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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: May 12, 2015
Date of Issue: May 28, 2015
Test Report No. HCT-E-1505-F023
HCT FRN: 0005866421

FCC ID: **ZNFH731**
IC : **2703C-H731**

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:	GSM, WCDMA and LTE Phone with Bluetooth, WLAN and NFC
Model Name:	LG-H731
Additional Model Name:	LGH731, H731
Test Port:	USB / Earphone Port
Date of Test:	May 14, 2015 - May 27, 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 denial 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-1505-F023	May 28, 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.

Model	LG-H731
FCC ID	ZNFH731
IC	2703C-H731
Additional Model	LGH731, H731
EUT Type	GSM, WCDMA and LTE Phone with Bluetooth, WLAN and NFC
TX Frequency	824.20 ㎒ to 848.80 ㎒ (GSM 850) 1 850.20 ㎒ to 1 909.80 ㎒ (GSM 1 900) 1 852.4 ㎒ to 1 907.6 ㎒ (WCDMA B2) 1712.4 ㎒ to 1752.6 ㎒ (WCDMA B4) 826.40 ㎒ to 846.60 ㎒ (WCDMA B5) 1 850 ㎒ to 1 910 ㎒ (LTE B2) 1 710 ㎒ to 1 755 ㎒ (LTE B4) 824 ㎒ to 849 ㎒ (LTE B5) 2 496 ㎒ to 2570 ㎒ (LTE B7) 699 ㎒ to 716 ㎒ (LTE B12) 704 ㎒ to 716 ㎒ (LTE B17)
RX Frequency	869.20 ㎒ to 893.80 ㎒ (GSM 850) 1 930.20 ㎒ to 1 989.80 ㎒ (GSM 1 900) 1 932.4 ㎒ to 1 987.6 ㎒ (WCDMA B2) 2 112.4 ㎒ to 2 152.6 ㎒ (WCDMA B4) 871.40 ㎒ to 891.60 ㎒ (WCDMA B5) 1 930 ㎒ to 1 990 ㎒ (LTE B2) 2 110 ㎒ to 2 155 ㎒ (LTE B4) 869 ㎒ to 894 ㎒ (LTE B5) 2 516 ㎒ to 2 690 ㎒ (LTE B7) 729 ㎒ to 746 ㎒ (LTE B12) 734 ㎒ to 746 ㎒ (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-H731	LG	ZNFH731	Notebook PC, Earphone
USB cable	EAD62377902	Ningbo Broad	-	EUT, Notebook PC
USB cable	EAD62377903	KSD	-	EUT, Notebook PC
Earphone	EAB62209201	I-SOUND	-	EUT
Standard cover	-	-	-	EUT
Quick cover	CFV-110	Young Kwang	-	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 semi anechoic chamber. 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]

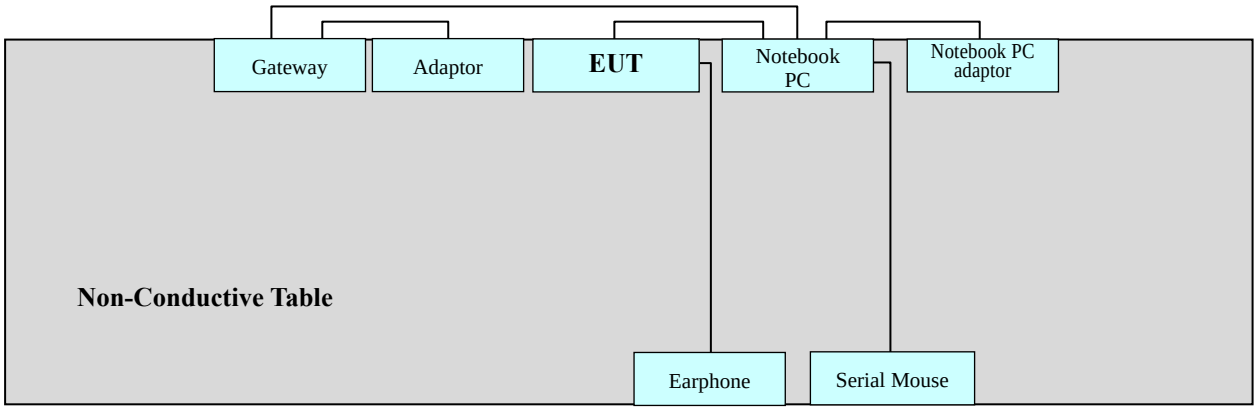
Frequency (MHz)	Antenna Distance (m)	Field Strength (μV/m)	Quasi-Peak (dB(μV)/m)
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0
Frequency (MHz)	**Antenna Distance (m)**	**Peak (dB(μV)/m)**	**Average (dB(μV)/m)**
Above 1 000	3	74	54

