1	10.0	25.0	50.0
8.064000	24.8	9.000	Off	L1	10.0	25.2	50.0

2016-10-31 오후 9:31:45

Conducted Emissions (Line 2)

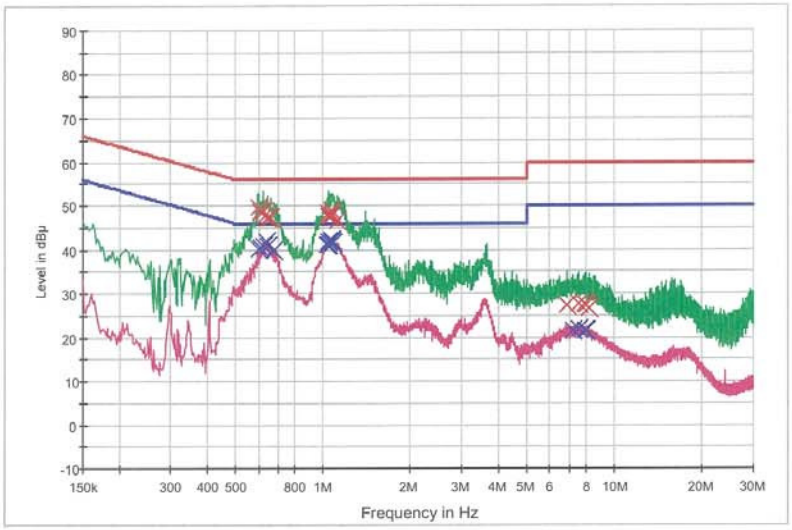
NFC MODE _ TERM _N 1 / 2

HCT TEST Report

Common Information

EUT:	LG-M200n
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE _TERMINATION

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.600000	49.6	9.000	Off	N	9.7	6.4	56.0
0.614000	48.5	9.000	Off	N	9.7	7.5	56.0
0.624000	48.7	9.000	Off	N	9.7	7.3	56.0
0.632000	47.5	9.000	Off	N	9.7	8.5	56.0
0.648000	47.2	9.000	Off	N	9.7	8.8	56.0
0.662000	47.2	9.000	Off	N	9.7	8.8	56.0
1.042000	48.2	9.000	Off	N	9.7	7.8	56.0
1.046000	47.8	9.000	Off	N	9.7	8.2	56.0
1.054000	47.8	9.000	Off	N	9.7	8.2	56.0
1.066000	48.9	9.000	Off	N	9.7	7.1	56.0
1.078000	47.8	9.000	Off	N	9.7	8.2	56.0
1.124000	46.7	9.000	Off	N	9.7	9.3	56.0
6.870000	27.4	9.000	Off	N	9.9	32.6	60.0
7.506000	27.5	9.000	Off	N	10.0	32.5	60.0
7.524000	27.7	9.000	Off	N	10.0	32.3	60.0
7.872000	27.5	9.000	Off	N	10.0	32.5	60.0
7.960000	27.3	9.000	Off	N	10.0	32.7	60.0
8.238000	26.6	9.000	Off	N	10.0	33.4	60.0

2016-10-31 오후 9:22:30

NFC MODE _ TERM _N 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.600000	40.2	9.000	Off	N	9.7	5.8	46.0
0.614000	40.7	9.000	Off	N	9.7	5.3	46.0
0.626000	41.0	9.000	Off	N	9.7	5.0	46.0
0.636000	41.8	9.000	Off	N	9.7	4.2	46.0
0.648000	41.0	9.000	Off	N	9.7	5.0	46.0
0.682000	39.8	9.000	Off	N	9.7	6.2	46.0
1.036000	41.2	9.000	Off	N	9.7	4.8	46.0
1.040000	41.4	9.000	Off	N	9.7	4.6	46.0
1.048000	41.8	9.000	Off	N	9.7	4.2	46.0
1.066000	42.0	9.000	Off	N	9.7	4.0	46.0
1.074000	42.1	9.000	Off	N	9.7	3.9	46.0
1.084000	41.7	9.000	Off	N	9.7	4.3	46.0
7.162000	21.5	9.000	Off	N	10.0	28.5	50.0
7.176000	21.7	9.000	Off	N	10.0	28.3	50.0
7.506000	21.7	9.000	Off	N	10.0	28.3	50.0
7.872000	21.7	9.000	Off	N	10.0	28.3	50.0
7.918000	21.5	9.000	Off	N	10.0	28.5	50.0
7.960000	21.5	9.000	Off	N	10.0	28.5	50.0

2016-10-31 오후 9:22:30

13. LIST OF TEST EQUIPMENT

13.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/28/2015	Annual	100073
Rohde & Schwarz	ESCI / Test Receiver	12/28/2015	Annual	100584
Agilent	N9020A / Signal Analyzer	06/24/2016	Annual	MY51110085
Agilent	N9030A / Signal Analyzer	11/24/2015	Annual	MY49431210
Agilent	N1911A / Power Meter	03/11/2016	Annual	MY45100523
Agilent	N1921A / Power Sensor	03/11/2016	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/30/2015	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	06/14/2016	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	03/09/2016	Annual	KR75303962
Agilent	8493C / Attenuator(10 dB)	07/15/2016	Annual	07560

13.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Audix	AM4000 / Antenna Position Tower	N/A	N/A	N/A
Audix	Turn Table	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Rohde & Schwarz	Loop Antenna	02/23/2016	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/15/2015	Biennial	255
Schwarzbeck	BBHA 9120D / Horn Antenna	05/07/2015	Biennial	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	09/03/2015	Biennial	BBHA9170541
Rohde & Schwarz	FSP / Spectrum Analyzer	09/10/2016	Annual	100688
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/23/2016	Annual	101068-SZ
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	06/24/2016	Annual	8
Wainwright Instruments	WHFX7.0/18G-8SS / High Pass Filter	05/13/2016	Annual	29
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	07/06/2016	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/26/2016	Annual	2
Agilent	8493C-10 / Attenuator(10 dB)	08/11/2016	Annual	76649
CERNEX	CBLU1183540 / Power Amplifier	07/15/2016	Annual	22964
CERNEX	CBL06185030 / Power Amplifier	07/15/2016	Annual	22965
CERNEX	CBL18265035 / Power Amplifier	07/11/2016	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	07/11/2016	Annual	25956