



HCT CO., LTD.

CERTIFICATION DIVISION

74, SEOICHEON-RO, 578BEON-GIL, MAJANG-MYEON, ICHEON-SI, GYEONGGI-DO, KOREA
TEL: +82 31 645 6300 FAX: +82 31 645 6401

EMI CERTIFICATION REPORT

Applicant:

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

1000 Sylvan Avenue, Englewood Cliffs NJ 07632

Date of Issue: June 04, 2013

Test Report No.: HCTE1306FE03

Test Site: HCT CO., LTD.

HCT FRN: 0005-8664-21

FCC ID:

ZNFD801

Rule Part(s) / Standard(s) : FCC PART 15 Subpart B Class B
Equipment Type : Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS/AWS WCDMA/HSDPA
/HSUPA/DC-HSDPA and LTE B2/B4/B17 Phone with Bluetooth, WLAN,
NFC
Model Name : LG-D801
Additional Model Name : LGD801, D801
Port / Connector(s) : USB / Earphone Port
Date of Test : May 27, 2013 – June 03, 2013

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 subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862


Report prepared by

: Gu-Cheol Yoon

Test Engineer of EMC Team


Approved by

: Jin-Pyo Hong

Manager of EMC Team

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

DOCUMENT HISTORY

The revision history for this document is shown in table.

Version	Date	Description
HCTE1306FE03	June 04, 2013	Initial Release

TABLE OF CONTENTS

	PAGE
1. GENERAL INFORMATION	4
1.1 Product Description.....	4
1.2 Related Submittal(s) / Grant(s).....	4
1.3 Tested System Details.....	5
1.4 Cable Description.....	6
1.5 Noise Suppression Parts on Cable. (I/O cable)	6
1.6 Test Methodology	7
1.7 Test Facility	7
1.8 Frequency Range of Radiated Measurements	7
2. SYSTEM TEST CONFIGURATION.....	8
2.1 Configuration of Test System	8
3. PRELIMINARY TEST	9
3.1 Conducted Emission Test	9
3. 2 Radiated Emission Test	9
4. CONDUCTED AND RADIATED EMISSION TEST SUMMARY	10
4.1 Conducted Emission Test	10
4.2 Radiated Emission Test	15
5. FIELD STRENGTH CALCULATION	24
6. TEST EQUIPMENT	25
7. CONCLUSION	26

ATTACHMENT: TEST SETUP PHOTOGRAPHS

1. GENERAL INFORMATION

1.1 Product Description

Equipment Under Test is **EUT type: Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS/AWS WCDMA/HSDPA/HSUPA/DC-HSDPA and LTE B2/B4/B17 Phone with Bluetooth, WLAN, NFC, Model: LG-D801** manufactured by **LG Electronics MobileComm U.S.A., Inc.** Its basic purpose is used for communications.

Model	LG-D801
FCC ID	ZNFD801
Additional Model	LGD801, D801
EUT Type	Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS/AWS WCDMA /HSDPA/HSUPA/DC-HSDPA and LTE B2/B4/B17 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) 1 850 MHz to 1 910 MHz (WCDMA B2) 1 710 MHz to 1 755 MHz (WCDMA B4) 824 MHz to 849 MHz (WCDMA B5) 1 850 MHz to 1 910 MHz (LTE B2) 1 710 MHz to 1 755 MHz (LTE B4) 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) 1 930 MHz to 1 990 MHz (WCDMA B2) 2 110 MHz to 2 155 MHz (WCDMA B4) 869 MHz to 894 MHz (WCDMA B5) 1 930 MHz to 1 990 MHz (LTE B2) 2 110 MHz to 2 155 MHz (LTE B4) 734 MHz to 746 MHz (LTE B17)

1.2 Related Submittal(s) / Grant(s)

Original submittal only.

1.3 Tested System Details

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

Device Type	Manufacturer	Model Name	FCC ID / DoC	Connected To
EUT	LG	LG-D801	ZNFD801	Notebook PC Ear-phone
USB cable (2.0)	INTERFACESAMIL	SAMIL12345	-	E.U.T Notebook PC
USB cable (3.0)	Ningbo	-	-	E.U.T Notebook PC
Ear-phone	I-SOUND	LE431	-	E.U.T
Adaptor	Yang Ming Industrial	DA-60M12	-	Gateway
RJ45 cable	-	-	-	Notebook PC, Gateway
Notebook PC	LG	A560-XH55K	DoC	Notebook PC adaptor, HDMI cable
Notebook PC adaptor	Dongguang Lite Power 2 nd plant	PA-1900-08	-	Notebook PC
Gateway	Axesstel	MV440R	-	Notebook PC, Adaptor
LCD monitor	SAMSUNG	B2230HF	-	HDMI cable
HDMI cable	Cambridge Audio	900 series	-	LCD monitor Notebook PC

1.4 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
	Ear-phone	N/A	Y	(D)1.2
	Micro USB (USB 3.0)	Y	Y	(P,D)0.1
Notebook PC	RJ 45	N/A	N	(D)1.5
	HDMI	N/A	Y	(D)1.5
	DC in	N	N/A	(P)1.8
Gateway	DC in	N	N/A	(P)1.8
LCD monitor	AC in	N	N/A	(P)1.8

* The marked "(D)" means the data cable and "(P)" means the power cable.

