

# 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:**

February 11, 2016

**Test Site/Location:**

HCT CO., LTD., 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

**Report No.:** HCT-R-1601-F067-1**HCT FRN:** 0005866421**IC Recognition No.:** 5944A-5**FCC ID:** ZNFK350N**APPLICANT:** LG Electronics MobileComm U.S.A., Inc.**FCC Model(s):**

LG-K350n

**EUT Type:**

Cellular/PCS GSM/WCDMA/LTE Phone with WLAN, Bluetooth and NFC

**RF Output Field Strength:**

13.19 dBuV/m @30 m

**Frequency of Operation:**

13.5597 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****: Seoul Ki Lee****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-1601-F067	January 29, 2016	- First Approval Report
HCT-R-1601-F067-1	February 11, 2016	- Add edition of C63.4 on page 7

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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:** ZNFK350N  
**EUT Type:** Cellular/PCS GSM/WCDMA/LTE Phone with WLAN, Bluetooth and NFC  
**Model name(s):** LG-K350n  
**Date(s) of Tests:** January 10, 2016 ~ January 16, 2016  
**Place of Tests:** HCT Co., Ltd.  
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea  
(IC Recognition No. : 5944A-5)

## 2. EUT DESCRIPTION

<b>FCC Model Name</b>	LG-K350n
<b>EUT Type</b>	Cellular/PCS GSM/WCDMA/LTE Phone with WLAN, Bluetooth and NFC
<b>Power Supply</b>	DC 3.8 V
<b>Battery Information</b>	Model: BL-46ZH Type: Li-ion Battery
<b>Frequency of Operation</b>	13.5597 MHz
<b>Transmit Power</b>	13.19 dBuV/m @30 m
<b>Modulation Type</b>	ASK
<b>Antenna Specification</b>	Manufacturer: IM-TECH Antenna type: FPCB 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).

#### **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.

### 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), Clause 15.225(a)	ANSI C63.10:2013	13.553MHz to 13.567MHz
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(d)	ANSI C63.10:2013	outside of the 13.110-14.010 MHz band
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.209	ANSI C63.10:2013	9kHz to 30MHz
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.209	ANSI C63.10:2013	30MHz to 1GHz
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.207	ANSI C63.10:2013	150kHz to 30MHz
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.225(e)	ANSI C63.10:2013	0.01% of nominal
Title 47 of the CFR: Part 15 Subpart (c), Clause 15.215(c)	ANSI C63.10:2013	-

## 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.

All equipment(spectrum, antenna, accessory, etc.) for measurement is calibrated in accordance with the requirements of ANSI 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. 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

## 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

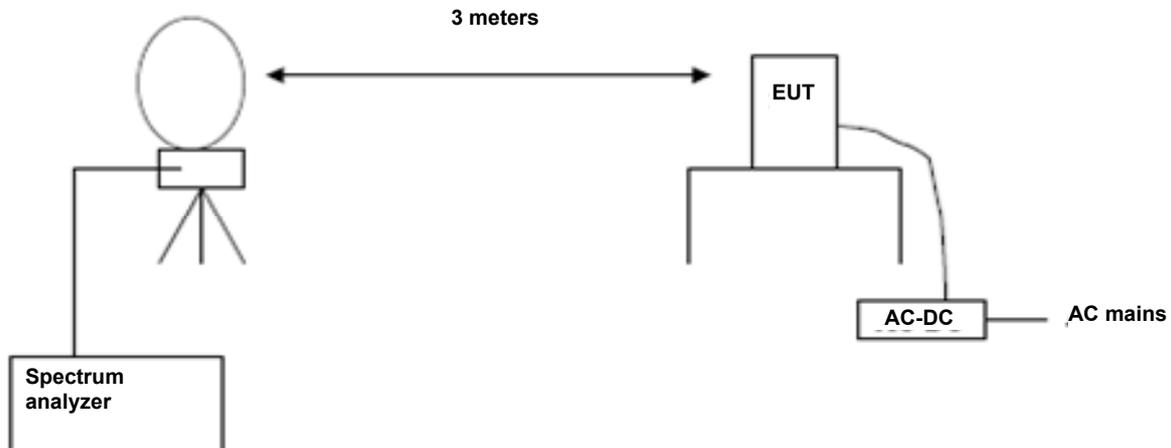
\*\* Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, 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(dB $\mu$ V/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

