74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea
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FCC / IC NFC REPORT

FCC/IC Certification

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

Address:
1000 Sylvan Avenue, Englewood Cliffs NJ 07632

Date of Issue:
April 23, 2015
Test Site/Location:
HCT CO., LTD., 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea
Report No.: HCT-R-1504-F015-1
HCT FRN: 0005866421

FCC ID:	**ZNFH815**
IC:	**2703C-H815**
APPLICANT:	**LG Electronics MobileComm U.S.A., Inc.**

FCC/IC Model(s):	LG-H815
FCC/IC Additional Model(s):	LGH815, H815, LG-H815P, LGH815P, H815P, LG-H815p, LGH815p, H815p, LG-H815L, LGH815L, H815L, LG-H815l, LGH815l, H815l,LG-H815AR, LGH815AR, H815AR, LG-H815ar, LGH815ar, H815ar, LG-H815K, LGH815K, H815K, LG-H815k, LGH815k, H815k
EUT Type:	Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/**LTE** Phone with Bluetooth, WLAN, NFC
RF Output Field Strength:	13.88 dBuV/m @30 m
Frequency of Operation:	13.5601 MHz
Modulation type:	ASK
FCC Classification:	Low Power Communication Device – Transmitter
FCC Rule Part(s):	FCC Part 15.225 Subpart C
IC Rule :	RSS-210 Issue 8(February 2015), RSS-GEN Issue 4(November 2014)

The measurements shown in this report were made in accordance with the procedures specified in §2.947. 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
: Kyung Soo Kang
Test Engineer of RF Team

Approved by
: Sang Jun Lee
Manager of RF Team

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1504-F015	April 20, 2015	- First Approval Report
HCT-R-1504-F015-1	April 23, 2015	-Revised the EUT Type

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1. GENERAL INFORMATION

Applicant:	LG Electronics MobileComm U.S.A., Inc.
Address:	1000 Sylvan Avenue, Englewood Cliffs NJ 07632
FCC ID:	ZNFH815
IC:	2703C-H815
EUT Type:	Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/**LTE** Phone with Bluetooth, WLAN, NFC
Model name(s):	LG-H815
Additional Model(s):	LGH815, H815, LG-H815P, LGH815P, H815P, LG-H815p, LGH815p, H815p, LG-H815L, LGH815L, H815L, LG-H815l, LGH815l, H815l,LG-H815AR, LGH815AR, H815AR, LG-H815ar, LGH815ar, H815ar, LG-H815K, LGH815K, H815K, LG-H815k, LGH815k, H815k
Date(s) of Tests:	March 27, 2015 ~ April 06, 2015
Place of Tests:	HCT Co., Ltd. 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea (IC Recognition No. : 5944A-3)

2. EUT DESCRIPTION

FCC/IC Model Name	LG-H815
FCC/IC Additional Model	LGH815, H815, LG-H815P,LGH815P,H815P,LG-H815p,LGH815p,H815p LG-H815L, LGH815L, H815L, LG-H815l, LGH815l, H815l LG-H815AR, LGH815AR, H815AR, LG-H815ar, LGH815ar, H815ar
EUT Type	Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/**LTE** Phone with Bluetooth, WLAN, NFC
Power Supply	DC 3.8 V
Battery Type	Li-ion Battery(Standard)
Frequency of Operation	13.5601 MHz
Transmit Power	13.88 dBuV/m @30 m
Modulation Type	ASK
Antenna Specification	Manufacturer: IM-TECH Antenna type: FPCB Antenna

3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Testing Unlicensed Wireless Devices(ANSI C63.10-2009).

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 :2009) 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: 2009).

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.

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. Detailed description of test facilities was submitted to the Commission and accepted dated February 28, 2014 (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. 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) RSS 210(Issue 8) A2.6(a)	Radiated Electric Field Emissions	13.553 MHz to 13.567 MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(b) RSS 210(Issue 8) A2.6(b)	Radiated Electric Field Emissions	13.410 MHz to 13.553 MHz and 13.567 MHz to 13.710 MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(c) RSS 210(Issue 8) A2.6(c)	Radiated Electric Field Emissions	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) RSS 210(Issue 8) A2.6(d)	Radiated Electric Field Emissions	9 kHz to 30 MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.209 RSS GEN(Issue 4) 6.13	Radiated Electric Field Emissions	30 MHz to 1 GHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.207 RSS GEN(Issue 4) 8.8	AC power conducted emissions	150 kHz to 30 MHz	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(e) RSS 210(Issue 8) A2.6	Frequency Stability	0.01% of nominal	Pass
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.215(c)	20 dB Bandwidth	-	Pass
RSS GEN(Issue 4) 6.6	Occupied Bandwidth	-	Pass
RSS GEN(Issue 4) 7.1.2	Receiver Spurious Emissions	30 MHz to 1 GHz	Pass

8. 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 – 14.010 MHz.

