

# EMI CERTIFICATION REPORT

**Applicant:**

**LG Electronics MobileComm U.S.A., Inc.**  
**1000 Sylvan Avenue, Englewood Cliffs NJ 07632**

**Date of Receipt: April 06, 2015**

**Date of Issue: April 24, 2015**

**Test Report No. HCT-E-1504-F063**

**HCT FRN: 0005866421**

**FCC ID:**

**ZNFH811**

**Rule Part(s) / Standard(s):** FCC CFR 47 PART 15 Subpart B Class B  
**FCC Classification:** JBP (Part 15 B – Class B Computing Device Peripheral)  
**EUT Type:** Multiband GSM/EDGE/WCDMA/LTE Phone with WLAN, Bluetooth & RFID  
**Model Name:** LG-H811  
**Additional Model Name:** LGH811, H811  
**Test Port:** USB / Earphone Port  
**Date of Test:** April 22, 2015

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2003. (See Test Report if any modifications were made for compliance)

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

HCT certifies that no party to application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

**Tested By**



**Jeong-Hyun Choi**  
**Test Engineer**  
**EMC Team**  
**Certification Division**

**Reviewed By**



**Jin-Pyo Hong**  
**Technical Manager**  
**EMC Team**  
**Certification Division**

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## DOCUMENT HISTORY

The revision history for this document is shown in table.

Version	Date	Description
HCT-E-1504-F063	April 24, 2015	Initial Release



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**ATTACHMENT: TEST SETUP PHOTOGRAPHS**



## 1. GENERAL INFORMATION

### 1.1 Description of EUT

Equipment Under Test is manufactured by **LG Electronics MobileComm U.S.A., Inc.**  
Its basic purpose is used for communications.

<b>Model</b>	LG-H811
<b>FCC ID</b>	ZNFH811
<b>Additional Model</b>	LGH811, H811
<b>EUT Type</b>	Multiband GSM/EDGE/WCDMA/LTE Phone with WLAN, Bluetooth & RFID
<b>TX Frequency</b>	824.20 MHz to 848.80 MHz (GSM 850) 1 850.20 MHz to 1 909.80 MHz (GSM 1 900) 1 852.4 MHz to 1 907.6 MHz (WCDMA B2) 1712.4 MHz to 1752.6 MHz (WCDMA B4) 826.40 MHz to 846.60 MHz (WCDMA B5) 1 850 MHz to 1 910 MHz (LTE B2) 1 710 MHz to 1 755 MHz (LTE B4) 824 MHz to 849 MHz (LTE B5) 2 496 MHz to 2570 MHz (LTE B7) 699 MHz to 716 MHz (LTE B12)
<b>RX Frequency</b>	869.20 MHz to 893.80 MHz (GSM 850) 1 930.20 MHz to 1 989.80 MHz (GSM 1 900) 1 932.4 MHz to 1 987.6 MHz (WCDMA B2) 2 112.4 MHz to 2 152.6 MHz (WCDMA B4) 871.40 MHz to 891.60 MHz (WCDMA B5) 1 930 MHz to 1 990 MHz (LTE B2) 2 110 MHz to 2 155 MHz (LTE B4) 869 MHz to 894 MHz (LTE B5) 2 516 MHz to 2 690 MHz (LTE B7) 729 MHz to 746 MHz (LTE B12)



## 1.2 Related Submittal(s) / Grant(s)

Original submittal only.

## 1.3 Test Facility

Test site is located at 74, SEOICHEON-RO, 578BEON-GIL, MAJANG-MYEON, ICHEON-SI, GYEONGGI-DO, SOUTH KOREA. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4-2003.

Measurement Facilities	Reg. No.
Radiated Field strength measurement facility (3 m)	90661 (February 28, 2014)
Radiated Field strength measurement facility (10 m)	90661 (February 28, 2014)



## 1.4 Tested System Details

All equipment descriptions used in the tested system (including inserted cards) are:

Device Type	Model Name	Manufacturer	FCC ID / DoC	Connected To
EUT	LG-H811	LG	ZNFH811	Notebook PC, Earphone
USB cable	EAD62626901	CRESYN	-	EUT, Notebook PC
Earphone	EAB62910502	CRESYN	-	EUT
Standard cover	-	-	-	EUT
Wireless charging cover	-	-	-	EUT
Notebook PC	ProBook6560b	HP	DoC	EUT, Notebook PC adaptor
Notebook PC adaptor	PPP009D	DELTA Electronics (Jiangsu) LTD	-	Notebook PC
Gateway	MV440	Axesstel	PH7MV440	Notebook PC, Adaptor
Serial mouse	Serial 2 button mouse	Radio shack	FSUGMZE3	Notebook PC
Adaptor	DA-60M12	Yang Ming Industrial	-	Gateway
RJ45 cable	-	-	-	Notebook PC, Gateway
Micro SD card	16 GB	Samsung	-	EUT



## 1.5 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	Micro USB	Y	Y	(P,D)1.2
	Earphone	N/A	Y	(D)1.2
Notebook PC	RJ 45	N/A	N	(D)1.5
	Serial (Mouse)	N/A	Y	(D)1.8
	DC in	N	N/A	(P)1.8
Gateway	DC in	N	N/A	(P)1.8

\* The marked “(D)” means the data cable and “(P)” means the power cable.

