74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 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:

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-F025

HCT FRN: 0005866421

FCC ID: ZNFH818P

APPLICANT: LG Electronics MobileComm U.S.A., Inc.

FCC Model(s):

Additional Model(s):

LG-H818P

LGH818P, H818P, LG-H818p, LGH818p, H818p

EUT Type: Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA Phone with Bluetooth, WLAN, NFC

RF Output Field Strength: 10.37 dBuV/m @30 m

Frequency of Operation: 13.5604 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 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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F-01P-02-014 (Rev.00) HCT Co.,LTD.



Report No.: HCT-R-1504-F025 Model: LG-H818P Page 2 of 26

# **Version**

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1504-F025	April 23, 2015	- First Approval Report

Report No.: HCT-R-1504-F025 Model: LG-H818P

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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: ZNFH818P

EUT Type: Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA Phone with Bluetooth, WLAN, NFC

Model name(s): LG-H818P

Additional Model(s): LGH818P, H818P, LG-H818p,LGH818p, H818p

**Date(s) of Tests:** April 16, 2015 ~ April 21, 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 Model Name	LG-H818P
Additional Model	LGH818P, H818P, LG-H818p,LGH818p,H818p
EUT Type	Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA Phone with Bluetooth, WLAN, NFC
Power Supply	DC 3.85 V
Battery Type	Li-ion Battery(Standard)
Frequency of Operation	13.5604 MHz
Transmit Power	10.37 dBuV/m @30 m
Modulation Type	ASK
Antenna Specification	Manufacturer: IMTECH
/	Antenna type: FPCB Antenna



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### 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.



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# 3.5 STANDARDS

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance With

FCC Part 15.Subpart C

Regulation	Measurement standard	Range	
Title 47 of the CFR: Part 15 Subpart (c),	ANOLOGO 40-0000	40 550MH- 4- 40 507MH-	
Clause 15.225(a)	ANSI C63.10:2009	13.553MHz to 13.567MHz	
Title 47 of the CFR: Part 15 Subpart (c),	ANCI 002 40-2000	putaida afaba 42 440 44 040 Milla band	
Clause 15.225(d)	ANSI C63.10:2009	outside of the 13.110-14.010 MHz band	
Title 47 of the CFR: Part 15 Subpart (c),	ANCI C62 40:2000	9kHz to 30MHz	
Clause 15.209	ANSI C63.10:2009	SKUZ 10 SOIVIUZ	
Title 47 of the CFR: Part 15 Subpart (c),	ANSI C63.10:2009	30MHz to 1GHz	
Clause 15.209	ANSI C63. 10.2009	30WHZ to TGHZ	
Title 47 of the CFR: Part 15 Subpart (c),	ANSI C63.10:2009	150kHz to 30MHz	
Clause 15.207	ANSI C63. 10.2009	130KHZ to 30WHZ	
Title 47 of the CFR: Part 15 Subpart (c),	ANCI C62 40:2000	0.049/ of nominal	
Clause 15.225(e)	ANSI C63.10:2009	0.01% of nominal	
Title 47 of the CFR: Part 15 Subpart (c),	ANCI C62 40,2000		
Clause 15.215(c)	ANSI C63.10:2009	-	



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### 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





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# 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)	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 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)	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



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### 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

Millimani Standard: 1 00 1 drt 10:2207 10:203						
Rule Part	Frequency (MHz)	Limit				
	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				
Part 15.209	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				

<sup>\*\*</sup> 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.

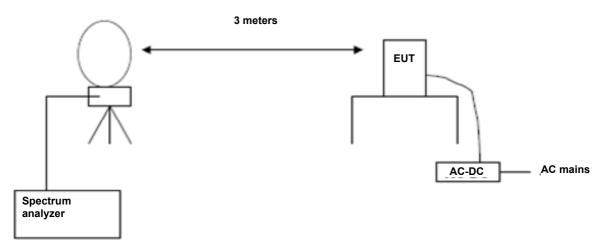




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### 8.1. RADIATED EMISSION 9 kHz - 30 MHz

### **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**  $= 9 \text{ kHz} (9 \text{ kHz} \sim 30 \text{ MHz})$ = 120 kHz (30 MHz ~ 1 GHz)

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



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# **Test Results**

13.553 MHz-13.567 MHz							
Frequency	Read Level Ant.Factor+Cable Distance Result Level Limit						
		Loss	Correction				
(MHz)	(dBuV/m)@3m	(dB/m)	(dB)	(dBuV/m)@30m	(dBuV/m)@30m	(dB)	
13.5604(H)	30.00	20.37	-40.00	10.37	84.00	73.63	
13.5594(V)	24.88	20.37	-40.00	5.25	84.00	78.75	