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

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 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 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter (=40.5 dBuV/m) at 30 meters.

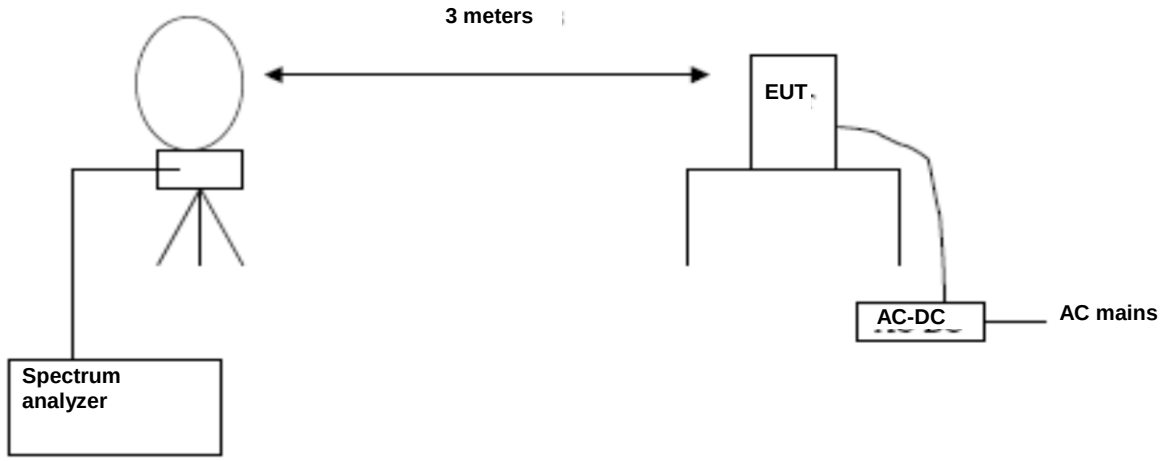
(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

(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.

8.1. RADIATED EMISSION 9 kHz – 30 MHz

Test Set-up



Test Procedure

The EUT was placed on a non-conductive table located on a large open test site.
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 Mode

- Standalone with normal cover
- Standalone with wireless charging cover (open)
- Standalone with wireless charging cover (close)
- With wireless charging pad

Standalone with normal cover

Test Results

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)
13.5609(H)*	28.43	20.37	-40	8.8	84	75.20
13.5594(V)*	24.04	20.37	-40	4.41	84	79.59

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)
13.4537	16.21	20.37	-40	-3.42	50.47	53.89
13.5670	17.55	20.37	-40	-2.08	50.47	52.55

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)
13.3476	12.79	20.37	-40	-6.84	40.51	47.35
13.7718	15.52	20.37	-40	-4.11	40.51	44.62

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)
*7.400	9.78	20.62	-40	-9.6	29.54	39.14
*14.0739	8.43	20.34	-40	-11.23	29.54	40.77
*27.1296	7.81	20.65	-40	-11.54	29.54	41.08
27.081	8.23	20.65	-40	-11.12	29.54	40.66

Standalone with wireless charging cover (open)

Test Results

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)
13.5601(H)*	33.51	20.37	-40	13.88	84	70.12
13.5602(V)*	28.90	20.37	-40	9.27	84	74.73

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)
13.4540	20.9	20.37	-40	1.27	50.47	49.2
13.6668	22.1	20.37	-40	2.47	50.47	48.0

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)
13.3500	17.88	20.37	-40	-1.75	40.51	42.26
13.7718	19.15	20.37	-40	-0.48	40.51	40.99