## 1.6 Noise Suppression Parts on Cable. (I/O Cable)

Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
EUT	Micro USB	N	N/A	Y	Both End
	Earphone	N	N/A	Y	EUT End
Notebook PC	RJ 45	N	N/A	N	N/A
	Serial (Mouse)	N	N/A	Y	Notebook PC End



## 2. DESCRIPTION OF TEST

### 2.1 Measurement of Conducted Emission

The test procedure was in accordance with ANSI C63.4-2003, Clause 7

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN).  
If the EUT is connected to the PC through USB, the AC power-line adapter of the PC is directly connected to a line impedance stabilization network (LISN).  
Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.
- c. The frequency range from 150 kHz to 30 MHz was searched.

#### [ Conducted Emission Limits ]

Frequency (MHz)	Resolution Bandwidth (kHz)	Quasi-Peak (dB(μV))	Average (dB(μV))
0.15 to 0.5	9	66 to 56*	56 to 46*
0.5 to 5	9	56	46
5 to 30	9	60	50

*\*Decreases with the logarithm of the frequency.*



## 2.2 Measurement of Radiated Emission

The test procedure was in accordance with ANSI C63.4-2003, Clause 8

- a. The EUT was placed on the top of a turn table 0.8 meters above the ground at a 3 m shield room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 m away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from 1 m to 4 m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 m to 4 m and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to Peak and Average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- g. The antenna height scans apply for both horizontal and vertical polarizations, except that for vertical polarization, the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the lowest antenna element clears the site reference ground plane by at least 25 cm. (below 1 GHz)

### [ Radiated Emission Limits ]

Frequency (MHz)	Antenna Distance (m)	Field Strength ( $\mu\text{V}/\text{m}$ )	Quasi-Peak ( $\text{dB}(\mu\text{V})/\text{m}$ )
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0
Frequency (MHz)	Antenna Distance (m)	Peak ( $\text{dB}(\mu\text{V})/\text{m}$ )	Average ( $\text{dB}(\mu\text{V})/\text{m}$ )
Above 1 000	3	74	54

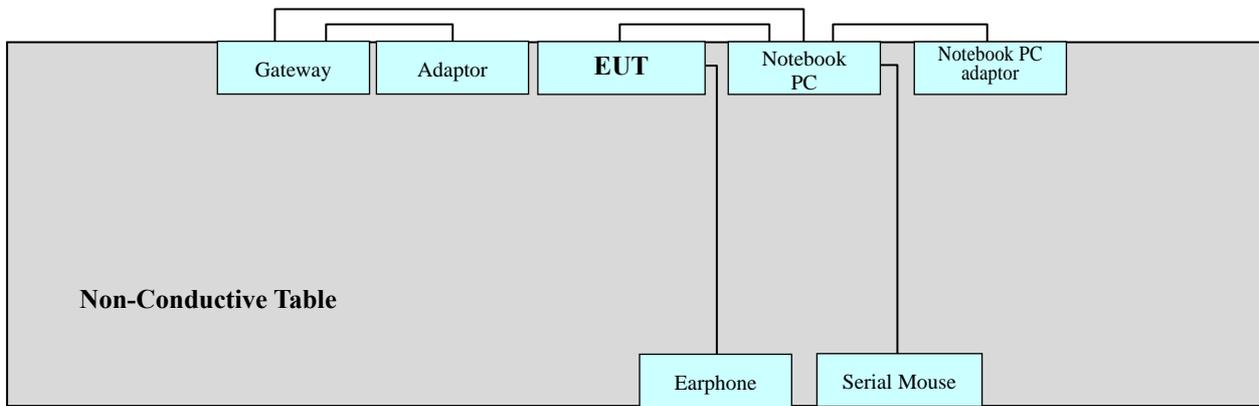


### 2.2.1 Frequency Range of Radiated Measurements

An unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a Radiated Emission limit is specified, up to the frequency shown in the following table

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 to 108	1 000
108 to 500	2 000
500 to 1 000	5 000
Above 1 000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower

### 2.3 Configuration of Tested System



Power Line: 120 VAC, 60 Hz



### 3. PRELIMINARY TEST

#### 3.1 Conducted Emission Test

It was tested Data Communication mode, after connecting all peripheral devices.

**Operation Mode:**       Data Communication mode

#### 3.2 Radiated Emission Test

It was tested Data Communication mode, after connecting all peripheral devices.