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	5th harmonic of the highest frequency or 40 ㎓, 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

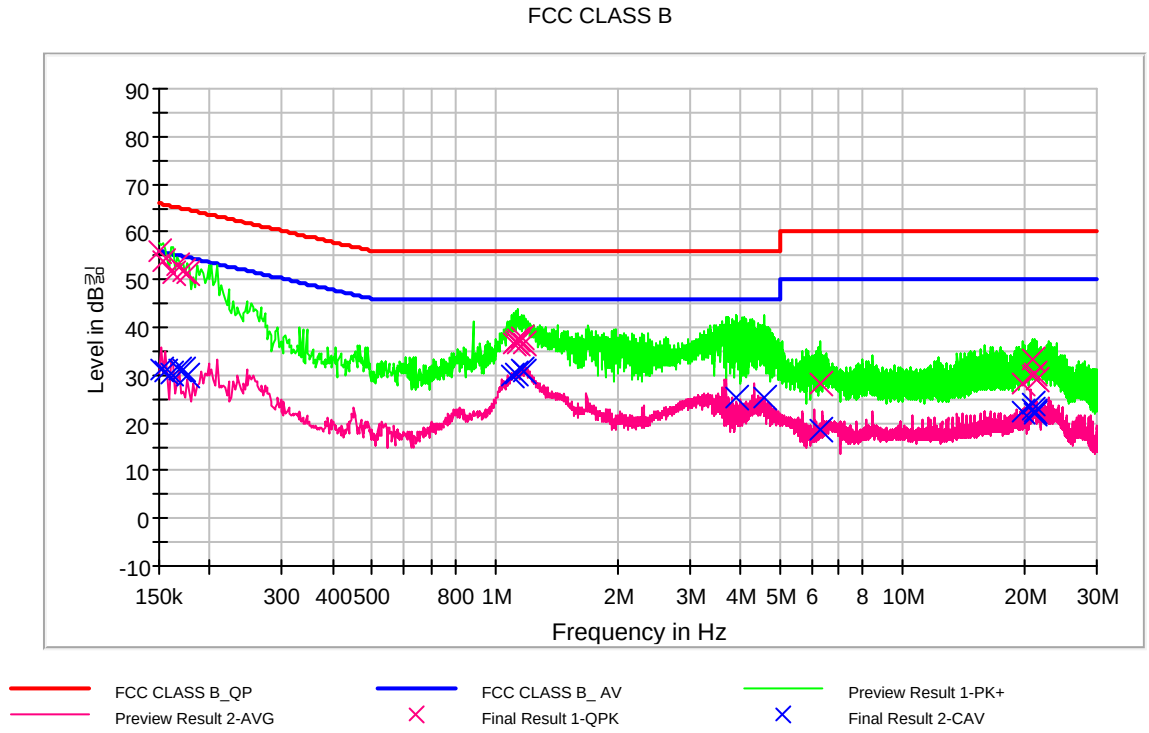
The test results of conducted emission at mains ports provide the following information:

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
USB Cable Type	Ningbo Broad (EAD62377902) ※**NOTE:** The worst-case emissions are reported.
EUT Cover Type	Standard cover
Kind of Test Site	Shielded Room
Temperature	23.6 °C
Relative Humidity	40.0 %
Test Date	May 18, 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)