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)
13.5597(H)	32.82	20.37	-40.00	13.19	84.00	70.81
13.5597(V)	28.26	20.37	-40.00	8.63	84.00	75.37

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	23.22	20.37	-40.00	3.59	50.47	46.88
13.6654	20.68	20.37	-40.00	1.05	50.47	49.42

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	17.34	20.37	-40.00	-2.29	40.51	42.80
13.8786	16.94	20.37	-40.00	-2.69	40.51	43.20

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)
13.08	11.61	20.62	-40.00	-7.77	29.54	37.31
14.17	11.57	20.34	-40.00	-8.09	29.54	37.63
27.12	7.32	20.65	-40.00	-12.03	29.54	41.57
27.12	7.17	20.65	-40.00	-12.18	29.54	41.72

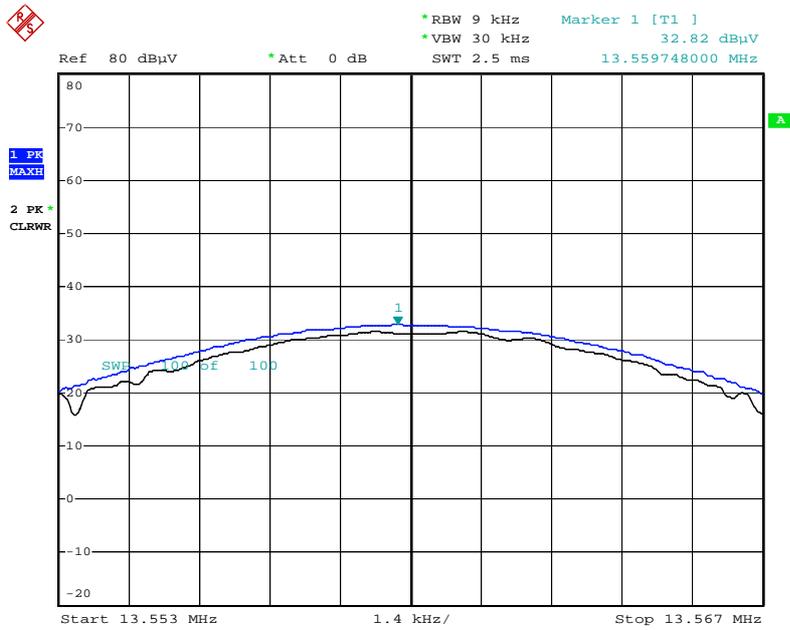
Note :

1. Distance Correction Below 30MHz =  $40\log(3m/30m) = -40$  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.

**RESULT PLOTS**

**Radiated Emissions (9kHz~30MHz) plot**



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**Note : Only the worst case plots for Radiated Emissions.**

**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.

■ **Test Results**

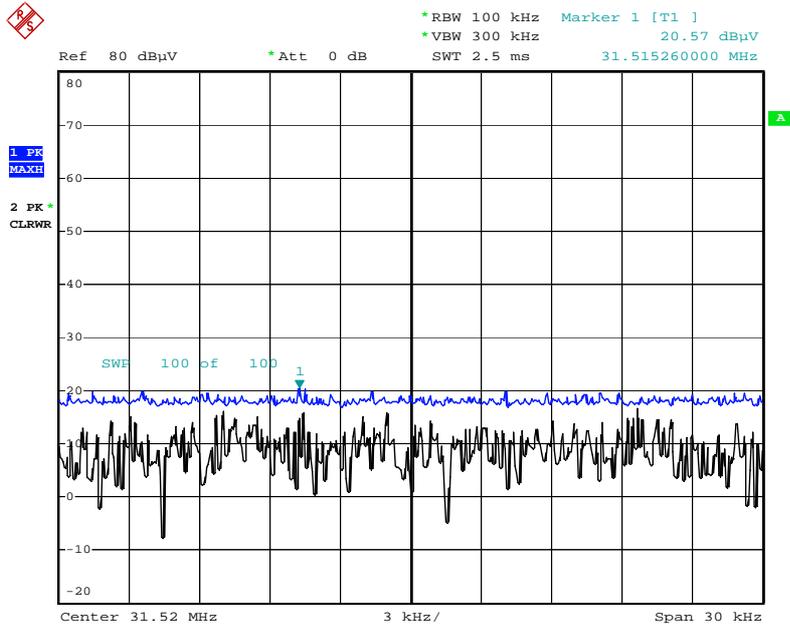
Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB $\mu$ V	dB /m	dB	(H/V)	dB $\mu$ V/m	dB $\mu$ V/m	dB
31.52	20.57	11.24	0.58	H	32.39	40	7.61
*38.12	19.09	11.95	0.66	H	31.7	40	8.3
93.99	19.21	7.73	0.86	V	27.8	43.5	15.7
*114.55	19	11.64	0.96	H	31.6	43.5	11.9
*149.91	19.92	13.13	1.07	H	34.12	43.5	9.38
189.05	21.01	10.62	1.2	V	32.83	43.5	10.67