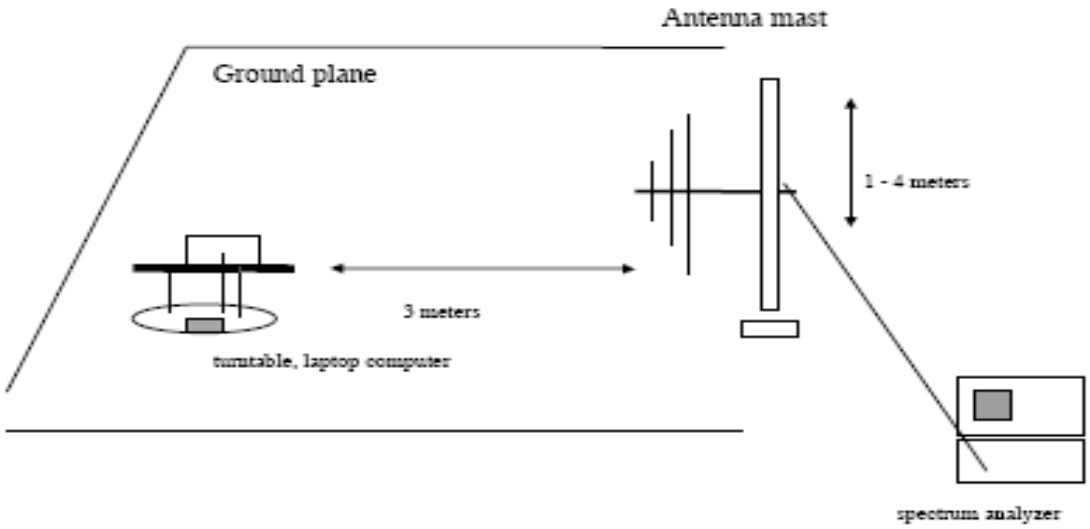
9 kHz -30 MHz						
Frequency (MHz)	Read Level (dBuV/m)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
*10.4499	11.48	20.62	-40	-7.9	29.54	37.44
*14.0739	10.46	20.34	-40	-9.2	29.54	38.74
*27.1746	7.88	20.65	-40	-11.47	29.54	41.01
27.0936	7.14	20.65	-40	-12.21	29.54	41.75

Note :

1. Distance Correction Below 30MHz = 40log(3m/30m) = - 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.
8. '*' is the result for restricted band.
9. We were attached the results of standalone with wireless charging cover (open). Because the results of open condition is higher than close condition.

8.2. 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.

Standalone with normal cover

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
32.17	20.49	11.3	0.58	H	32.37	40	7.63
50.95	19.47	12.38	0.7	H	32.55	40	7.45
*74.89	18.72	11.45	0.77	V	30.94	40	9.06
87.68	18.51	7.93	0.86	H	27.3	40	12.7
145.12	18.43	13.14	1.05	H	32.62	43.5	10.88
*156.82	18.66	13.21	1.1	V	32.97	43.5	10.53

Standalone with wireless charging cover (open)

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
*36.36	20.49	11.49	0.62	H	32.6	40.0	7.4
45.05	19.47	12.3	0.68	H	32.45	40.0	7.55
86.39	18.72	7.96	0.83	V	27.51	40.0	12.49
99.96	18.51	9.27	0.88	H	28.66	43.5	14.84
*128.79	18.43	12.24	1.00	H	31.67	43.5	11.83
140.09	18.66	12.84	1.03	V	32.53	43.5	10.97

Remark

1. Result Level = Read Level + (Antenna Factor+ Cable Loss)
2. Margin = Limit – Result Level
3. '*' is the result for restricted band.
4. We were attached the results of standalone with wireless charging cover (open). Because the results of open condition is higher than close condition.

8.3 RECEIVER SPURIOUS EMISSIONS

IC Rule(s)	**RSS-GEN**
Test Requirements:	**Blow the table**
Operating conditions:	**Under normal test conditions**
Method of testing:	**Radiated**
S/A. Settings:	**F < 1 GHz: RBW: 120 kHz, VBW: 300 kHz (Quasi Peak)** **F > 1 GHz: RBW: 1 MHz, VBW: 1 MHz (Peak)**
Mode of operation:	**Receive**

Frequency (MHz)	Field Strength (microvolts/m at 3 meters)
30 – 88	100
88 - 216	150
216 – 960	200
Above 960	500

Operation Mode: Receive:

30 MHz ~ 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBμV	dB /m	dB	(H/V)	dBμV/m	dBμV/m	dB
No Critical peaks found							