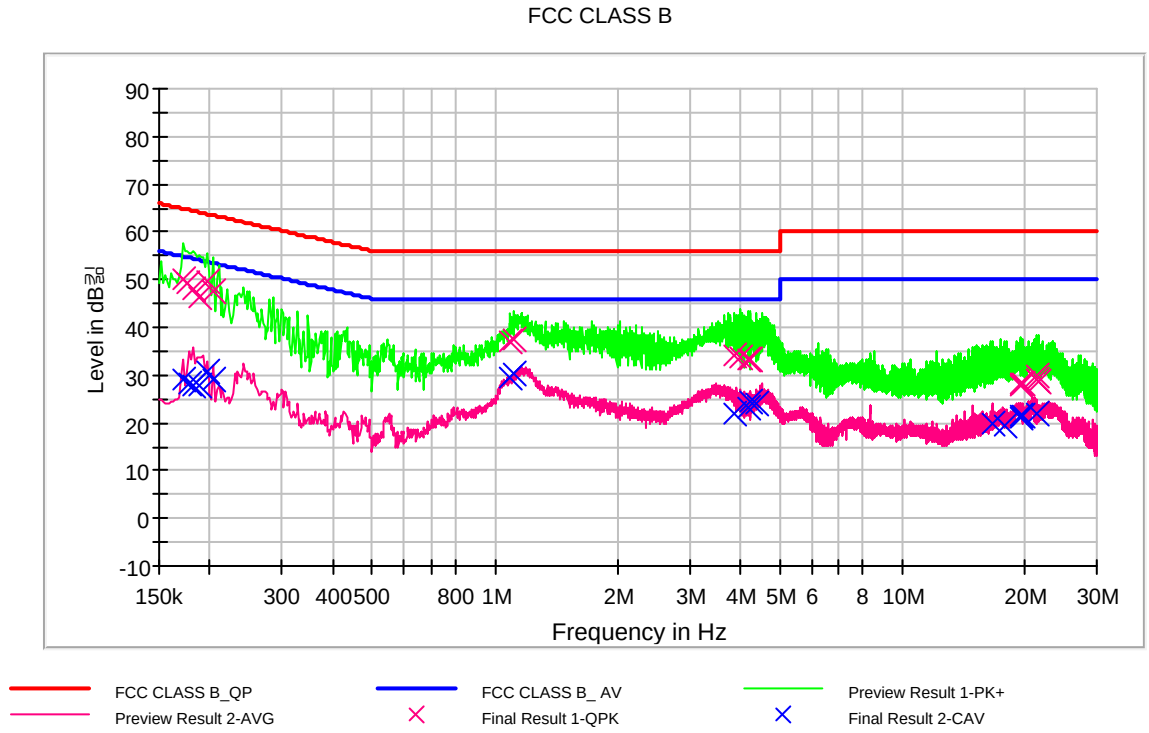
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	55.8	9.000	L1	9.6	10.2	66.0
0.154000	54.0	9.000	L1	9.6	11.8	65.8
0.162000	51.5	9.000	L1	9.6	13.9	65.4
0.166000	52.9	9.000	L1	9.6	12.3	65.2
0.172000	51.7	9.000	L1	9.6	13.2	64.9
0.176000	51.4	9.000	L1	9.6	13.3	64.7
1.112000	36.7	9.000	L1	9.7	19.3	56.0
1.128000	36.9	9.000	L1	9.7	19.2	56.0
1.136000	36.7	9.000	L1	9.7	19.3	56.0
1.142000	37.6	9.000	L1	9.7	18.4	56.0
1.164000	37.8	9.000	L1	9.7	18.2	56.0
1.184000	36.8	9.000	L1	9.7	19.2	56.0
6.298000	28.1	9.000	L1	9.9	32.0	60.0
19.768000	28.4	9.000	L1	10.3	31.6	60.0
20.880000	33.3	9.000	L1	10.3	26.7	60.0
20.944000	30.0	9.000	L1	10.3	30.0	60.0
21.218000	30.4	9.000	L1	10.3	29.6	60.0
21.442000	29.1	9.000	L1	10.3	30.9	60.0