Remark

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

■ **RESULT PLOTS**

**Radiated Emissions (30MHz~1000MHz) plot**



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**Note : Only the worst case plots for Radiated Emissions.**

## 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.

- RBW = Auto
- VBW = Auto
- Span = Adequately in the operating Tx.
- Detector = Peak
- Trace mode = Max hold
- Allow the trace to stabilize

**Test Results**



**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:

OPERATING FREQUENCY: 13.56 MHz  
 REFERENCE VOLTAGE: 3.8 VDC  
 DEVIATION LIMIT: 0.01% = 1356 Hz

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (MHz)	Frequency Dev. (Hz)	Frequency Dev (%)
100%	3.8	-20	13.559987	-13.24	-0.0000976
100%		-10	13.559992	-8.48	-0.0000625
100%		0	13.559991	-9.15	-0.0000675
100%		+10	13.559995	-4.84	-0.0000357
100%		+20(Ref.)	13.560002	2.00	0.0000147
100%		+30	13.560006	6.15	0.0000454
100%		+40	13.560009	9.05	0.0000667
100%		+50	13.560011	11.07	0.0000816
Highest point		4.35	+20	13.560008	8.16
Batt. Endpoint	3.6	+20	13.560004	4.31	0.0000318

## 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 (dB $\mu$ V)	
	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)

EMI Auto Test(14)

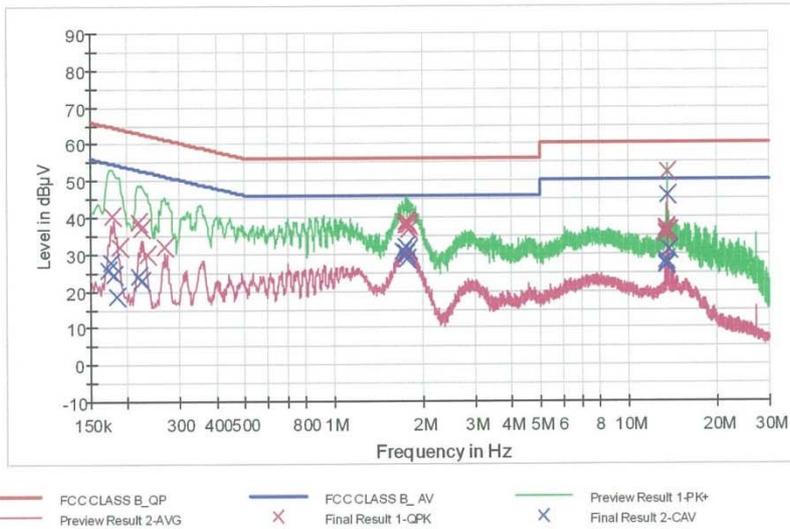
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## HCT TEST Report

### Common Information

EUT:	LG-K350n
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	NFC MODE_UNTERMINATION
Operator Name:	SK LEE

FCC CLASS B



### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.178000	40.3	9.000	Off	N	9.6	24.3	64.6
0.185000	32.2	9.000	Off	N	9.6	31.9	64.1
0.218000	38.6	9.000	Off	N	9.6	24.3	62.9
0.222000	37.0	9.000	Off	N	9.6	25.7	62.7
0.232000	29.8	9.000	Off	N	9.6	32.6	62.4
0.268000	32.1	9.000	Off	N	9.6	29.1	61.2
1.746000	37.9	9.000	Off	N	9.7	18.1	56.0
1.758000	38.7	9.000	Off	N	9.7	17.3	56.0
1.764000	38.6	9.000	Off	N	9.7	17.4	56.0
1.768000	38.5	9.000	Off	N	9.7	17.5	56.0
1.788000	36.8	9.000	Off	N	9.7	19.2	56.0
1.794000	37.8	9.000	Off	N	9.7	18.2	56.0
13.452000	36.8	9.000	Off	N	10.1	23.2	60.0
13.456000	36.9	9.000	Off	N	10.1	23.1	60.0
13.460000	35.4	9.000	Off	N	10.1	24.6	60.0
13.472000	35.8	9.000	Off	N	10.1	24.2	60.0