Above 1 GHz

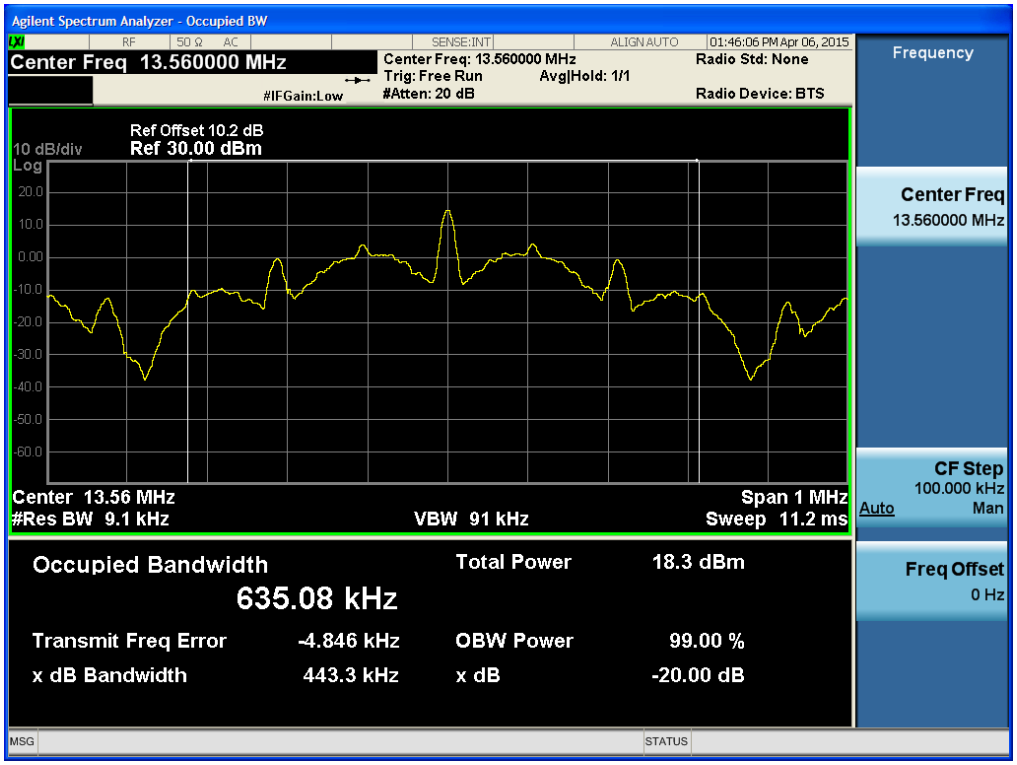
Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBμV	dB /m	dB	(H/V)	dBμV/m	dBμV/m	dB
No Critical peaks found							

9. 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.



10. FREQUENCY TOLERANCE

Procedure: Part 15.225, ANSI 63.10

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.

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

Measurement Result:

VOLTAGE	POWER	Temperature	Frequency	Frequency Error
(%)	(VDC)	(°C)	(MHz)	(Hz)
100%	3.8	-20	13.560160	160.00
100%		-10	13.560170	170.00
100%		0	13.560190	190.00
100%		10	13.560200	200.00
100%		20	13.560220	220.00
100%		30	13.560230	230.00
100%		40	13.560240	240.00
100%		50	13.560260	260.00
Batt. Endpoint	3.27	20	13.560240	240.00

11. 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 with a detachable antenna 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.

Test Plots

Unterminate the Antenna

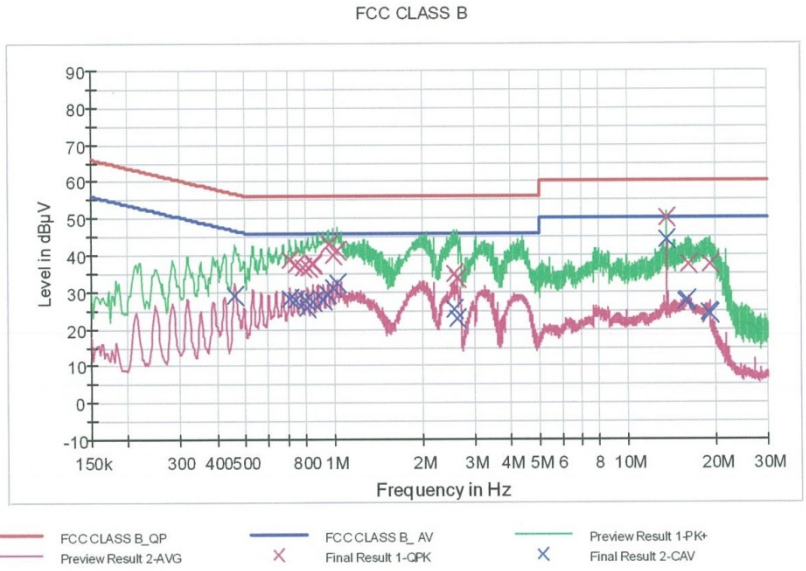
Conducted Emissions (Line 1)