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	31.0	9.000	L1	9.6	24.9	55.9
0.156000	30.9	9.000	L1	9.6	24.8	55.7
0.160000	30.5	9.000	L1	9.6	25.0	55.5
0.168000	31.0	9.000	L1	9.6	24.1	55.1
0.172000	31.2	9.000	L1	9.6	23.7	54.9
0.176000	30.0	9.000	L1	9.6	24.7	54.7
1.100000	29.8	9.000	L1	9.7	16.2	46.0
1.128000	30.4	9.000	L1	9.7	15.6	46.0
1.164000	31.4	9.000	L1	9.7	14.6	46.0
1.184000	30.8	9.000	L1	9.7	15.2	46.0
3.920000	25.1	9.000	L1	9.9	20.9	46.0
4.590000	25.1	9.000	L1	9.9	20.9	46.0
6.298000	18.8	9.000	L1	9.9	31.2	50.0
19.768000	22.3	9.000	L1	10.3	27.7	50.0
20.880000	22.9	9.000	L1	10.3	27.1	50.0
20.908000	24.0	9.000	L1	10.3	26.0	50.0
21.156000	22.2	9.000	L1	10.3	27.8	50.0
21.218000	21.9	9.000	L1	10.3	28.1	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)
0.172000	49.9	9.000	N	9.6	15.0	64.9
0.176000	49.1	9.000	N	9.6	15.6	64.7
0.182000	48.0	9.000	N	9.6	16.4	64.4
0.188000	46.5	9.000	N	9.6	17.6	64.1
0.196000	49.5	9.000	N	9.6	14.3	63.8
0.204000	47.7	9.000	N	9.6	15.7	63.4
1.092000	37.0	9.000	N	9.7	19.0	56.0
1.114000	37.7	9.000	N	9.7	18.3	56.0
3.868000	34.3	9.000	N	9.8	21.7	56.0
3.994000	33.7	9.000	N	9.8	22.3	56.0
4.166000	33.5	9.000	N	9.8	22.5	56.0
4.226000	33.5	9.000	N	9.8	22.5	56.0
19.458000	27.7	9.000	N	10.3	32.3	60.0
19.618000	28.4	9.000	N	10.3	31.6	60.0
19.748000	28.0	9.000	N	10.3	32.0	60.0
21.364000	29.9	9.000	N	10.3	30.1	60.0
21.444000	29.0	9.000	N	10.3	31.0	60.0
21.516000	28.6	9.000	N	10.3	31.4	60.0

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.172000	29.1	9.000	N	9.6	25.8	54.9
0.178000	28.2	9.000	N	9.6	26.4	54.6
0.182000	27.9	9.000	N	9.6	26.5	54.4
0.188000	28.0	9.000	N	9.6	26.1	54.1
0.196000	30.7	9.000	N	9.6	23.1	53.8
0.204000	29.2	9.000	N	9.6	24.2	53.4
1.092000	29.7	9.000	N	9.7	16.3	46.0
1.114000	30.4	9.000	N	9.7	15.6	46.0
3.868000	21.8	9.000	N	9.8	24.2	46.0
4.166000	23.1	9.000	N	9.8	22.9	46.0
4.226000	24.4	9.000	N	9.8	21.6	46.0
4.390000	24.2	9.000	N	9.9	21.8	46.0
16.610000	19.8	9.000	N	10.2	30.2	50.0
17.802000	19.5	9.000	N	10.3	30.5	50.0
19.458000	21.1	9.000	N	10.3	28.9	50.0
19.618000	21.7	9.000	N	10.3	28.3	50.0
19.748000	21.5	9.000	N	10.3	28.5	50.0
21.364000	22.1	9.000	N	10.3	27.9	50.0

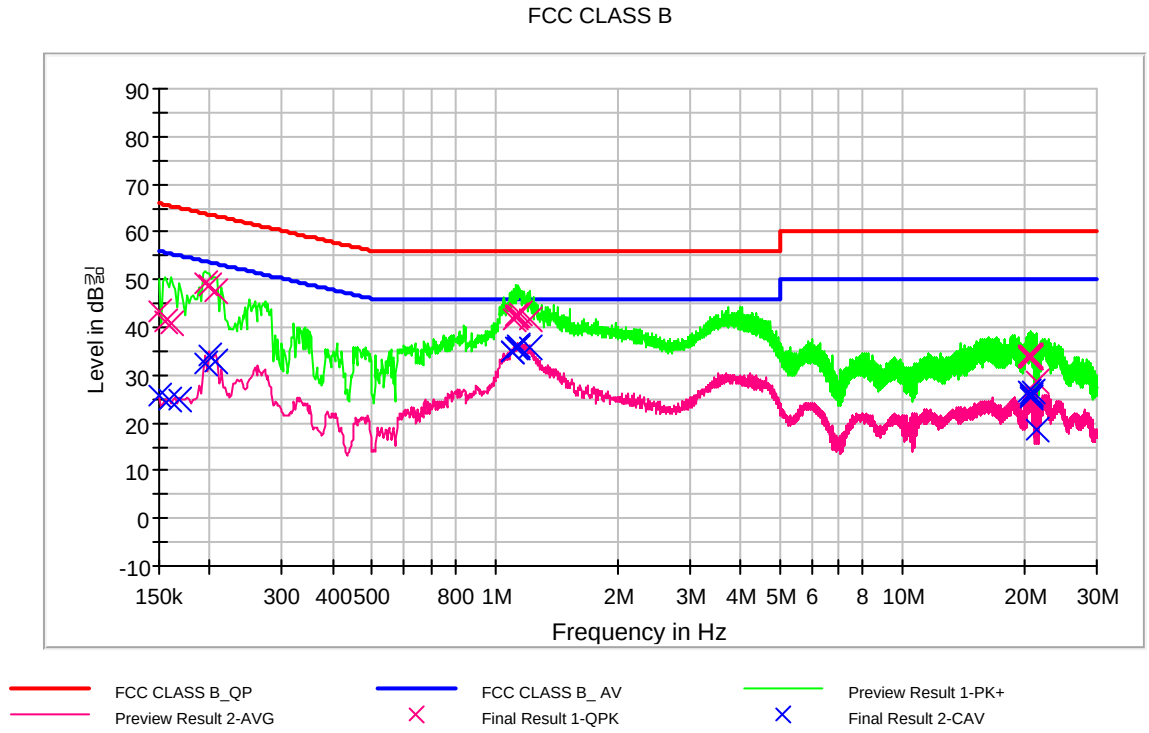
The test results of conducted emission at mains ports provide the following information:

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
USB Cable Type	Ningbo Broad (EAD62377902) ※**NOTE:** The worst-case emissions are reported.
EUT Cover Type	Quick cover
Kind of Test Site	Shielded Room
Temperature	24.4 °C
Relative Humidity	41.7 %
Test Date	May 26, 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)



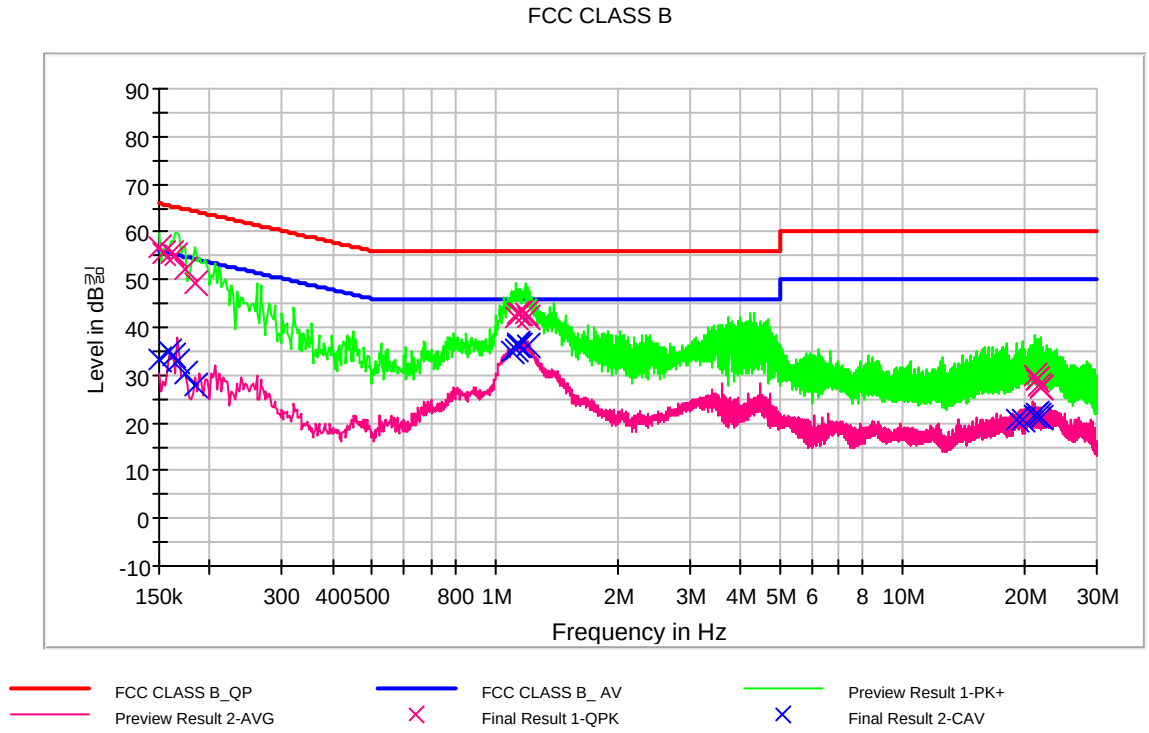
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	43.3	9.000	L1	9.6	22.7	66.0
0.156000	41.1	9.000	L1	9.6	24.6	65.7
0.160000	40.7	9.000	L1	9.6	24.8	65.5
0.194000	49.1	9.000	L1	9.6	14.8	63.9
0.198000	48.8	9.000	L1	9.6	14.9	63.7
0.206000	47.7	9.000	L1	9.7	15.7	63.4
1.110000	41.6	9.000	L1	9.7	14.4	56.0
1.124000	42.1	9.000	L1	9.7	13.9	56.0
1.128000	42.6	9.000	L1	9.7	13.4	56.0
1.144000	42.5	9.000	L1	9.7	13.5	56.0
1.150000	42.9	9.000	L1	9.7	13.1	56.0
1.214000	41.8	9.000	L1	9.7	14.2	56.0
20.494000	33.6	9.000	L1	10.3	26.4	60.0
20.502000	34.1	9.000	L1	10.3	25.9	60.0
20.638000	33.8	9.000	L1	10.3	26.2	60.0
20.642000	34.0	9.000	L1	10.3	26.0	60.0
20.706000	33.8	9.000	L1	10.3	26.2	60.0
21.360000	28.6	9.000	L1	10.3	31.4	60.0