**Operation Mode:**       Data Communication mode



## 4. CONDUCTED AND RADIATED EMISSION TEST SUMMARY

### 4.1 Conducted Emission Test

The test results of conducted emission at mains ports provide the following information:

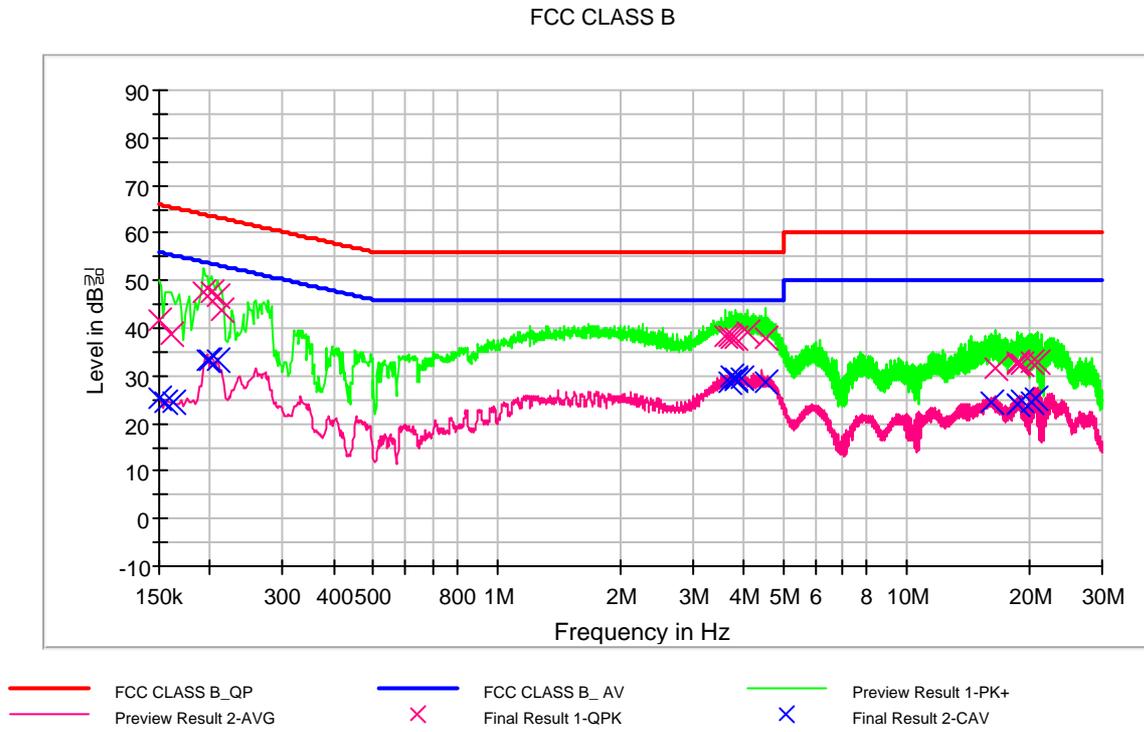
<b>Rule Part / Standard</b>	FCC PART 15 Subpart B Class B
<b>Detector</b>	Quasi-Peak, CISPR-Average
<b>Bandwidth</b>	9 kHz (6 dB)
<b>Operation Mode</b>	Data Communication mode
<b>Cover Type</b>	Standard cover
<b>Kind of Test Site</b>	Shielded Room
<b>Temperature</b>	23.0 °C
<b>Relative Humidity</b>	35.2 %
<b>Test Date</b>	April 22, 2015

#### ***- Calculation Formula:***

1. Conductor L1 = Hot, Conductor N = Neutral
2. Corr. = LISN Factor + Cable Loss
3. QuasiPeak or CAverage= Receiver Reading + Corr.
4. Margin = Limit – QuasiPeak or CAverage



Figure 1: Spectral Diagrams, Conducted Emission, AC Main Port, Line (L1)





## QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	41.8	9.000	L1	9.6	24.2	66.0
0.160000	38.8	9.000	L1	9.6	26.7	65.5
0.192000	47.7	9.000	L1	9.6	16.2	63.9
0.202000	47.5	9.000	L1	9.7	16.0	63.5
0.208000	46.6	9.000	L1	9.7	16.7	63.3
0.214000	43.6	9.000	L1	9.7	19.4	63.0
3.604000	38.4	9.000	L1	9.8	17.6	56.0
3.676000	38.3	9.000	L1	9.8	17.7	56.0
3.740000	38.0	9.000	L1	9.8	18.0	56.0
3.832000	37.8	9.000	L1	9.9	18.2	56.0
4.098000	39.1	9.000	L1	9.9	16.9	56.0
4.524000	37.8	9.000	L1	9.9	18.2	56.0
16.540000	31.8	9.000	L1	10.2	28.2	60.0
18.590000	32.6	9.000	L1	10.3	27.4	60.0
18.658000	32.8	9.000	L1	10.3	27.2	60.0
19.010000	32.6	9.000	L1	10.3	27.4	60.0
20.280000	32.7	9.000	L1	10.3	27.3	60.0
20.922000	33.0	9.000	L1	10.3	27.0	60.0