13.410 MHz-13.553 MHz and 13.567 MHz-13.710 MHz									
Frequency	Read Level	Read Level Ant.Factor+Cable Distance Result Level Limit Marg							
		Loss	Correction						
(MHz)	(dBuV/m)@3m	(dB/m)	(dB)	(dBuV/m)@30m	(dBuV/m)@30m	(dB)			
13.4549	18.26	20.37	-40	-1.37	50.47	51.84			
13.5670	18.12	20.37	-40	-1.51	50.47	51.98			

	13.110 MHz – 13.410 MHz and 13.710 MHz-14.010 MHz							
Frequency	Read Level Ant.Factor+Cable Distance Result Level Limit Ma							
		Loss	Correction					
(MHz)	(dBuV/m)@3m	(dB/m)	(dB)	(dBuV/m)@30m	(dBuV/m)@30m	(dB)		
13.3488	15.60	20.37	-40.00	-4.03	40.51	44.54		
13.7730	14.82	20.37	-40.00	-4.81	40.51	45.32		

9 kHz -30 MHz							
Frequency	Read Level	Ant.Factor+Cable	Distance	Result Level	Limit	Margin	
		Loss	Correction				
(MHz)	(dBuV/m)@3m	(dB/m)	(dB)	(dBuV/m)@30m	(dBuV/m)@30m	(dB)	
7.8433	9.25	20.37	-40.00	-10.38	29.54	39.92	
14.0839	8.16	20.37	-40.00	-11.47	29.54	41.01	
27.1231	7.65	20.65	-40.00	-11.7	29.54	41.24	
27.1208	6.86	20.65	-40.00	-12.49	29.54	42.03	



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#### Note:

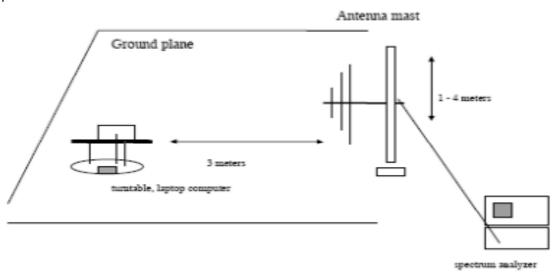
- Distance Correction Below 30MHz = 40log(3m/30m) = 40 dB
   Measurement Distance : 3 m (Below 30 MHz)
- 2. Factor = Antenna Factor + Cable Loss
- 3. Result Level = Read Level + Factor + Distance Correction
- 4. Margin = Limit Result Level
- 5. We have done x, y, z planes in EUT
- 6. Antenna rotated 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.



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# 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.

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB <i>μ</i> V	dB /m	dB	(H/V)	dB <i>μ</i> V/m	dB <i>μ</i> V/m	dB
35.16	19.87	11.49	0.52	Н	31.88	40.00	8.12
45.32	20.54	12.30	0.60	Н	33.44	40.00	6.56
51.96	21.23	12.38	0.63	V	34.24	40.00	5.76
82.45	23.28	8.19	0.85	Н	32.32	40.00	7.68
*125.79	22.68	12.40	1.12	Н	36.20	43.50	7.30
*149.98	21.59	13.05	1.23	V	35.87	43.50	7.63

### Remark

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





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# 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

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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%		-20	13.559803	-197.00
100%		-10	13.559818	-182.00
100%		0	13.559824	-176.00
100%	3.85	10	13.559850	-150.00
100%	3.65	20	13.559868	-132.00
100%		30	13.559886	-114.00
100%		40	13.559902	-98.00
100%		50	13.559919	-81.00
Batt. Endpoint	3.27	20	13.559851	-149.00

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# 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:

Francisco Ponco (MILE)	Limits (dBμV)					
Frequency Range (MHz)	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**