EMI Auto Test(2) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H815
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE(UNTERMINATION)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.708000	38.8	9.000	Off	N	9.7	17.2	56.0
0.744000	37.4	9.000	Off	N	9.7	18.6	56.0
0.780000	36.8	9.000	Off	N	9.7	19.2	56.0
0.816000	36.7	9.000	Off	N	9.7	19.3	56.0
0.846000	37.4	9.000	Off	N	9.7	18.6	56.0
0.850000	37.9	9.000	Off	N	9.7	18.1	56.0
0.956000	42.9	9.000	Off	N	9.7	13.1	56.0
0.992000	40.2	9.000	Off	N	9.7	15.8	56.0
1.026000	41.3	9.000	Off	N	9.7	14.7	56.0
2.576000	35.1	9.000	Off	N	9.8	20.9	56.0
2.584000	34.9	9.000	Off	N	9.8	21.1	56.0
2.644000	33.8	9.000	Off	N	9.8	22.2	56.0
13.560000	50.1	9.000	Off	N	10.1	9.9	60.0
16.166000	37.6	9.000	Off	N	10.2	22.4	60.0
19.014000	37.4	9.000	Off	N	10.3	22.6	60.0
19.036000	37.5	9.000	Off	N	10.3	22.5	60.0

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EMI Auto Test(2) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
19.110000	37.5	9.000	Off	N	10.3	22.5	60.0
19.132000	37.4	9.000	Off	N	10.3	22.6	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.460000	29.2	9.000	Off	N	9.7	17.5	46.7
0.708000	28.3	9.000	Off	N	9.7	17.7	46.0
0.742000	27.8	9.000	Off	N	9.7	18.2	46.0
0.800000	27.9	9.000	Off	N	9.7	18.1	46.0
0.814000	25.7	9.000	Off	N	9.7	20.3	46.0
0.846000	27.5	9.000	Off	N	9.7	18.5	46.0
0.920000	27.6	9.000	Off	N	9.7	18.4	46.0
0.954000	29.4	9.000	Off	N	9.7	16.6	46.0
0.990000	31.2	9.000	Off	N	9.7	14.8	46.0
1.026000	32.4	9.000	Off	N	9.7	13.6	46.0
2.584000	25.5	9.000	Off	N	9.8	20.5	46.0
2.644000	22.9	9.000	Off	N	9.8	23.1	46.0
13.560000	44.4	9.000	Off	N	10.1	5.6	50.0
15.780000	27.4	9.000	Off	N	10.2	22.6	50.0
15.920000	27.7	9.000	Off	N	10.2	22.3	50.0
18.936000	24.5	9.000	Off	N	10.3	25.5	50.0
19.014000	24.2	9.000	Off	N	10.3	25.8	50.0
19.132000	23.8	9.000	Off	N	10.3	26.2	50.0

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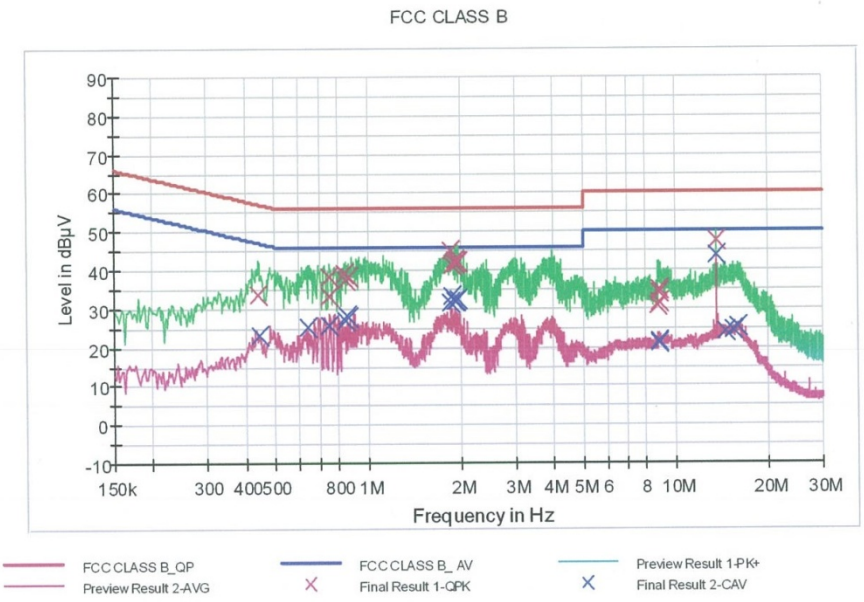
Conducted Emissions (Line 2)

