

EMI TEST REPORT

FCC CERTIFICATION / INDUSTRY CANADA

Applicant:

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

1000 Sylvan Avenue, Englewood Cliffs NJ 07632

Date of Receipt: March 20, 2015**Date of Issue:** April 23, 2015**Test Report No.** HCT-E-1504-F035-1**HCT FRN:** 0005866421**FCC ID/IC :****ZNFH815 / 2703C-H815**

Rule Part(s) / Standard(s): FCC CFR 47 PART 15 Subpart B Class B
ICES-003 Issue 5 Class B

FCC Classification: JBP (Part 15 B – Class B Computing Device Peripheral)

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

Model Name: LG-H815

Additional Model Name: 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

Test Port: USB / Earphone Port

Date of Test: April 06, 2015 - April 08, 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

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EMC Team
Certification Division

Reviewed By

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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-F035	April 17, 2015	Initial Release
HCT-E-1504-F035-1	April 23, 2015	The EUT Type is revised.



TABLE OF CONTENTS

	PAGE
1. GENERAL INFORMATION	4
1.1 Description of EUT	4
1.2 Related Submittal(s) / Grant(s).....	5
1.3 Test Facility	5
1.4 Tested System Details.....	6
1.5 Cable Description	7
1.6 Noise Suppression Parts on Cable. (I/O Cable)	7
2. DESCRIPTION OF TEST	8
3. PRELIMINARY TEST	11
3.1 Conducted Emission Test	11
3. 2 Radiated Emission Test	11
4. CONDUCTED AND RADIATED EMISSION TEST SUMMARY	12
4.1 Conducted Emission Test	12
4.2 Radiated Emission Test	26
5. LIST OF TEST EQUIPMENT	30
6. CONCLUSION	31

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.

Model	LG-H815
FCC ID	ZNFH815
IC	2703C-H815
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, LG-H815K, LGH815K, H815K, LG-H815k, LGH815k, H815k
EUT Type	Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/ LTE Phone with Bluetooth, WLAN, NFC
TX Frequency	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) 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) 704 MHz to 716 MHz (LTE B17)
RX Frequency	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) 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) 734 MHz to 746 MHz (LTE B17)



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.
HCT FRN: 0005866421 Radiated Field strength measurement facility (3 m)	90661 (February 28, 2014)
HCT FRN: 0005866421 Radiated Field strength measurement facility (10 m)	90661 (February 28, 2014)
COMPANY CODE: 5944A Filing the EMI Measurement Facility (3 m Semi Anechoic Chamber and Shielded Room)	IC 5944A-4 (August 20, 2014)
COMPANY CODE: 5944A Radiated Field Strength Measurement Facility (10 m Semi-Anechoic Chamber)	IC 5944A-2 (August 30, 2012)



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-H815	LG	ZNFH815	Notebook PC, Earphone
USB cable	EAD62329705	Ningbo Broad	-	EUT, Notebook PC
Earphone	EAB63728201	BUJEON	-	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)1.0
	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 (μV/m)	Quasi-Peak (dB(μV)/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 (dB(μV)/m)	Average (dB(μV)/m)
Above 1 000	3	74	54