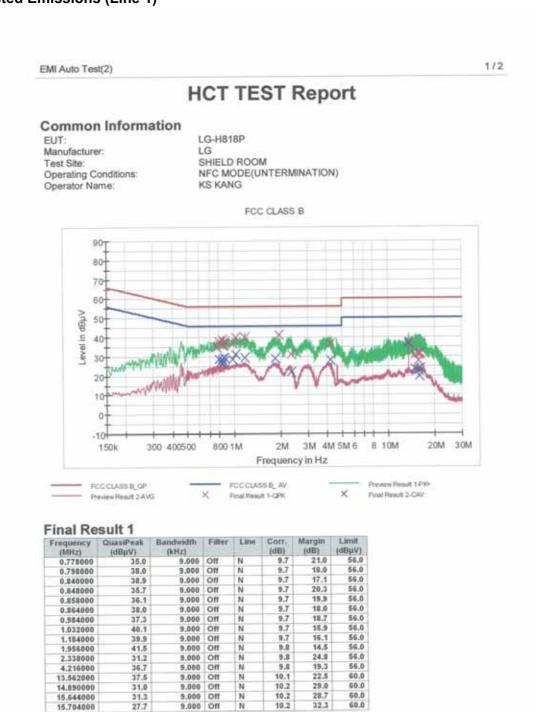
- 1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
- 2. The EUT is connected via LISN to a test power supply.
- 3. The measurement results are obtained as described below:
- Detectors Quasi Peak and Average Detector.
- 5. The EUT is the device with a detachable antenna operating 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.





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# **Test Plots Unterminate the Antenna Conducted Emissions (Line 1)**



10:07:56 4/10/2015



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EMI Auto Test(2)

2/2

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
15,956000	31.1	9,000	Off	N	10.2	28.9	60.0
16.016000	31.7	9,000	Off	N	10.2	28.3	60.0

#### Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.798000	28.7	9.000	no	N:	9.7	17.3	46.0
0.826000	27.4	9,000	110	N	9.7	18.6	46.0
0.840000	28.8	9.000	Off	N.	9.7	17.2	46.0
0.848000	26.0	9,000	Off	N	9.7	20.0	46.0
0.858000	27.3	9.000	Off	N	9.7	18.7	46.0
0.864000	29,4	9.000	Off	N	9.7	16.6	46.0
0.984000	28.8	9.000	Off	N	9.7	17.2	46.0
1.032000	31.3	9.000	Off	N	9.7	14.7	46.0
1,172000	29.7	9,000	Off	N	9.7	16.3	46.0
1.846000	29.1	9.000	Off	N	9.8	16.9	46.0
2,338000	21.9	9.000	Off	N	9,8	24.1	46.0
4,216000	28.0	9.000	Off	N	9.8	18,0	46.0
13.560000	36.5	9.000	Off	N	10.1	13.5	50,6
14.890000	23.6	9.000	Off	N	10.2	26.4	50.0
15,644000	23.1	9,000	Off	N	10.2	26.9	50.0
15.704000	22.6	9.000	Off	N	10.2	27.4	50.0
15.956000	20.0	9.000	110	N	10.2	30.0	50.0
16,178000	23.5	9,000	Off	N.	10.2	26.5	50.0

4/10/2015 10:07:56

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# **Conducted Emissions (Line 2)**

1/2 EMI Auto Test(2)

# **HCT TEST Report**

### **Common Information**

EUT:

LG-H818P

Manufacturer:

LG

Test Site:

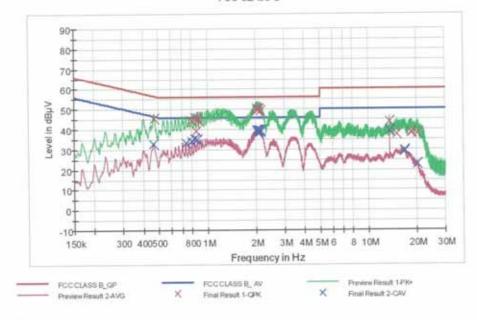
SHIELD ROOM

Operating Conditions: Operator Name:

NFC MODE(UNTERMINATION)

KS KANG

#### FCC CLASS B



#### **Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.468800	45.4	9.000	Off	L1	9.7	11.1	56.5
0.800000	44.3	9,000	Off	L1	9.7	11.7	56.0
0.836000	45.7	9.000	Off	L1	9.7	10,3	56.0
0.862000	39.2	9,000	Off	1.1	9.7	16.8	56.0
0.868000	45.9	9,000	Off	L1	9.7	10.1	56.0
0.874000	44.6	9,000	Off	L1	9.7	11.4	56.0
2.038000	50,4	9,000	Off	1.1	9,8	5.6	56.0
2.046000	49.5	9,000	Off	L1	9.8	6.5	56.0
2.072000	50.2	9.000	Off	L1	9.8	5.8	56.0
2.076000	50.1	9.000	Off	L1	9.8	5.9	56.0
2,106000	50.2	9.000	Off	L1	9.8	5.8	56.6
2,136000	49.2	9,000	Off	L1	9.8	6.8	56.
13,560000	43.9	9,000	Off	L1	10.1	16.1	60.0
14,996000	37.5	9,000	Off	L1	10.2	22.5	60,
15,072000	37.4	9.000	Off	L1	10.2	22.6	60.
18,378000	38.2	9.000	Off	L1	10.3	21.8	60.