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	25.8	9.000	L1	9.6	30.2	56.0
0.158000	24.8	9.000	L1	9.6	30.8	55.6
0.168000	25.0	9.000	L1	9.6	30.1	55.1
0.194000	32.6	9.000	L1	9.6	21.3	53.9
0.198000	34.0	9.000	L1	9.6	19.7	53.7
0.206000	33.1	9.000	L1	9.7	20.3	53.4
1.100000	34.8	9.000	L1	9.7	11.2	46.0
1.106000	34.8	9.000	L1	9.7	11.2	46.0
1.128000	35.6	9.000	L1	9.7	10.4	46.0
1.136000	35.9	9.000	L1	9.7	10.1	46.0
1.142000	36.4	9.000	L1	9.7	9.6	46.0
1.214000	35.6	9.000	L1	9.7	10.4	46.0
20.502000	26.7	9.000	L1	10.3	23.3	50.0
20.642000	26.2	9.000	L1	10.3	23.8	50.0
20.706000	25.2	9.000	L1	10.3	24.8	50.0
20.750000	25.8	9.000	L1	10.3	24.2	50.0
20.784000	26.7	9.000	L1	10.3	23.3	50.0
21.360000	18.7	9.000	L1	10.3	31.3	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	56.8	9.000	N	9.6	9.2	66.0
0.154000	55.3	9.000	N	9.6	10.5	65.8
0.160000	55.6	9.000	N	9.6	9.9	65.5
0.164000	54.9	9.000	N	9.6	10.4	65.3
0.174000	52.0	9.000	N	9.6	12.8	64.8
0.184000	49.2	9.000	N	9.6	15.1	64.3
1.124000	42.3	9.000	N	9.7	13.7	56.0
1.136000	42.9	9.000	N	9.7	13.1	56.0
1.150000	42.8	9.000	N	9.7	13.2	56.0
1.154000	42.9	9.000	N	9.7	13.1	56.0
1.186000	43.0	9.000	N	9.7	13.0	56.0
1.200000	42.1	9.000	N	9.7	13.9	56.0
21.090000	29.8	9.000	N	10.3	30.2	60.0
21.290000	29.2	9.000	N	10.3	30.8	60.0
21.308000	29.0	9.000	N	10.3	31.0	60.0
21.520000	27.9	9.000	N	10.3	32.1	60.0
21.738000	27.5	9.000	N	10.3	32.5	60.0
21.870000	27.5	9.000	N	10.3	32.5	60.0