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EMI Auto Test(14)

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Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
13.560000	52.1	9.000	Off	N	10.1	7.9	60.0
13.770000	36.3	9.000	Off	N	10.1	23.7	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.172000	25.6	9.000	Off	N	9.6	29.3	54.9
0.176000	27.8	9.000	Off	N	9.6	26.9	54.7
0.180000	24.4	9.000	Off	N	9.6	30.1	54.5
0.184000	18.7	9.000	Off	N	9.6	35.6	54.3
0.218000	24.0	9.000	Off	N	9.6	28.9	52.9
0.222000	23.0	9.000	Off	N	9.6	29.7	52.7
1.714000	30.7	9.000	Off	N	9.7	15.3	46.0
1.746000	29.8	9.000	Off	N	9.7	16.2	46.0
1.754000	32.1	9.000	Off	N	9.7	13.9	46.0
1.758000	30.4	9.000	Off	N	9.7	15.6	46.0
1.762000	28.6	9.000	Off	N	9.7	17.4	46.0
1.794000	31.2	9.000	Off	N	9.7	14.8	46.0
13.452000	28.1	9.000	Off	N	10.1	21.9	50.0
13.456000	28.4	9.000	Off	N	10.1	21.6	50.0
13.460000	27.1	9.000	Off	N	10.1	22.9	50.0
13.472000	27.5	9.000	Off	N	10.1	22.5	50.0
13.562000	46.0	9.000	Off	N	10.1	4.0	50.0
13.772000	31.1	9.000	Off	N	10.1	18.9	50.0

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**Conducted Emissions (Line 2)**

EMI Auto Test(14)

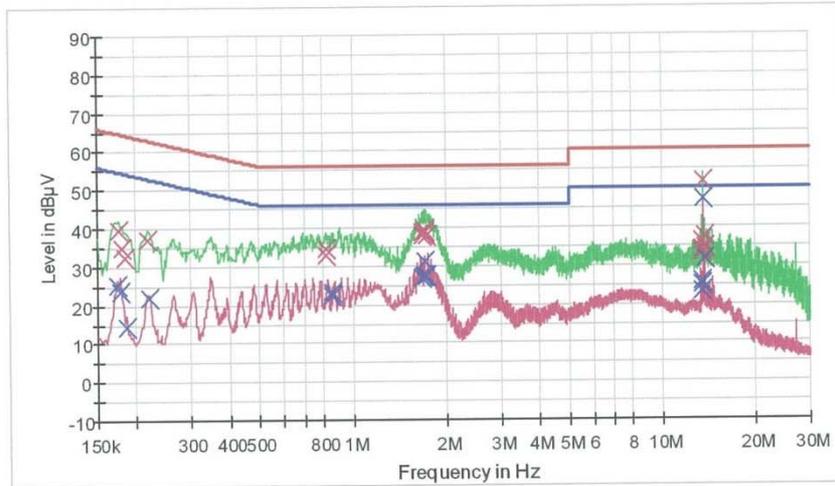
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**HCT TEST Report**

**Common Information**

EUT: LG-K350n  
 Manufacturer: LG  
 Test Site: SHIELD ROOM  
 Operating Conditions: NFC MODE\_UNTERMINATION  
 Operator Name: SK LEE

FCC CLASS B



— FCCCLASS B\_QP      — FCCCLASS B\_AV      — Preview Result 1-PK+  
— Preview Result 2-AVG      x Final Result 1-CPK      x Final Result 2-CAV