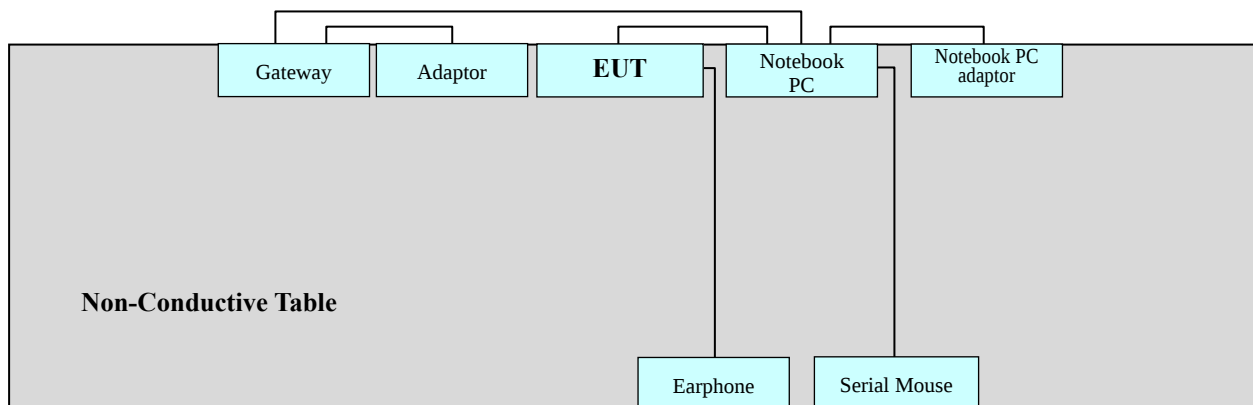


2.2.1 Frequency Range of Radiated Measurements

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 th 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

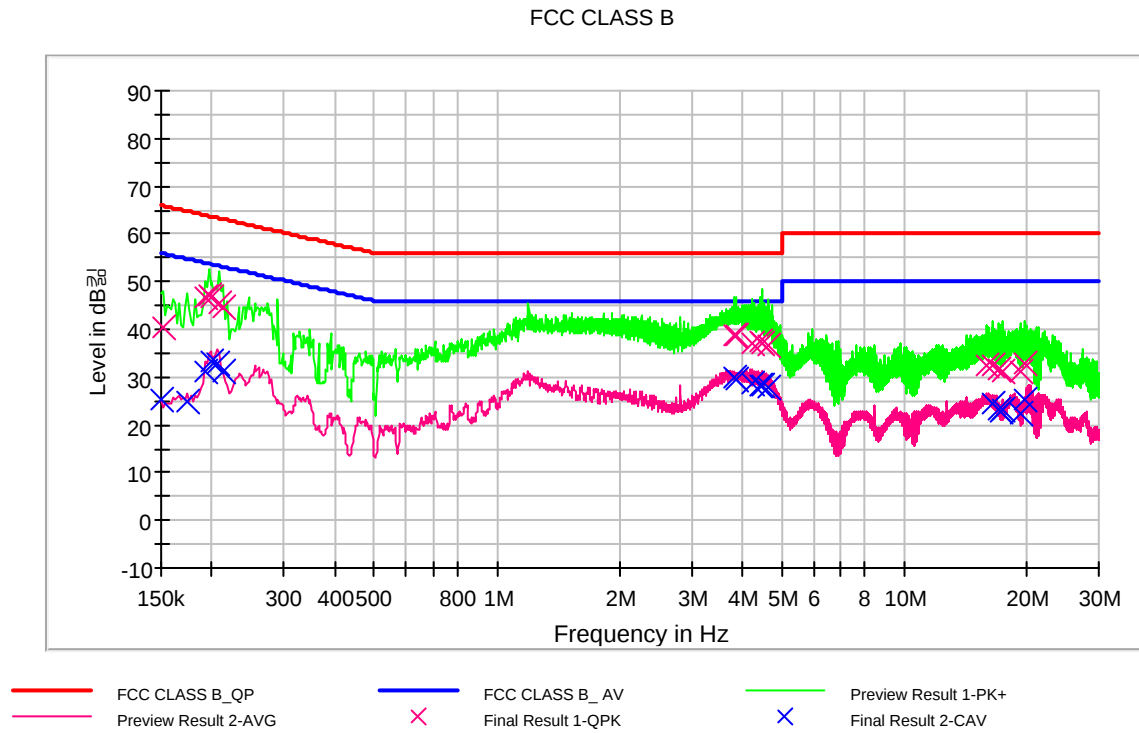
4.1 Conducted Emission Test

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

Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Quasi-Peak, CISPR-Average
Bandwidth	9 kHz (6 dB)
Operation Mode	Data Communication mode
EUT Cover Type	Standard cover
Kind of Test Site	Shielded Room
Temperature	25.4 °C
Relative Humidity	36.0 %
Test Date	April 07, 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)**