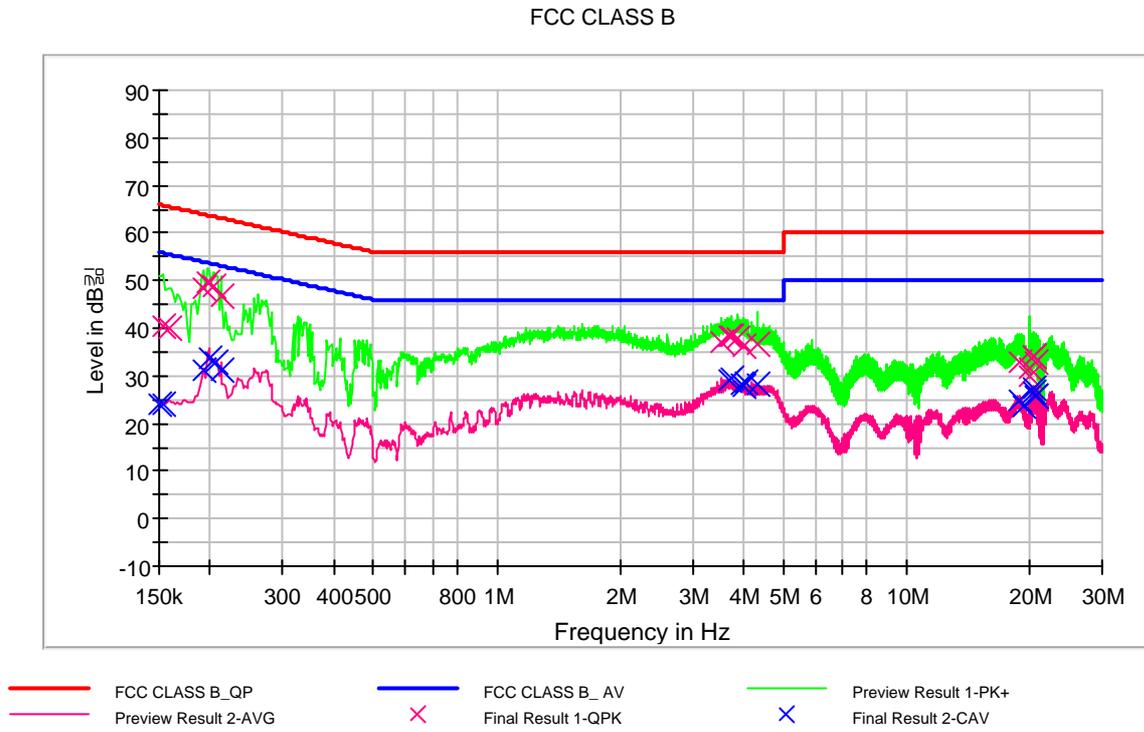


## CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	25.4	9.000	L1	9.6	30.6	56.0
0.156000	24.3	9.000	L1	9.6	31.4	55.7
0.162000	24.4	9.000	L1	9.6	31.0	55.4
0.196000	33.3	9.000	L1	9.6	20.5	53.8
0.200000	33.5	9.000	L1	9.7	20.1	53.6
0.208000	33.3	9.000	L1	9.7	20.0	53.3
3.706000	28.8	9.000	L1	9.8	17.2	46.0
3.740000	30.0	9.000	L1	9.8	16.0	46.0
3.816000	29.5	9.000	L1	9.9	16.5	46.0
3.832000	29.0	9.000	L1	9.9	17.0	46.0
3.956000	29.3	9.000	L1	9.9	16.7	46.0
4.524000	28.6	9.000	L1	9.9	17.4	46.0
16.138000	24.4	9.000	L1	10.2	25.6	50.0
18.590000	24.0	9.000	L1	10.3	26.0	50.0
18.658000	24.2	9.000	L1	10.3	25.8	50.0
19.082000	24.8	9.000	L1	10.3	25.2	50.0
20.280000	24.6	9.000	L1	10.3	25.4	50.0
20.710000	25.3	9.000	L1	10.3	24.7	50.0



Figure 2: Spectral Diagrams, Conducted Emission, AC Main Port, Line (N)





## QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	40.6	9.000	N	9.6	25.2	65.8
0.158000	39.8	9.000	N	9.6	25.8	65.6
0.192000	48.5	9.000	N	9.6	15.4	63.9
0.196000	49.5	9.000	N	9.6	14.3	63.8
0.204000	48.8	9.000	N	9.6	14.6	63.4
0.212000	46.9	9.000	N	9.6	16.2	63.1
3.530000	37.2	9.000	N	9.8	18.8	56.0
3.674000	38.2	9.000	N	9.8	17.8	56.0
3.746000	38.2	9.000	N	9.8	17.8	56.0
3.886000	37.8	9.000	N	9.8	18.2	56.0
3.982000	36.1	9.000	N	9.8	19.9	56.0
4.310000	36.8	9.000	N	9.8	19.2	56.0
18.944000	33.1	9.000	N	10.3	26.9	60.0
19.878000	30.0	9.000	N	10.3	30.0	60.0
20.024000	31.5	9.000	N	10.3	28.5	60.0
20.304000	34.0	9.000	N	10.3	26.0	60.0
20.444000	33.9	9.000	N	10.3	26.1	60.0
20.564000	32.9	9.000	N	10.3	27.1	60.0



## CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	24.0	9.000	N	9.6	32.0	56.0
0.154000	24.2	9.000	N	9.6	31.6	55.8
0.192000	31.4	9.000	N	9.6	22.5	53.9
0.198000	33.6	9.000	N	9.6	20.1	53.7
0.206000	33.0	9.000	N	9.6	20.4	53.4
0.212000	31.1	9.000	N	9.6	22.0	53.1
3.674000	29.2	9.000	N	9.8	16.8	46.0
3.744000	29.3	9.000	N	9.8	16.7	46.0
3.958000	28.4	9.000	N	9.8	17.6	46.0
3.982000	27.7	9.000	N	9.8	18.3	46.0
4.026000	28.5	9.000	N	9.8	17.5	46.0
4.310000	28.3	9.000	N	9.8	17.7	46.0
18.944000	25.0	9.000	N	10.3	25.0	50.0
19.230000	23.7	9.000	N	10.3	26.3	50.0
20.304000	27.4	9.000	N	10.3	22.6	50.0
20.502000	26.6	9.000	N	10.3	23.4	50.0
20.564000	25.9	9.000	N	10.3	24.1	50.0
20.572000	25.8	9.000	N	10.3	24.2	50.0



The test results of conducted emission at mains ports provide the following information:

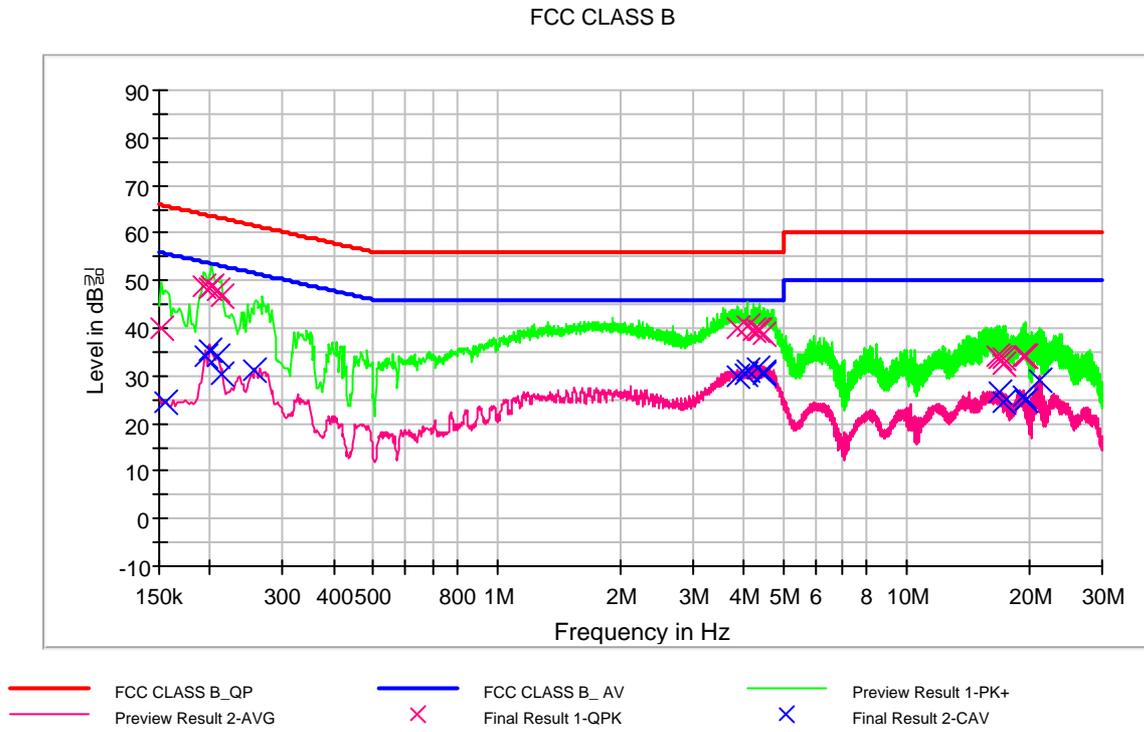
<b>Rule Part / Standard</b>	FCC PART 15 Subpart B Class B
<b>Detector</b>	Quasi-Peak, CISPR-Average
<b>Bandwidth</b>	9 kHz (6 dB)
<b>Operation Mode</b>	Data Communication mode
<b>Cover Type</b>	Wireless charging caver
<b>Kind of Test Site</b>	Shielded Room
<b>Temperature</b>	23.0 °C
<b>Relative Humidity</b>	35.2 %
<b>Test Date</b>	April 22, 2015

**- Calculation Formula:**

1. Conductor L1 = Hot, Conductor N = Neutral
2. Corr. = LISN Factor + Cable Loss
3. QuasiPeak or CAverage= Receiver Reading + Corr.
4. Margin = Limit – QuasiPeak or CAverage



Figure 3: Spectral Diagrams, Conducted Emission, AC Main Port, Line (L1)





## QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	40.0	9.000	L1	9.6	25.9	65.9
0.192000	48.7	9.000	L1	9.6	15.2	63.9
0.198000	48.5	9.000	L1	9.6	15.2	63.7
0.202000	48.8	9.000	L1	9.7	14.7	63.5
0.208000	47.8	9.000	L1	9.7	15.5	63.3
0.212000	46.6	9.000	L1	9.7	16.5	63.1
3.886000	39.8	9.000	L1	9.9	16.2	56.0
4.100000	40.4	9.000	L1	9.9	15.6	56.0
4.242000	39.5	9.000	L1	9.9	16.5	56.0
4.312000	39.5	9.000	L1	9.9	16.5	56.0
4.382000	39.5	9.000	L1	9.9	16.5	56.0
4.482000	38.9	9.000	L1	9.9	17.1	56.0
16.678000	34.2	9.000	L1	10.2	25.8	60.0
16.752000	33.6	9.000	L1	10.2	26.4	60.0
17.250000	32.5	9.000	L1	10.2	27.5	60.0
17.318000	33.7	9.000	L1	10.2	26.3	60.0
19.366000	34.2	9.000	L1	10.3	25.8	60.0
19.436000	34.2	9.000	L1	10.3	25.8	60.0

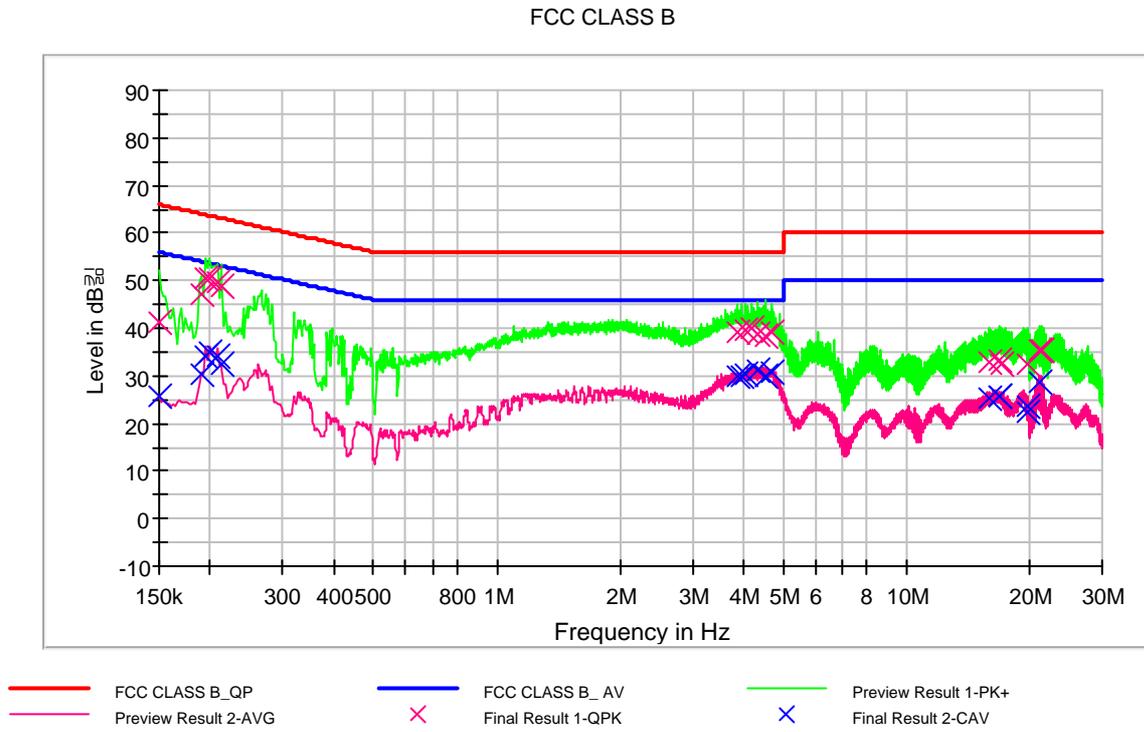


## CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.156000	24.4	9.000	L1	9.6	31.3	55.7
0.194000	34.2	9.000	L1	9.6	19.7	53.9
0.200000	35.2	9.000	L1	9.7	18.4	53.6
0.208000	34.2	9.000	L1	9.7	19.1	53.3
0.214000	30.3	9.000	L1	9.7	22.7	53.0
0.256000	31.1	9.000	L1	9.7	20.5	51.6
3.886000	30.1	9.000	L1	9.9	15.9	46.0
4.030000	30.5	9.000	L1	9.9	15.5	46.0
4.100000	31.3	9.000	L1	9.9	14.7	46.0
4.312000	31.4	9.000	L1	9.9	14.6	46.0
4.456000	30.9	9.000	L1	9.9	15.1	46.0
4.482000	30.2	9.000	L1	9.9	15.8	46.0
16.752000	26.6	9.000	L1	10.2	23.4	50.0
17.318000	24.7	9.000	L1	10.2	25.3	50.0
19.366000	25.9	9.000	L1	10.3	24.1	50.0
19.436000	24.9	9.000	L1	10.3	25.1	50.0
19.440000	25.0	9.000	L1	10.3	25.0	50.0
21.204000	29.0	9.000	L1	10.3	21.0	50.0



Figure 4: Spectral Diagrams, Conducted Emission, AC Main Port, Line (N)





## QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	41.3	9.000	N	9.6	24.8	66.0
0.190000	47.3	9.000	N	9.6	16.7	64.0
0.194000	50.6	9.000	N	9.6	13.3	63.9
0.198000	50.5	9.000	N	9.6	13.2	63.7
0.208000	49.8	9.000	N	9.6	13.5	63.3
0.212000	48.8	9.000	N	9.6	14.3	63.1
3.844000	39.0	9.000	N	9.8	17.0	56.0
4.028000	39.8	9.000	N	9.8	16.2	56.0
4.170000	40.0	9.000	N	9.8	16.0	56.0
4.314000	38.7	9.000	N	9.8	17.3	56.0
4.526000	38.2	9.000	N	9.9	17.8	56.0
4.664000	39.1	9.000	N	9.9	16.9	56.0
15.836000	32.9	9.000	N	10.2	27.1	60.0
16.824000	33.4	9.000	N	10.2	26.6	60.0
17.110000	32.5	9.000	N	10.2	27.5	60.0
19.794000	32.6	9.000	N	10.3	27.4	60.0
21.136000	35.5	9.000	N	10.3	24.5	60.0
21.278000	35.2	9.000	N	10.3	24.8	60.0



## CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	25.8	9.000	N	9.6	30.2	56.0
0.190000	30.3	9.000	N	9.6	23.7	54.0
0.194000	34.1	9.000	N	9.6	19.8	53.9
0.200000	34.9	9.000	N	9.6	18.7	53.6
0.208000	34.2	9.000	N	9.6	19.1	53.3
0.212000	32.3	9.000	N	9.6	20.8	53.1
3.844000	29.9	9.000	N	9.8	16.1	46.0
3.962000	29.9	9.000	N	9.8	16.1	46.0
4.030000	30.4	9.000	N	9.8	15.6	46.0
4.314000	31.3	9.000	N	9.8	14.7	46.0
4.526000	30.1	9.000	N	9.9	15.9	46.0
4.664000	30.8	9.000	N	9.9	15.2	46.0
15.910000	25.2	9.000	N	10.2	24.8	50.0
16.760000	25.7	9.000	N	10.2	24.3	50.0
16.824000	25.7	9.000	N	10.2	24.3	50.0
19.632000	23.7	9.000	N	10.3	26.3	50.0
19.794000	22.3	9.000	N	10.3	27.7	50.0
21.136000	28.8	9.000	N	10.3	21.2	50.0



## 4.2 Radiated Emission Test

The test results of radiated emission provide the following information:

### -For Measurement Below 1 GHz

<b>Rule Part / Standard</b>	FCC PART 15 Subpart B Class B
<b>Detector</b>	Quasi-Peak
<b>Bandwidth</b>	120 kHz (6 dB)
<b>Operation Mode</b>	Data Communication mode
<b>Cover Type</b>	Standard cover
<b>Kind of Test Site</b>	3 m semi anechoic chamber
<b>Temperature</b>	23.5 °C
<b>Relative Humidity</b>	34.8 %
<b>Test Date</b>	April 22, 2015

Frequency (MHz)	Quasi Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
33.887776	23.7	115.0	V	240.0	14.9	16.3	40.0
61.942204	25.1	150.0	V	43.0	15.2	14.9	40.0
78.197194	33.6	223.0	H	251.0	12.3	6.4	40.0
86.172745	29.7	275.0	H	267.0	11.6	10.3	40.0
133.346052	29.6	100.0	V	152.0	16.4	13.9	43.5
275.993747	31.1	100.0	H	265.0	17.2	14.9	46.0

### - Calculation Formula:

1. POL. H = Horizontal, POL. V = Vertical
2. QuasiPeak = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor + Cable Loss
4. Margin = Limit - QuasiPeak



<b>Rule Part / Standard</b>	FCC PART 15 Subpart B Class B
<b>Detector</b>	Quasi-Peak
<b>Bandwidth</b>	120 kHz (6 dB)
<b>Operation Mode</b>	Data Communication mode
<b>Cover Type</b>	Wireless charging cover
<b>Kind of Test Site</b>	3 m semi anechoic chamber
<b>Temperature</b>	23.5 °C
<b>Relative Humidity</b>	34.8 %
<b>Test Date</b>	April 22, 2015

Frequency (MHz)	Quasi Peak (dBuV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
33.927776	23.7	100.0	V	-1.0	14.9	16.3	40.0
50.318878	22.0	100.0	V	254.0	15.9	18.0	40.0
78.197194	32.8	240.0	H	261.0	12.3	7.2	40.0
133.346052	30.6	100.0	V	138.0	16.4	12.9	43.5
266.554309	31.4	134.0	H	260.0	16.9	14.6	46.0



## -For Measurement Above 1 GHz

<b>Rule Part / Standard</b>	FCC PART 15 Subpart B Class B
<b>Detector</b>	Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)
<b>Highest Operating Frequency</b>	1.8 GHz
<b>Testing Frequency Range</b>	1 GHz to 9 GHz
<b>Operation Mode</b>	Data Communication mode
<b>Cover Type</b>	Standard cover
<b>Kind of Test Site</b>	3 m semi anechoic chamber
<b>Temperature</b>	23.5 °C
<b>Relative Humidity</b>	34.8 %
<b>Test Date</b>	April 22, 2015