EMI Auto Test(2) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H815
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE(UNTERMINATION)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.442000	33.8	9.000	Off	L1	9.7	23.2	57.0
0.748000	38.3	9.000	Off	L1	9.7	17.7	56.0
0.752000	33.3	9.000	Off	L1	9.7	22.7	56.0
0.838000	39.3	9.000	Off	L1	9.7	16.7	56.0
0.848000	37.7	9.000	Off	L1	9.7	18.3	56.0
0.870000	38.4	9.000	Off	L1	9.7	17.6	56.0
1.862000	45.0	9.000	Off	L1	9.8	11.0	56.0
1.866000	41.2	9.000	Off	L1	9.8	14.8	56.0
1.906000	41.9	9.000	Off	L1	9.8	14.1	56.0
1.914000	42.3	9.000	Off	L1	9.8	13.7	56.0
1.946000	42.0	9.000	Off	L1	9.8	14.0	56.0
1.970000	42.0	9.000	Off	L1	9.8	14.0	56.0
8.778000	30.7	9.000	Off	L1	10.0	29.3	60.0
8.834000	34.3	9.000	Off	L1	10.0	25.7	60.0
8.868000	34.9	9.000	Off	L1	10.0	25.1	60.0
8.872000	34.1	9.000	Off	L1	10.0	25.9	60.0

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EMI Auto Test(2) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
8.876000	31.5	9.000	Off	L1	10.0	28.5	60.0
13.562000	47.7	9.000	Off	L1	10.1	12.3	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.444000	23.3	9.000	Off	L1	9.7	23.7	47.0
0.640000	25.4	9.000	Off	L1	9.7	20.6	46.0
0.752000	25.7	9.000	Off	L1	9.7	20.3	46.0
0.848000	27.0	9.000	Off	L1	9.7	19.0	46.0
0.860000	28.1	9.000	Off	L1	9.7	17.9	46.0
0.870000	27.8	9.000	Off	L1	9.7	18.2	46.0
1.862000	31.7	9.000	Off	L1	9.8	14.3	46.0
1.866000	33.1	9.000	Off	L1	9.8	12.9	46.0
1.906000	31.8	9.000	Off	L1	9.8	14.2	46.0
1.914000	32.2	9.000	Off	L1	9.8	13.8	46.0
1.946000	32.1	9.000	Off	L1	9.8	13.9	46.0
1.970000	32.3	9.000	Off	L1	9.8	13.7	46.0
8.822000	21.1	9.000	Off	L1	10.0	28.9	50.0
8.876000	21.5	9.000	Off	L1	10.0	28.5	50.0
13.560000	43.7	9.000	Off	L1	10.1	6.3	50.0
14.516000	24.2	9.000	Off	L1	10.2	25.8	50.0
15.416000	24.4	9.000	Off	L1	10.2	25.6	50.0
15.970000	25.4	9.000	Off	L1	10.2	24.6	50.0

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Terminate the Antenna

Conducted Emissions (Line 1)

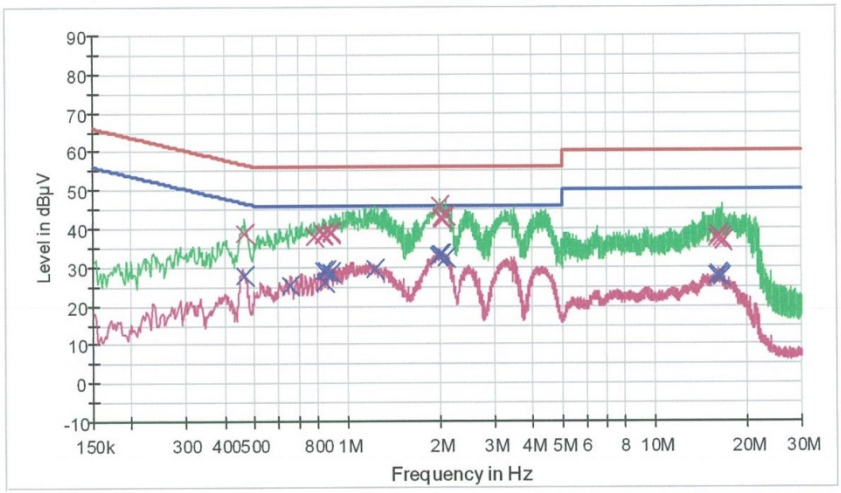
EMI Auto Test(2) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H815
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE(TERMINATION)
Operator Name:	KS KANG