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.176000	39.4	9.000	Off	L1	9.6	25.3	64.7
0.180000	35.1	9.000	Off	L1	9.6	29.4	64.5
0.184000	32.5	9.000	Off	L1	9.6	31.8	64.3
0.218000	37.2	9.000	Off	L1	9.6	25.7	62.9
0.820000	34.4	9.000	Off	L1	9.7	21.6	56.0
0.824000	32.7	9.000	Off	L1	9.7	23.3	56.0
1.668000	38.6	9.000	Off	L1	9.7	17.4	56.0
1.676000	38.0	9.000	Off	L1	9.7	18.0	56.0
1.684000	38.3	9.000	Off	L1	9.7	17.7	56.0
1.706000	39.1	9.000	Off	L1	9.7	16.9	56.0
1.720000	38.8	9.000	Off	L1	9.7	17.2	56.0
1.730000	38.0	9.000	Off	L1	9.7	18.0	56.0
13.444000	33.2	9.000	Off	L1	10.1	26.8	60.0
13.456000	36.0	9.000	Off	L1	10.1	24.0	60.0
13.464000	34.2	9.000	Off	L1	10.1	25.8	60.0
13.560000	51.9	9.000	Off	L1	10.1	8.1	60.0

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Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
13.668000	34.6	9.000	Off	L1	10.1	25.4	60.0
13.772000	37.5	9.000	Off	L1	10.1	22.5	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.174000	25.4	9.000	Off	L1	9.6	29.4	54.8
0.178000	23.4	9.000	Off	L1	9.6	31.2	54.6
0.186000	14.5	9.000	Off	L1	9.6	39.7	54.2
0.220000	21.8	9.000	Off	L1	9.6	31.0	52.8
0.858000	22.4	9.000	Off	L1	9.7	23.6	46.0
0.862000	23.1	9.000	Off	L1	9.7	22.9	46.0
1.676000	26.9	9.000	Off	L1	9.7	19.1	46.0
1.684000	27.2	9.000	Off	L1	9.7	18.8	46.0
1.688000	27.6	9.000	Off	L1	9.7	18.4	46.0
1.706000	31.1	9.000	Off	L1	9.7	14.9	46.0
1.720000	27.3	9.000	Off	L1	9.7	18.7	46.0
1.724000	27.4	9.000	Off	L1	9.7	18.6	46.0
13.444000	25.0	9.000	Off	L1	10.1	25.0	50.0
13.464000	25.7	9.000	Off	L1	10.1	24.3	50.0
13.468000	25.7	9.000	Off	L1	10.1	24.3	50.0
13.502000	23.3	9.000	Off	L1	10.1	26.7	50.0
13.560000	47.2	9.000	Off	L1	10.1	2.8	50.0
13.772000	31.4	9.000	Off	L1	10.1	18.6	50.0

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**Terminate the Antenna**

**Conducted Emissions (Line 1)**

EMI Auto Test(14)

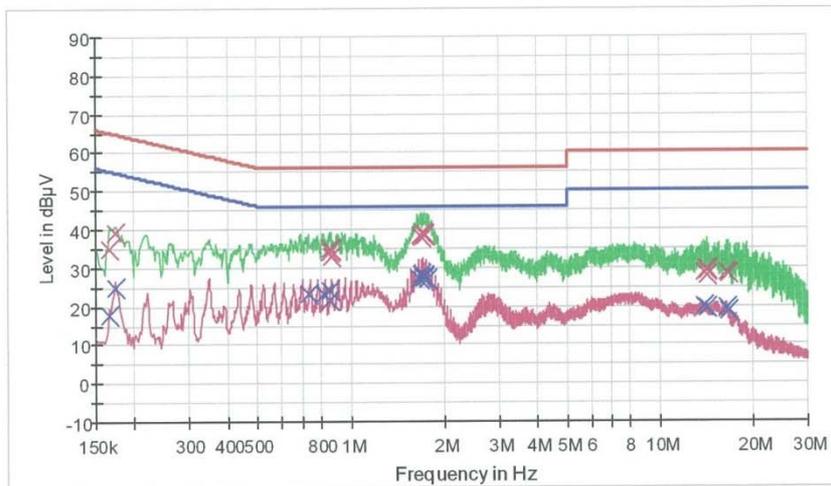
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**HCT TEST Report**

**Common Information**

EUT: LG-K350n  
 Manufacturer: LG  
 Test Site: SHIELD ROOM  
 Operating Conditions: NFC MODE\_TERMINATION  
 Operator Name: SK LEE