Frequency (MHz)	Peak (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1331.713427	49.8	100.0	V	-1.0	-9.3	24.2	74.0
1998.847695	49.0	100.0	V	17.0	-7.8	25.0	74.0
2649.749499	44.0	150.0	V	243.0	-4.9	30.0	74.0

Frequency (MHz)	CAverage (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1331.713427	26.6	100.0	V	-1.0	-9.3	27.4	54.0
1998.847695	28.6	100.0	V	17.0	-7.8	25.4	54.0
2649.749499	31.0	150.0	V	243.0	-4.9	23.0	54.0

### - Calculation Formula:

1. POL. H = Horizontal, POL. V = Vertical
2. Peak or CAverage = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor+ Cable Loss –Amplifier Gain
4. Margin = Limit - Peak or CAverage



<b>Rule Part / Standard</b>	FCC PART 15 Subpart B Class B
<b>Detector</b>	Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)
<b>Highest Operating Frequency</b>	1.8 GHz
<b>Testing Frequency Range</b>	1 GHz to 9 GHz
<b>Operation Mode</b>	Data Communication mode
<b>Cover Type</b>	Wireless charging cover
<b>Kind of Test Site</b>	3 m semi anechoic chamber
<b>Temperature</b>	23.5 °C
<b>Relative Humidity</b>	34.8 %
<b>Test Date</b>	April 22, 2015

Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1332.815632	48.7	100.0	V	0.0	-9.3	25.3	74.0
1996.743487	49.2	100.0	V	27.0	-7.8	24.8	74.0
2033.617234	48.2	100.0	V	14.0	-7.6	25.8	74.0
2656.462926	46.7	125.0	V	192.0	-4.8	27.3	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1332.815632	26.9	100.0	V	0.0	-9.3	27.1	54.0
1996.743487	29.2	100.0	V	27.0	-7.8	24.8	54.0
2033.617234	27.8	100.0	V	14.0	-7.6	26.2	54.0
2656.462926	31.3	125.0	V	192.0	-4.8	22.7	54.0



## 5. LIST OF TEST EQUIPMENT

<u>Type</u>	<u>Manufacturer</u>	<u>Model Name</u>	<u>Serial Number</u>	<u>Calibration Cycle</u>	<u>CAL Date</u>
<b><u>Conducted Emission</u></b>					
<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	01.13.2015
<input checked="" type="checkbox"/> LISN	Rohde & Schwarz	ESH3-Z5	100282	1 year	06.10.2014
<input checked="" type="checkbox"/> LISN	Rohde & Schwarz	ENV216	100073	1 year	01.13.2015
<input checked="" type="checkbox"/> Software	Rohde & Schwarz	EMC32	-	-	-
<b><u>Radiated Emission</u></b>					
<b>-For measurement below 1 GHz</b>					
<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	04.01.2015
<input checked="" type="checkbox"/> Trilog Antenna	Schwarzbeck	VULB9160	3301	2 year	11.17.2014
<input checked="" type="checkbox"/> Antenna master	HD GmbH	MA240	240/520	N/A	-
<input checked="" type="checkbox"/> Antenna master controller	HD GmbH	HD 100	100/637	N/A	-
<input checked="" type="checkbox"/> Turn Table	EMCO	1060-2M	-	N/A	-
<input checked="" type="checkbox"/> Turn Table controller	EMCO	2090	9702-1224	N/A	-
<input type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	06.18.2014
<input type="checkbox"/> Antenna master	INNCO Systems	MA4000-EP	MA4000/283	N/A	-
<input type="checkbox"/> Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
<input checked="" type="checkbox"/> Software	Rohde & Schwarz	EMC32	-	-	-
<b>-For measurement above 1 GHz</b>					
<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	04.01.2015
<input checked="" type="checkbox"/> Antenna master	HD GmbH	MA240	240/520	N/A	-
<input checked="" type="checkbox"/> Antenna master controller	HD GmbH	HD 100	100/637	N/A	-
<input checked="" type="checkbox"/> Turn Table	EMCO	1060-2M	-	N/A	-
<input checked="" type="checkbox"/> Turn Table controller	EMCO	2090	9702-1224	N/A	-
<input type="checkbox"/> Power Amplifier	CERNEX	CBLU1183540	21691	1 year	07.11.2014
<input checked="" type="checkbox"/> Power Amplifier	CERNEX	CBLU5183530	24348	1 year	06.11.2014
<input checked="" type="checkbox"/> Horn Antenna	Schwarzbeck	BBHA 9120D	296	2 year	10.07.2014
<input type="checkbox"/> Horn Antenna	Schwarzbeck	BBHA 9120D	1151	2 year	07.05.2013
<input type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	06.18.2014
<input type="checkbox"/> Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
<input type="checkbox"/> Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170124	2 year	10.30.2013
<input type="checkbox"/> Power Amplifier	CERNEX	CBL18265035	22966	1 year	07.23.2014
<input checked="" type="checkbox"/> Software	Rohde & Schwarz	EMC32	-	-	-



## 6. CONCLUSION

The data collected shows that the **EUT Type: Multiband GSM/EDGE/WCDMA/LTE Phone with WLAN, Bluetooth & RFID, FCC ID: ZNFH811, Model: LG-H811** complies with §15.107 and §15.109 of the FCC rules.