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.466000	38.9	9.000	Off	N	9.7	17.7	56.6
0.786000	38.0	9.000	Off	N	9.7	18.0	56.0
0.834000	38.5	9.000	Off	N	9.7	17.5	56.0
0.842000	38.7	9.000	Off	N	9.7	17.3	56.0
0.884000	38.8	9.000	Off	N	9.7	17.2	56.0
0.890000	39.3	9.000	Off	N	9.7	16.7	56.0
2.008000	46.1	9.000	Off	N	9.8	9.9	56.0
2.016000	42.5	9.000	Off	N	9.8	13.5	56.0
2.026000	42.7	9.000	Off	N	9.8	13.3	56.0
2.030000	43.0	9.000	Off	N	9.8	13.0	56.0
2.040000	42.5	9.000	Off	N	9.8	13.5	56.0
2.102000	43.2	9.000	Off	N	9.8	12.8	56.0
15.874000	37.4	9.000	Off	N	10.2	22.6	60.0
16.090000	38.3	9.000	Off	N	10.2	21.7	60.0
16.110000	38.4	9.000	Off	N	10.2	21.6	60.0
16.540000	37.3	9.000	Off	N	10.2	22.7	60.0

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EMI Auto Test(2) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
16.544000	37.4	9.000	Off	N	10.2	22.6	60.0
16.558000	36.6	9.000	Off	N	10.2	23.4	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.466000	27.7	9.000	Off	N	9.7	18.9	46.6
0.652000	25.3	9.000	Off	N	9.7	20.7	46.0
0.834000	29.2	9.000	Off	N	9.7	16.8	46.0
0.844000	26.1	9.000	Off	N	9.7	19.9	46.0
0.860000	29.1	9.000	Off	N	9.7	16.9	46.0
0.884000	28.7	9.000	Off	N	9.7	17.3	46.0
1.236000	29.4	9.000	Off	N	9.7	16.6	46.0
1.974000	33.0	9.000	Off	N	9.8	13.0	46.0
2.004000	33.2	9.000	Off	N	9.8	12.8	46.0
2.008000	33.4	9.000	Off	N	9.8	12.6	46.0
2.034000	33.3	9.000	Off	N	9.8	12.7	46.0
2.102000	32.5	9.000	Off	N	9.8	13.5	46.0
15.874000	27.7	9.000	Off	N	10.2	22.3	50.0
16.110000	28.2	9.000	Off	N	10.2	21.8	50.0
16.174000	28.1	9.000	Off	N	10.2	21.9	50.0
16.328000	28.0	9.000	Off	N	10.2	22.0	50.0
16.540000	27.3	9.000	Off	N	10.2	22.7	50.0
16.544000	27.2	9.000	Off	N	10.2	22.8	50.0

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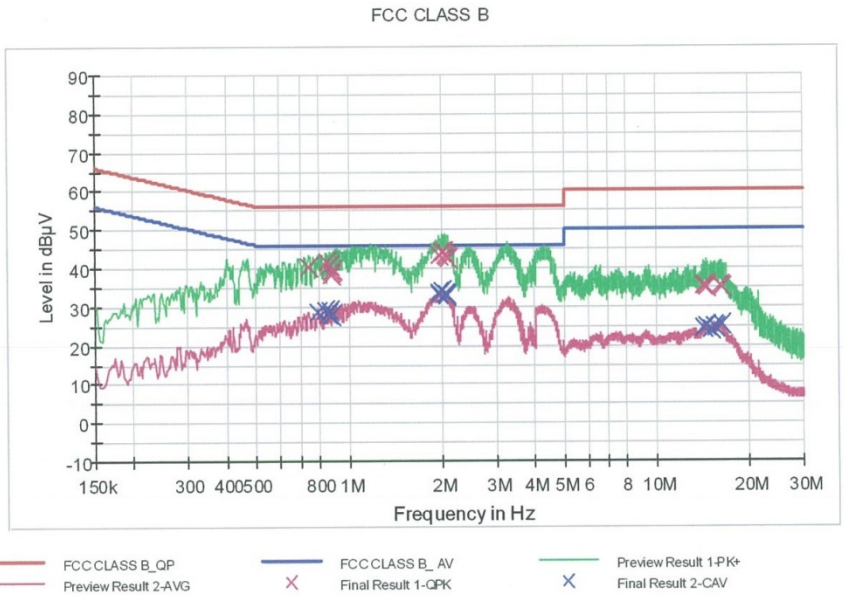
Conducted Emissions (Line 2)