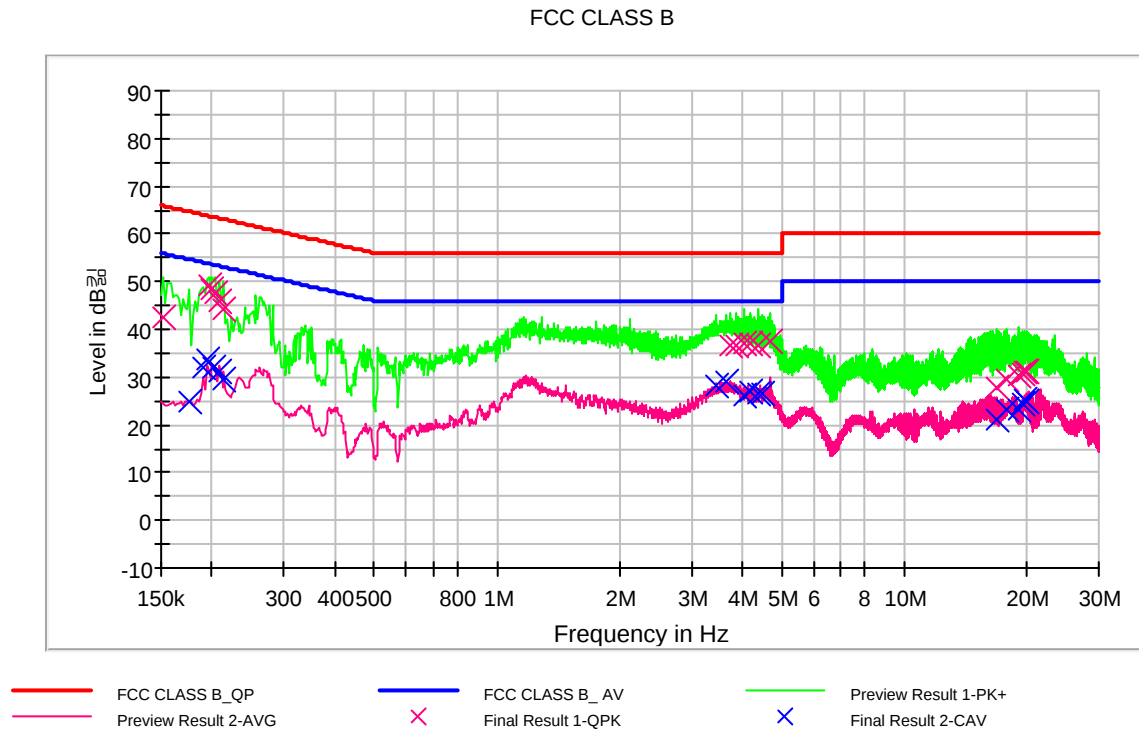
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	40.5	9.000	L1	9.6	25.4	65.9
0.192000	46.7	9.000	L1	9.6	17.2	63.9
0.196000	47.2	9.000	L1	9.6	16.6	63.8
0.200000	46.7	9.000	L1	9.7	16.9	63.6
0.208000	45.6	9.000	L1	9.7	17.7	63.3
0.212000	44.5	9.000	L1	9.7	18.6	63.1
3.810000	38.8	9.000	L1	9.9	17.2	56.0
3.882000	38.9	9.000	L1	9.9	17.1	56.0
4.222000	36.9	9.000	L1	9.9	19.1	56.0
4.448000	37.5	9.000	L1	9.9	18.5	56.0
4.480000	36.9	9.000	L1	9.9	19.1	56.0
4.658000	36.7	9.000	L1	9.9	19.3	56.0
15.958000	32.4	9.000	L1	10.2	27.6	60.0
16.452000	32.4	9.000	L1	10.2	27.6	60.0
17.018000	31.7	9.000	L1	10.2	28.3	60.0
17.444000	31.4	9.000	L1	10.3	28.6	60.0
19.312000	31.0	9.000	L1	10.3	29.0	60.0
19.706000	32.9	9.000	L1	10.3	27.1	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
0.174000	25.1	9.000	L1	9.6	29.7	54.8
0.192000	31.3	9.000	L1	9.6	22.6	53.9
0.198000	33.3	9.000	L1	9.6	20.4	53.7
0.206000	33.0	9.000	L1	9.7	20.4	53.4
0.212000	31.0	9.000	L1	9.7	22.1	53.1
3.810000	29.8	9.000	L1	9.9	16.2	46.0
3.882000	29.6	9.000	L1	9.9	16.4	46.0