FCC CLASS B



— FCCCLASS B\_QP      — FCCCLASS B\_AV      — Preview Result 1-PK+  
— Preview Result 2-AVG      X Final Result 1-QPK      X Final Result 2-CAV

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	34.8	9.000	Off	N	9.6	30.4	65.2
0.174000	39.0	9.000	Off	N	9.6	25.8	64.8
0.854000	34.1	9.000	Off	N	9.7	21.9	56.0
0.860000	35.0	9.000	Off	N	9.7	21.0	56.0
0.864000	34.7	9.000	Off	N	9.7	21.3	56.0
0.868000	33.0	9.000	Off	N	9.7	23.0	56.0
1.680000	38.2	9.000	Off	N	9.7	17.8	56.0
1.688000	37.7	9.000	Off	N	9.7	18.3	56.0
1.712000	38.6	9.000	Off	N	9.7	17.4	56.0
1.722000	38.6	9.000	Off	N	9.7	17.4	56.0
1.728000	38.3	9.000	Off	N	9.7	17.7	56.0
1.732000	38.2	9.000	Off	N	9.7	17.8	56.0
13.826000	28.8	9.000	Off	N	10.1	31.2	60.0
14.140000	27.8	9.000	Off	N	10.1	32.2	60.0
14.176000	29.0	9.000	Off	N	10.1	31.0	60.0
14.182000	29.6	9.000	Off	N	10.1	30.4	60.0

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Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
16.430000	28.5	9.000	Off	N	10.2	31.5	60.0
16.630000	28.0	9.000	Off	N	10.2	32.0	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	17.8	9.000	Off	N	9.6	37.4	55.2
0.174000	24.7	9.000	Off	N	9.6	30.1	54.8
0.732000	23.3	9.000	Off	N	9.7	22.7	46.0
0.818000	23.3	9.000	Off	N	9.7	22.7	46.0
0.854000	21.7	9.000	Off	N	9.7	24.4	46.0
0.862000	23.9	9.000	Off	N	9.7	22.1	46.0
1.680000	27.1	9.000	Off	N	9.7	18.9	46.0
1.688000	28.4	9.000	Off	N	9.7	17.6	46.0
1.712000	27.5	9.000	Off	N	9.7	18.5	46.0
1.724000	27.6	9.000	Off	N	9.7	18.4	46.0
1.728000	27.8	9.000	Off	N	9.7	18.2	46.0
1.766000	27.1	9.000	Off	N	9.7	18.9	46.0
13.826000	19.8	9.000	Off	N	10.1	30.2	50.0
14.140000	19.2	9.000	Off	N	10.1	30.8	50.0
14.176000	19.4	9.000	Off	N	10.1	30.6	50.0
14.182000	19.4	9.000	Off	N	10.1	30.6	50.0
16.420000	19.5	9.000	Off	N	10.2	30.5	50.0
16.630000	18.4	9.000	Off	N	10.2	31.6	50.0

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**Conducted Emissions (Line 2)**

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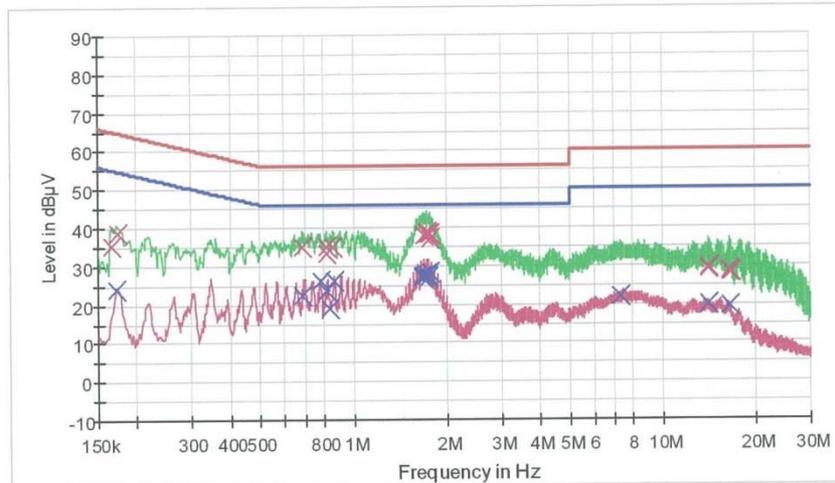
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## HCT TEST Report