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EMI Auto Test(2)

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Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
18,584000	38.2	9.000	Off	L1	10.3	21,8	60.0
20,164000	37.9	9,000	Off	L1	10.3	22.1	60.0

#### Final Result 2

Frequency (MHz)	GAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.466000	33.0	9.000	Off	L1	9.7	13.6	46.6
0.738000	33,4	9,000	Off	L1	9.7	12.6	46.0
0.802000	34.0	9.000	Off	L1	9.7	12.0	46.0
0,836000	35.3	9,000	110	L1	9.7	10.7	46.0
0.868000	35.1	9.000	Off	L1	9.7	10,9	46.0
0.872000	35.0	9.000	Off	L1	9.7	11.0	46.0
2.038000	39.5	9.000	Off	L1	9.8	6.5	46.0
2.064000	38.5	9.000	Off	L1	9.8	7.5	46.0
2.076000	39.4	9,000	Off	L1	9.8	6.6	46.0
2,106000	39.7	9,000	Off	L1	9,8	6.3	46.0
2.138000	39,4	9,000	Off	L1	9.8	6.6	46.0
2.144000	38.9	9.000	Off	L1	9.8	7.1	46.0
13.560000	39,0	9.000	011	L1	10.1	11.0	50.0
16.746000	29.6	9.000	Off	L1	10.2	20.4	50.0
16,808000	29.5	9.000	Ott	L1	10.2	20.5	50.0
16.860000	29.2	9.000	Off	L1	10.2	20.8	50.0
16.866000	29.3	9.000	Off	L1	10.2	20.7	50.0
20.164000	22.8	9.000	Off	L1	10.3	27.2	50.0

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### **Terminate the Antenna**

# **Conducted Emissions (Line 1)**

1/2 EMI Auto Test(2)

# **HCT TEST Report**

# **Common Information**

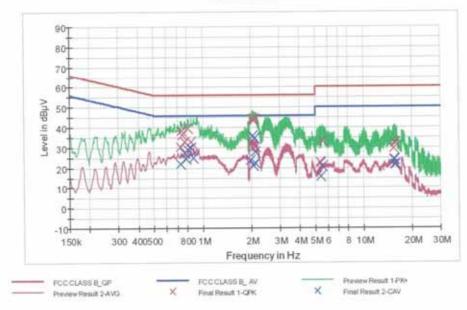
LG-H818P EUT: LG Manufacturer.

SHIELD ROOM Test Site:

NFC MODE(TERMINATION) KS KANG Operating Conditions:

Operator Name:

#### FCC CLASS B



#### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.736000	30.2	9.000	110	N	9.7	25.8	56.0
0.742000	38.3	9,000	110	N	9.7	17.7	56,0
0.746000	36.3	9.000	Off	N	9.7	19.7	56.0
0.778000	32.8	9.000	Off	N	9,7	23,2	56.0
0.814000	39.6	9.000	110	N	9,7	16,4	56.0
0.850000	32.7	9.000	Off	N	9.7	23.3	56.0
2.026000	44.0	9.000	Off	N	9.8	12.0	56.0
2.050000	43.6	9,000	Off	N	9.8	12.4	56.0
2.054000	29.9	9.000	Off	N	9.8	26.1	56.0
2,080000	43.2	9,000	Off	N	9.8	12.8	56.0
2.108000	44.2	9.000	Off	N	9.8	11.8	56.0
2.134000	30.2	9.000	Off	N:	9.8	25.8	56.0
5,344000	22.7	9.000	Off	N	9.9	37.3	60.6
5,458000	22.3	9.000	Off	N	9.9	37.7	60.0
5.560000	33.3	9,000	Off	N	9.9	26.7	60,6
15,444000	29.6	9,000	Off	N	10.2	30.4	60.6

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EMI Auto Test(2)

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Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
15.604000	32.4	9,000	Off	N.	10.2	27.6	60.0
15.672000	32.1	9.000	Off	N	10.2	27.9	60.0

# Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.736000	21.8	9,000	Off	N	9.7	24.2	46.0
0.774000	27.5	9,000	Off	N	9.7	18.5	46.0
0.794000	24.6	9.000	Off	N	9.7	21,4	46.0
0.812000	28.9	9,000	Off	N	9.7	17.1	46.0
0.848000	29.7	9.000	110	N	9.7	16,3	46.0
0.874000	25.0	9.000	Off	N.	9.7	21.0	46.0
1.990000	23.6	9.000	Off	N	9.8	22.4	46.0
2.050000	35.9	9,000	Off	N	9.8	10.1	46.0
2.078000	20.9	9,000	Off	N	9.8	25.1	46.0
2.108000	34.5	9,000	110	N	9.8	11.5	46.0
2.112000	27.9	9,000	Off	N	9.8	18.1	46.0
2.132000	22.3	9.000	Off	N	9.8	23.7	46.0
5,456000	15.5	9.000	Off	N	9.9	34.5	50.0
5,560000	20.7	9.000	Off	N	9.9	29.3	50.0
15.444000	24.1	9.000	Off	N	10.2	25.9	50.0
15.576000	21.3	9.000	110	N	10.2	28.7	50.0
15,604000	24.1	9.000	Off	N	10.2	25.9	50.0
15.672000	21.5	9.000	Off	N	10.2	28.5	50.0

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# **Conducted Emissions (Line 2)**

1/2 EMI Auto Test(2)

# **HCT TEST Report**

#### Common Information

EUT: Manufacturer: Test Site:

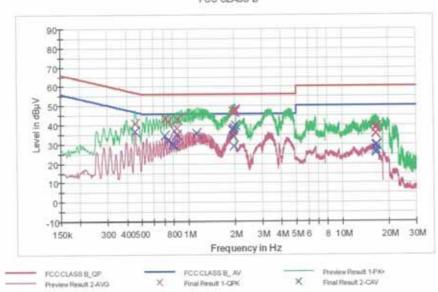
Operating Conditions: Operator Name:

LG-H818P LG

SHIELD ROOM NFC MODE(TERMINATION)

KS KANG

#### FCC CLASS B



#### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.456000	41.0	9,000	110	L1	9.7	15.8	56.8
0.712000	43.2	9,000	Off	L1	9.7	12.8	56.0
0.742000	41.8	9.000	Off	L1	9.7	14.2	56.0
0.824000	37.3	9,000	Off	L1	9.7	18.7	56.0
0.852000	38.3	9.000	Off	L1	9.7	17.7	56.0
0,858000	43.0	9.000	Off	L1	9.7	13.0	56.0
1,958000	47.0	9.000	Off	L1	9.8	9.0	56.0
1.962000	38.1	9,000	Off	L1	9.8	17.9	56.0
1.988000	47.3	9,000	Off	L1	9.8	8.7	56.6
1.996000	46.6	9.000	Off	L1	9.8	9.4	56.6
2.016000	47.7	9.000	Off	L1	9.8	8,3	56.0
2.022000	48.1	9,000	Off	L1	9.8	7.9	56.0
16,380000	35,4	9,000	Off	L1	10.2	24.6	60,0
16,390000	38.3	9.000	Off	L1	10.2	21.7	60.0
16.396000	39.0	9,000	011	L1	10.2	21.0	60.0
16,474000	35.9	9.000	Off	L1	10.2	24.1	60.

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EMI Auto Test(2)

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Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
16.566000	39.2	9.000	Off	L1	10.2	20.8	60.0
16.574000	39.3	9.000	Off	L1	10.2	20.7	60.0

# Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Fitter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.456000	36.5	9.000	Off	L1	9.7	10.3	46.8
0.710000	34.3	9,000	Off	L1	9.7	11.7	46.0
0.740000	31.9	9.000	Off	L1	9.7	14.1	46.0
0.796000	29.8	9,000	Off	L1	9.7	16.2	46.0
0.824000	29.5	9.000	Off	L1	9.7	16.5	46.0
0.852000	34.8	9.000	Off	L1	9.7	11.2	46.0
1,138000	36.0	9.000	Off	L1	9.7	10.0	46.0
1,934000	37.5	9,000	Off	L1	9.8	8.5	46.0
1.962000	34.4	9.000	Off	L1	9.8	11.6	46.0
1.988000	29.1	9,000	Off	L1	9.8	16.9	46.0
1.992000	38.7	9.000	Off	L1	9,8	7.3	46.0
2.018000	40.0	9,000	Off	L1	9.8	6.0	46.0
16.380000	26.2	9.000	Off	L1	10.2	23.8	50.0
16.426000	29.5	9.000	Off	L1	10.2	20.5	50.0
16.474000	27.6	9.000	Off	L1	10.2	22,4	50.0
16,544000	25.9	9.000	Off	L1	10.2	24.1	50.0
16.566000	29.9	9.000	Off	L1	10.2	20.1	50.0
16.602000	29.4	9.000	Off	L1	10.2	20.6	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



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# 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