4.222000	28.7	9.000	L1	9.9	17.3	46.0
4.448000	28.4	9.000	L1	9.9	17.6	46.0
4.480000	28.3	9.000	L1	9.9	17.7	46.0
4.658000	27.8	9.000	L1	9.9	18.2	46.0
16.452000	24.3	9.000	L1	10.2	25.7	50.0
17.018000	23.3	9.000	L1	10.2	26.7	50.0
17.158000	22.6	9.000	L1	10.2	27.4	50.0
17.444000	23.2	9.000	L1	10.3	26.8	50.0
19.312000	22.2	9.000	L1	10.3	27.8	50.0
19.706000	25.1	9.000	L1	10.3	24.9	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)
0.152000	42.3	9.000	N	9.6	23.6	65.9
0.196000	49.0	9.000	N	9.6	14.8	63.8
0.200000	48.5	9.000	N	9.6	15.1	63.6
0.204000	47.4	9.000	N	9.6	16.0	63.4
0.208000	46.1	9.000	N	9.6	17.2	63.3
0.214000	44.2	9.000	N	9.6	18.8	63.0
3.750000	36.7	9.000	N	9.8	19.3	56.0
3.872000	36.5	9.000	N	9.8	19.5	56.0
4.036000	36.9	9.000	N	9.8	19.1	56.0
4.170000	37.1	9.000	N	9.8	18.9	56.0
4.382000	36.6	9.000	N	9.9	19.4	56.0
4.680000	37.5	9.000	N	9.9	18.5	56.0
16.892000	27.9	9.000	N	10.2	32.1	60.0
17.814000	29.6	9.000	N	10.3	30.4	60.0
19.086000	30.1	9.000	N	10.3	29.9	60.0
19.440000	30.7	9.000	N	10.3	29.3	60.0
19.818000	31.0	9.000	N	10.3	29.0	60.0
20.008000	31.0	9.000	N	10.3	29.0	60.0



CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.176000	24.9	9.000	N	9.6	29.8	54.7
0.190000	31.9	9.000	N	9.6	22.1	54.0
0.194000	33.7	9.000	N	9.6	20.2	53.9
0.202000	31.9	9.000	N	9.6	21.6	53.5
0.208000	31.1	9.000	N	9.6	22.2	53.3
0.214000	29.5	9.000	N	9.6	23.5	53.0
3.462000	28.2	9.000	N	9.8	17.8	46.0
3.670000	29.1	9.000	N	9.8	16.9	46.0
4.036000	26.2	9.000	N	9.8	19.8	46.0
4.170000	26.9	9.000	N	9.8	19.1	46.0
4.382000	26.4	9.000	N	9.9	19.6	46.0
4.470000	26.6	9.000	N	9.9	19.4	46.0
16.892000	21.2	9.000	N	10.2	28.8	50.0
17.814000	23.2	9.000	N	10.3	26.8	50.0
19.086000	23.1	9.000	N	10.3	26.9	50.0
19.440000	24.3	9.000	N	10.3	25.7	50.0
19.818000	25.1	9.000	N	10.3	24.9	50.0
20.008000	24.9	9.000	N	10.3	25.1	50.0

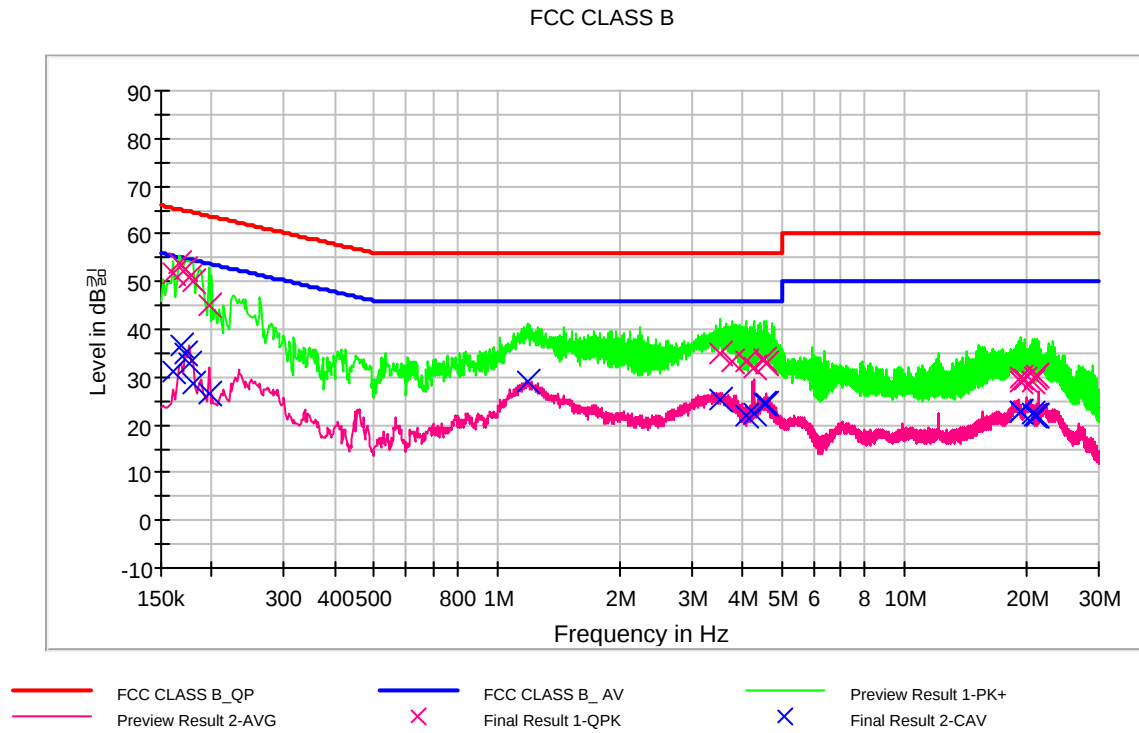


The test results of conducted emission at mains ports provide the following information:

Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Quasi-Peak, CISPR-Average
Bandwidth	9 kHz (6 dB)
Operation Mode	Data Communication mode
EUT Cover Type	Wireless charging cover
Kind of Test Site	Shielded Room
Temperature	25.4 °C
Relative Humidity	36.0 %
Test Date	April 07, 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)**