### Common Information

EUT: LG-K350n  
 Manufacturer: LG  
 Test Site: SHIELD ROOM  
 Operating Conditions: NFC MODE\_TERMINATION  
 Operator Name: SK LEE

FCC CLASS B



— FCCCLASS B\_QP      — FCCCLASS B\_AV      — Preview Result 1-1PK+  
— Preview Result 2-AVG      x Final Result 1-CPK      x Final Result 2-CAV

### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	35.2	9.000	Off	L1	9.6	30.0	65.2
0.174000	38.8	9.000	Off	L1	9.6	26.0	64.8
0.686000	35.1	9.000	Off	L1	9.7	20.9	56.0
0.818000	35.0	9.000	Off	L1	9.7	21.0	56.0
0.822000	33.2	9.000	Off	L1	9.7	22.8	56.0
0.860000	35.2	9.000	Off	L1	9.7	20.8	56.0
1.692000	37.9	9.000	Off	L1	9.7	18.1	56.0
1.724000	38.8	9.000	Off	L1	9.7	17.2	56.0
1.728000	38.2	9.000	Off	L1	9.7	17.8	56.0
1.758000	38.4	9.000	Off	L1	9.7	17.6	56.0
1.764000	38.3	9.000	Off	L1	9.7	17.7	56.0
1.774000	37.1	9.000	Off	L1	9.7	18.9	56.0
14.014000	29.3	9.000	Off	L1	10.1	30.7	60.0
14.018000	29.0	9.000	Off	L1	10.1	31.0	60.0
14.028000	29.3	9.000	Off	L1	10.1	30.7	60.0
16.418000	28.0	9.000	Off	L1	10.2	32.0	60.0

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EMI Auto Test(14)

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Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
16.430000	28.5	9.000	Off	L1	10.2	31.5	60.0
16.636000	28.3	9.000	Off	L1	10.2	31.7	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172000	24.0	9.000	Off	L1	9.6	30.9	54.9
0.684000	22.5	9.000	Off	L1	9.7	23.5	46.0
0.784000	26.0	9.000	Off	L1	9.7	20.0	46.0
0.818000	23.6	9.000	Off	L1	9.7	22.4	46.0
0.840000	19.1	9.000	Off	L1	9.7	26.9	46.0
0.866000	26.2	9.000	Off	L1	9.7	19.8	46.0
1.666000	27.2	9.000	Off	L1	9.7	18.8	46.0
1.678000	27.1	9.000	Off	L1	9.7	18.9	46.0
1.718000	27.3	9.000	Off	L1	9.7	18.7	46.0
1.726000	27.8	9.000	Off	L1	9.7	18.2	46.0
1.758000	27.1	9.000	Off	L1	9.7	18.9	46.0
1.774000	28.3	9.000	Off	L1	9.7	17.7	46.0
7.288000	21.8	9.000	Off	L1	9.9	28.2	50.0
14.018000	19.9	9.000	Off	L1	10.1	30.1	50.0
14.028000	19.8	9.000	Off	L1	10.1	30.2	50.0
16.400000	19.2	9.000	Off	L1	10.2	30.8	50.0
16.418000	19.3	9.000	Off	L1	10.2	30.7	50.0
16.430000	19.4	9.000	Off	L1	10.2	30.6	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	12/28/2015	Annual	100073
Agilent	E4440A/ Spectrum Analyzer	03/18/2015	Annual	US45303008
Agilent	N9020A / SIGNAL ANALYZER	06/30/2015	Annual	MY51110085
Agilent	N9020A / SIGNAL ANALYZER	07/02/2015	Annual	MY50510304
Agilent	N1911A/Power Meter	07/09/2015	Annual	MY45100523
Agilent	N1921A /POWER SENSOR	07/09/2015	Annual	MY45241059
Agilent	87300B/Directional Coupler	11/30/2015	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	06/15/2015	Annual	5001
Hewlett Packard	E3632A / DC POWER SUPPLY	03/11/2015	Annual	KR75303962
Agilent	8493C / Attenuator(10 dB)	07/23/2015	Annual	07560

### 12.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration	Calibration	Serial No.
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		Date	Interval	
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	FSP / Spectrum Analyzer	01/22/2015	Annual	839117/011
Rohde & Schwarz	LOOP ANTENNA	09/03/2014	Biennial	1513-175