EMI Auto Test(2) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H815
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE(TERMINATION)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.744000	40.4	9.000	Off	L1	9.7	15.6	56.0
0.846000	41.6	9.000	Off	L1	9.7	14.4	56.0
0.870000	41.0	9.000	Off	L1	9.7	15.0	56.0
0.876000	39.1	9.000	Off	L1	9.7	16.9	56.0
0.880000	38.3	9.000	Off	L1	9.7	17.7	56.0
0.884000	39.7	9.000	Off	L1	9.7	16.3	56.0
1.960000	43.6	9.000	Off	L1	9.8	12.4	56.0
2.008000	44.4	9.000	Off	L1	9.8	11.6	56.0
2.032000	44.2	9.000	Off	L1	9.8	11.8	56.0
2.046000	43.3	9.000	Off	L1	9.8	12.7	56.0
2.064000	43.1	9.000	Off	L1	9.8	12.9	56.0
2.096000	42.7	9.000	Off	L1	9.8	13.3	56.0
14.248000	35.3	9.000	Off	L1	10.2	24.7	60.0
14.354000	35.2	9.000	Off	L1	10.2	24.8	60.0
14.370000	35.3	9.000	Off	L1	10.2	24.7	60.0
14.550000	35.1	9.000	Off	L1	10.2	24.9	60.0

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EMI Auto Test(2) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
16.174000	35.3	9.000	Off	L1	10.2	24.7	60.0
16.196000	35.1	9.000	Off	L1	10.2	24.9	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.792000	28.6	9.000	Off	L1	9.7	17.4	46.0
0.842000	29.1	9.000	Off	L1	9.7	16.9	46.0
0.860000	28.1	9.000	Off	L1	9.7	17.9	46.0
0.864000	29.1	9.000	Off	L1	9.7	16.9	46.0
0.870000	29.2	9.000	Off	L1	9.7	16.8	46.0
0.876000	27.8	9.000	Off	L1	9.7	18.2	46.0
1.952000	33.5	9.000	Off	L1	9.8	12.5	46.0
1.960000	33.7	9.000	Off	L1	9.8	12.3	46.0
2.006000	34.1	9.000	Off	L1	9.8	11.9	46.0
2.048000	33.2	9.000	Off	L1	9.8	12.8	46.0
2.066000	32.8	9.000	Off	L1	9.8	13.2	46.0
2.072000	33.1	9.000	Off	L1	9.8	12.9	46.0
14.248000	24.5	9.000	Off	L1	10.2	25.5	50.0
14.550000	24.8	9.000	Off	L1	10.2	25.2	50.0
15.054000	24.0	9.000	Off	L1	10.2	26.0	50.0
15.398000	24.7	9.000	Off	L1	10.2	25.3	50.0
15.548000	24.6	9.000	Off	L1	10.2	25.4	50.0
16.316000	25.1	9.000	Off	L1	10.2	24.9	50.0

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12. LIST OF TEST EQUIPMENT

12.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216/ LISN	01/13/2015	Annual	100073
Agilent	E4440A/ Spectrum Analyzer	03/18/2015	Annual	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	05/23/2014	Annual	MY51110063
Agilent	N1911A/Power Meter	01/15/2015	Annual	MY45100523
Agilent	N1921A /POWER SENSOR	07/09/2014	Annual	MY45241059
Agilent	87300B/Directional Coupler	12/08/2014	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	05/19/2014	Annual	11275
ITECH	IT6720 / DC POWER SUPPLY	11/04/2014	Annual	010002156287001199
Rohde & Schwarz	CBT / BLUETOOTH TESTER	05/07/2014	Annual	100422
Agilent	8493C / Attenuator(10 dB)	07/21/2014	Annual	76649

12.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Schwarzbeck	VULB 9160/ TRILOG Antenna	10/10/2014	Biennial	3368
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	09/04/2014	Annual	10094
CERNEX	CBL18265035 / POWER AMP	07/23/2014	Annual	22966
Schwarzbeck	BBHA 9120D/ Horn Antenna	07/05/2013	Biennial	1151
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	07/05/2013	Biennial	BBHA9170541
Rohde & Schwarz	FSP / Spectrum Analyzer	10/23/2014	Annual	836650/016
Wainwright Instrument	WHF3.0/18G-10EF / High Pass Filter	06/23/2014	Annual	8
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	06/17/2014	Annual	1
Rohde & Schwarz	LOOP ANTENNA	09/03/2014	Biennial	1513-175
CERNEX	CBL06185030 / POWER AMP	07/21/2014	Annual	22965
CERNEX	CBLU1183540 / POWER AMP	07/21/2014	Annual	22964