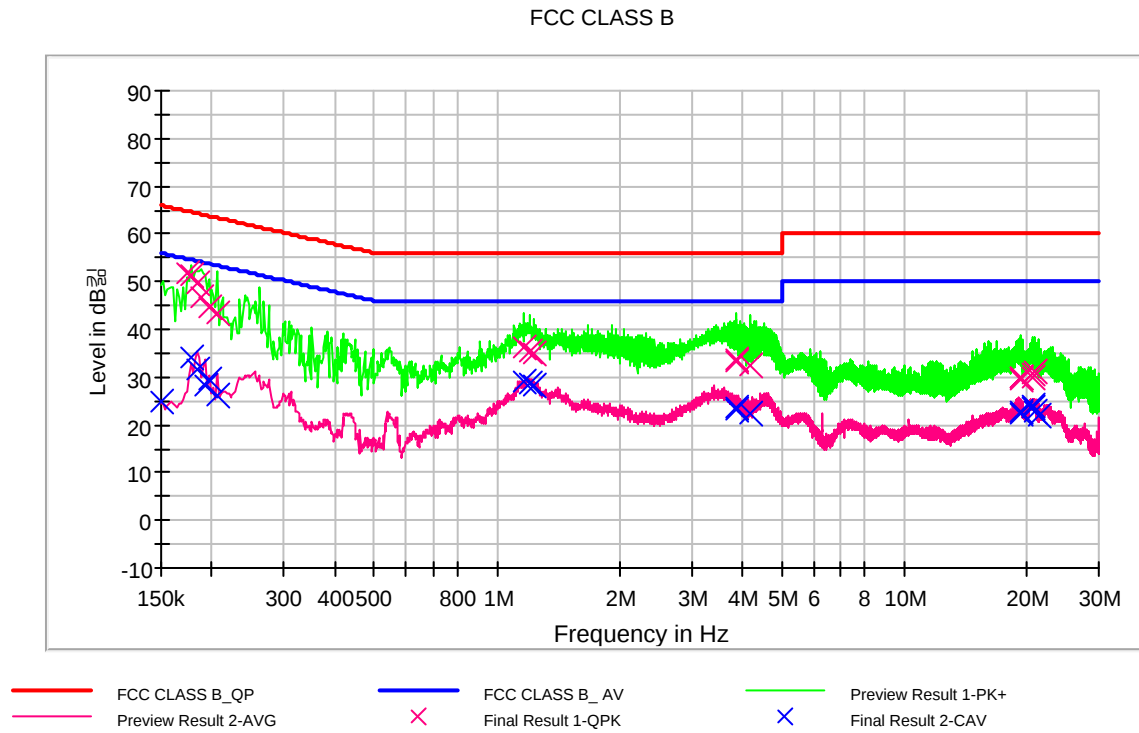
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.160000	51.9	9.000	L1	9.6	13.6	65.5
0.166000	53.9	9.000	L1	9.6	11.3	65.2
0.172000	52.5	9.000	L1	9.6	12.4	64.9
0.176000	50.9	9.000	L1	9.6	13.8	64.7
0.180000	50.2	9.000	L1	9.6	14.3	64.5
0.196000	45.0	9.000	L1	9.6	18.8	63.8
3.538000	35.0	9.000	L1	9.8	21.0	56.0
3.782000	33.4	9.000	L1	9.9	22.6	56.0
4.106000	33.2	9.000	L1	9.9	22.8	56.0
4.262000	32.2	9.000	L1	9.9	23.8	56.0
4.528000	33.6	9.000	L1	9.9	22.4	56.0
4.560000	33.0	9.000	L1	9.9	23.0	56.0
19.264000	29.2	9.000	L1	10.3	30.8	60.0
19.392000	29.7	9.000	L1	10.3	30.3	60.0
19.678000	29.6	9.000	L1	10.3	30.4	60.0
20.662000	28.9	9.000	L1	10.3	31.1	60.0
20.948000	29.9	9.000	L1	10.3	30.1	60.0
21.096000	30.5	9.000	L1	10.3	29.5	60.0



CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.160000	31.1	9.000	L1	9.6	24.4	55.5
0.168000	36.6	9.000	L1	9.6	18.5	55.1
0.172000	35.0	9.000	L1	9.6	19.9	54.9
0.176000	33.0	9.000	L1	9.6	21.7	54.7
0.180000	28.4	9.000	L1	9.6	26.1	54.5
0.196000	26.5	9.000	L1	9.6	27.3	53.8
1.188000	29.1	9.000	L1	9.7	16.9	46.0
3.538000	25.2	9.000	L1	9.8	20.8	46.0
4.106000	22.0	9.000	L1	9.9	24.0	46.0
4.262000	22.5	9.000	L1	9.9	23.5	46.0
4.528000	24.6	9.000	L1	9.9	21.4	46.0
4.560000	24.3	9.000	L1	9.9	21.7	46.0
19.264000	22.7	9.000	L1	10.3	27.3	50.0
19.392000	22.6	9.000	L1	10.3	27.4	50.0
20.662000	22.5	9.000	L1	10.3	27.5	50.0
20.948000	22.0	9.000	L1	10.3	28.0	50.0
21.022000	22.0	9.000	L1	10.3	28.0	50.0
21.096000	22.1	9.000	L1	10.3	27.9	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)
0.174000	51.9	9.000	N	9.6	12.9	64.8
0.178000	51.5	9.000	N	9.6	13.1	64.6
0.184000	49.9	9.000	N	9.6	14.4	64.3
0.188000	46.9	9.000	N	9.6	17.2	64.1
0.196000	44.4	9.000	N	9.6	19.4	63.8
0.206000	43.5	9.000	N	9.6	19.9	63.4
1.166000	36.4	9.000	N	9.7	19.6	56.0
1.204000	35.4	9.000	N	9.7	20.6	56.0
1.232000	34.9	9.000	N	9.7	21.1	56.0
3.862000	33.3	9.000	N	9.8	22.7	56.0
3.878000	33.5	9.000	N	9.8	22.5	56.0
4.182000	32.4	9.000	N	9.8	23.6	56.0
19.310000	30.0	9.000	N	10.3	30.0	60.0
19.384000	29.9	9.000	N	10.3	30.1	60.0
19.396000	29.4	9.000	N	10.3	30.6	60.0
20.642000	30.8	9.000	N	10.3	29.2	60.0
20.654000	29.9	9.000	N	10.3	30.1	60.0
20.874000	31.0	9.000	N	10.3	29.0	60.0



CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	24.8	9.000	N	9.6	31.2	56.0
0.178000	34.2	9.000	N	9.6	20.4	54.6
0.184000	31.7	9.000	N	9.6	22.6	54.3
0.192000	28.0	9.000	N	9.6	25.9	53.9
0.196000	29.4	9.000	N	9.6	24.4	53.8
0.206000	26.0	9.000	N	9.6	27.4	53.4
1.166000	29.0	9.000	N	9.7	17.0	46.0
1.204000	28.7	9.000	N	9.7	17.3	46.0
1.232000	28.3	9.000	N	9.7	17.7	46.0
3.862000	23.6	9.000	N	9.8	22.4	46.0
3.878000	23.4	9.000	N	9.8	22.6	46.0
4.182000	22.5	9.000	N	9.8	23.5	46.0
19.384000	22.4	9.000	N	10.3	27.6	50.0
19.396000	22.8	9.000	N	10.3	27.2	50.0
20.642000	24.0	9.000	N	10.3	26.0	50.0
20.654000	23.7	9.000	N	10.3	26.3	50.0
20.874000	22.7	9.000	N	10.3	27.3	50.0
21.300000	22.0	9.000	N	10.3	28.0	50.0



4.2 Radiated Emission Test

The test results of radiated emission provide the following information:

-For Measurement Below 1 GHz

Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Quasi-Peak
Bandwidth	120 kHz (6 dB)
Operation Mode	Data Communication mode
EUT Cover Type	Standard cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.7 °C
Relative Humidity	32.0 %
Test Date	April 06, 2015

Frequency (MHz)	Quasi Peak (dBuV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
34.847776	23.8	100.0	V	342.0	15.0	16.2	40.0
63.989980	33.6	100.0	V	0.0	14.9	6.4	40.0
266.554309	32.9	100.0	H	295.0	16.9	13.1	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



Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Quasi-Peak
Bandwidth	120 kHz (6 dB)
Operation Mode	Data Communication mode
EUT Cover Type	Wireless charging cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.8 °C
Relative Humidity	32.3 %
Test Date	April 07, 2015

Frequency (MHz)	Quasi Peak (dBuV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
63.766092	31.5	100.0	V	1.0	15.0	8.5	40.0
275.929860	33.4	144.0	H	296.0	17.2	12.6	46.0



-For Measurement Above 1 GHz

Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)
Highest Operating Frequency	1.8 GHz
Testing Frequency Range	1 GHz to 9 GHz
Operation Mode	Data Communication mode
EUT Cover Type	Standard cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.8 °C
Relative Humidity	32.3 %
Test Date	April 06, 2015