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	33.4	9.000	N	9.6	22.6	56.0
0.158000	34.8	9.000	N	9.6	20.8	55.6
0.162000	34.2	9.000	N	9.6	21.2	55.4
0.166000	32.9	9.000	N	9.6	22.3	55.2
0.174000	30.5	9.000	N	9.6	24.3	54.8
0.184000	27.8	9.000	N	9.6	26.5	54.3
1.104000	35.2	9.000	N	9.7	10.8	46.0
1.124000	35.5	9.000	N	9.7	10.5	46.0
1.136000	36.3	9.000	N	9.7	9.7	46.0
1.142000	36.6	9.000	N	9.7	9.4	46.0
1.152000	36.4	9.000	N	9.7	9.6	46.0
1.200000	36.1	9.000	N	9.7	9.9	46.0
19.110000	20.8	9.000	N	10.3	29.2	50.0
19.670000	20.7	9.000	N	10.3	29.3	50.0
21.090000	21.6	9.000	N	10.3	28.4	50.0
21.308000	21.8	9.000	N	10.3	28.2	50.0
21.520000	21.6	9.000	N	10.3	28.4	50.0
21.738000	20.9	9.000	N	10.3	29.1	50.0

4.2 Radiated Emission Test

The test results of radiated emission provide the following information:

-For Measurement Below 1 ㎓

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
USB Cable Type	Ningbo Broad (EAD62377902) ※**NOTE:** The worst-case emissions are reported.
EUT Cover Type	Standard cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.4 °C
Relative Humidity	41.1 %
Test Date	May 14, 2015

Frequency (MHz)	Quasi Peak (dBuV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
91.260521	33.3	350.0	H	277.0	11.6	10.2	43.5

- 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
USB Cable Type	Ningbo Broad (EAD62377902) ※**NOTE:** The worst-case emissions are reported.
EUT Cover Type	Quick cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	24.9 °C
Relative Humidity	42.3 %
Test Date	May 26, 2015

Frequency (MHz)	Quasi Peak (dBuV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
34.767776	27.0	100.0	V	230.0	15.0	13.0	40.0
87.372745	27.9	241.0	H	264.0	11.5	12.1	40.0
266.514309	34.3	135.0	H	95.0	16.9	11.7	46.0

-For Measurement Above 1 ㎓

Rule Part / Standard	FCC PART 15 Subpart B Class B ICES-003 Issue 5 Class B
Detector	Peak mode: Peak (RBW: 1 ㎒, VBW: 3 ㎒) CISPR-Average mode: Peak (RBW: 1 ㎒, VBW: 10 ㎐)
Highest Operating Frequency	1.5 GHz
Testing Frequency Range	1 GHz to 7.5 GHz
Operation Mode	Data Communication mode
USB Cable Type	Ningbo Broad (EAD62377902) ※**NOTE:** The worst-case emissions are reported.
EUT Cover Type	Standard cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	22.5 °C
Relative Humidity	42.7 %
Test Date	May 19, 2015

Frequency (MHz)	Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1332.014028	51.2	100.0	V	29.0	-9.3	22.8	74.0
1993.436874	55.4	100.0	V	14.0	-7.8	18.6	74.0

Frequency (MHz)	CAverage (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1332.014028	26.5	100.0	V	29.0	-9.3	27.5	54.0
1993.436874	29.2	100.0	V	14.0	-7.8	24.8	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 ㎒, VBW: 3 ㎒) CISPR-Average mode: Peak (RBW: 1 ㎒, VBW: 10 ㎐)
Highest Operating Frequency	1.5 GHz
Testing Frequency Range	1 GHz to 7.5 GHz
Operation Mode	Data Communication mode
USB Cable Type	Ningbo Broad (EAD62377902) ※**NOTE:** The worst-case emissions are reported.
EUT Cover Type	Quick cover
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.6 °C
Relative Humidity	40.7 %
Test Date	May 27, 2015

Frequency (MHz)	Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.010020	50.1	100.0	V	298.0	-9.3	23.9	74.0
1996.543086	56.2	100.0	V	27.0	-7.8	17.8	74.0
2658.867735	49.6	100.0	V	350.0	-4.8	24.4	74.0

Frequency (MHz)	CAverage (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.010020	26.2	100.0	V	298.0	-9.3	27.8	54.0
1996.543086	29.0	100.0	V	27.0	-7.8	25.0	54.0
2658.867735	31.3	100.0	V	350.0	-4.8	22.7	54.0

5. LIST OF TEST EQUIPMENT

Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	CAL Date
Conducted Emission					
☒ 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	-	-	-
Radiated Emission					
-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: GSM, WCDMA and LTE Phone with Bluetooth, WLAN and NFC, FCC ID: ZNFH731, IC: 2703C-H731, Model: LG-H731** complies with §15.107 and §15.109 of the FCC rules and ICES-003 Issue 5 of the IC rules.