Frequency (MHz)	Peak (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
63.766092	31.5	100.0	V	1.0	15.0	8.5	40.0
275.929860	33.4	144.0	H	296.0	17.2	12.6	46.0
63.766092	31.5	100.0	V	1.0	15.0	8.5	40.0

Frequency (MHz)	CAverage (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1330.511022	28.3	100.0	V	-1.0	-9.3	25.7	54.0
1994.539078	32.6	100.0	V	22.0	-7.8	21.4	54.0
2663.977956	31.5	100.0	V	339.0	-4.8	22.5	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



Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)
Highest Operating Frequency	1.8 GHz
Testing Frequency Range	1 GHz to 9 GHz
Operation Mode	Data Communication mode
EUT Cover Type	Wireless charging cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.8 °C
Relative Humidity	32.3 %
Test Date	April 06, 2015

Frequency (MHz)	Peak (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1330.711423	44.9	100.0	V	43.0	-9.3	29.1	74.0
1998.246493	53.5	100.0	V	39.0	-7.8	20.5	74.0
2657.464930	48.7	100.0	V	42.0	-4.8	25.3	74.0

Frequency (MHz)	Peak (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1330.711423	27.8	100.0	V	43.0	-9.3	26.2	54.0
1998.246493	32.8	100.0	V	39.0	-7.8	21.2	54.0
2657.464930	31.9	100.0	V	42.0	-4.8	22.1	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>
<u>Conducted Emission</u>					
☒ EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	01.13.2015
☒ LISN	Rohde & Schwarz	ESH3-Z5	100282	1 year	06.10.2014
☒ LISN	Rohde & Schwarz	ENV216	100073	1 year	01.13.2015
☒ Software	Rohde & Schwarz	EMC32	-	-	-
<u>Radiated Emission</u>					
-For measurement below 1 GHz					
☒ EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	04.01.2015
☒ Trilog Antenna	Schwarzbeck	VULB9160	3301	2 year	11.17.2014
☒ Antenna master	HD GmbH	MA240	240/520	N/A	-
☒ Antenna master controller	HD GmbH	HD 100	100/637	N/A	-
☒ Turn Table	EMCO	1060-2M	-	N/A	-
☒ Turn Table controller	EMCO	2090	9702-1224	N/A	-
☐ EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	06.18.2014
☐ Antenna master	INNCO Systems	MA4000-EP	MA4000/283	N/A	-
☐ Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
☒ Software	Rohde & Schwarz	EMC32	-	-	-
-For measurement above 1 GHz					
☒ EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	04.01.2015
☒ Antenna master	HD GmbH	MA240	240/520	N/A	-
☒ Antenna master controller	HD GmbH	HD 100	100/637	N/A	-
☒ Turn Table	EMCO	1060-2M	-	N/A	-
☒ Turn Table controller	EMCO	2090	9702-1224	N/A	-
☐ Power Amplifier	CERNEX	CBLU1183540	21691	1 year	07.11.2014
☒ Power Amplifier	CERNEX	CBLU5183530	24348	1 year	06.11.2014
☒ Horn Antenna	Schwarzbeck	BBHA 9120D	296	2 year	10.07.2014
☐ Horn Antenna	Schwarzbeck	BBHA 9120D	1151	2 year	07.05.2013
☐ EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	06.18.2014
☐ Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
☐ Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170124	2 year	10.30.2013
☐ Power Amplifier	CERNEX	CBL18265035	22966	1 year	07.23.2014
☒ Software	Rohde & Schwarz	EMC32	-	-	-



6. CONCLUSION

The data collected shows that the **EUT Type: Cellular/PCS GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/LTE Phone with Bluetooth, WLAN, NFC, Model: LG-H815**
FCC ID: ZNFH815, IC: 2703C-H815 complies with §15.107 and §15.109 of the FCC rules and ICES-003 Issue 5 of the IC rules.