1.5 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
	Ear-phone	N	N/A	Y	EUT End
	Micro USB (USB 3.0)	N	N/A	Y	Both End
Notebook PC	RJ 45	N	N/A	N	N/A
	HDMI	N	N/A	Y	Both End

1.6 Test Methodology

Both Conducted and Radiated testing was performed according to the procedures in ANSI C63.4/2003. Radiated testing was performed at an antenna to EUT distance of 3 m

1.7 Test Facility

Chamber used to collect the test 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.

Measurement Facilities	Reg. No.
Radiated Field strength measurement facility (3m)	90661(Mar. 02, 2011)
Radiated Field strength measurement facility (10m)	90661 (Sep. 03, 2010)

1.8 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. SYSTEM TEST CONFIGURATION

2.1 Configuration of Test System

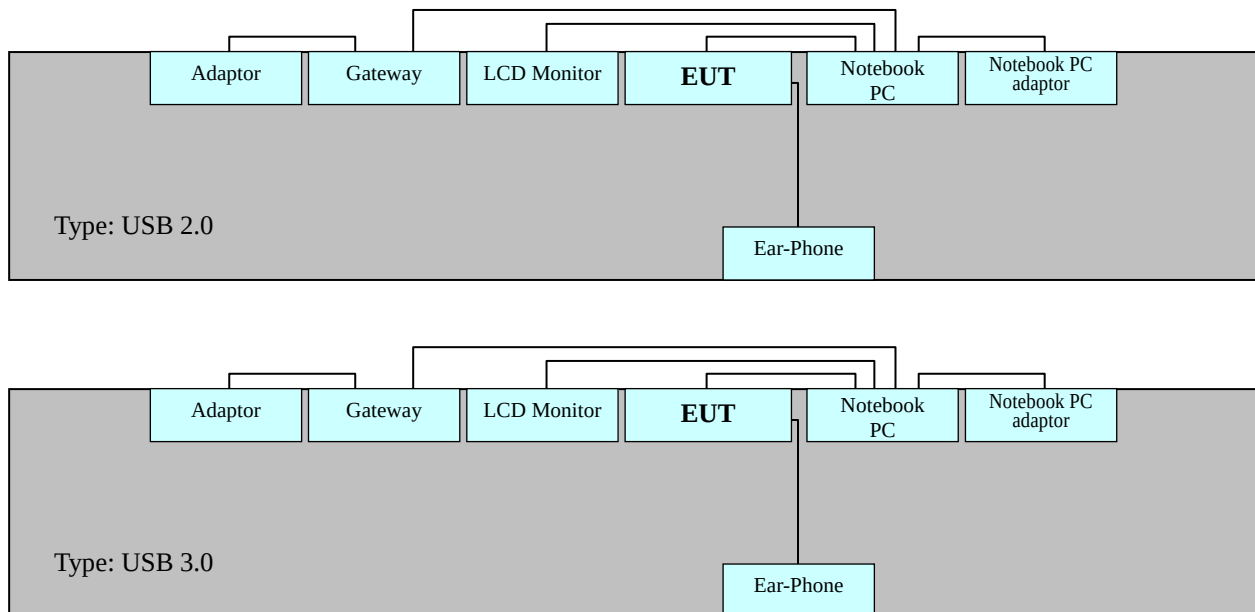
2.1.1 Conducted Emission Test

EUT was connected to LISN via Notebook PC adaptor and Base Station. Preliminary Power Line Conducted Emission tests were performed by using the procedure in ANSI C63.4/2003 7.2.3 to determine the worst operating conditions.

2.1.2 Radiated Emission Test

Preliminary Radiated Emission tests were performed by using the procedure in ANSI C63.4/2003 8.3.1.1 to determine the worst operating condition. Final Radiated Emission tests were performed at 3 m semi-anechoic chamber.

[Configuration of Tested System]



Non-Conductive Table
Power Line: 120 VAC

3. PRELIMINARY TEST

3.1 Conducted Emission Test

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

Operation Mode: ☒ Data Communication mode (Type: USB 2.0)
 ☒ Data Communication mode (Type: USB 3.0)

3. 2 Radiated Emission Test

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

Operation Mode: ☒ Data Communication mode (Type: USB 2.0)
 ☒ Data Communication mode (Type: USB 3.0)

4. CONDUCTED AND RADIATED EMISSION TEST SUMMARY

4.1 Conducted Emission Test

The following table shows the highest levels of conducted emissions on both polarization of hot and neutral line.

[Type: USB 2.0]

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)

Operation Mode : Data Communication mode

Temperature : 22.3-24.9 °C

Humidity Level : 55.6-59.4 %

Test Date : May 29, 2013 - May 30, 2013

Frequency	Transd	Conductor	Quasi-Peak			Average		
			Limit	Measurement Level	Result Level	Limit	Measurement Level	Result Level
(MHz)	(dB)		(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)
0.150	9.8	H	66	47.9	57.7	56	-	-
0.150	10.0	N	66	45.1	55.1	56	-	-
0.318	10.0	N	60	-	-	50	20.70	30.70
0.338	10.0	N	59	27.7	37.7	49	25.50	35.50
0.342	9.8	H	59	-	-	49	24.30	34.10
0.684	9.8	H	56	-	-	46	20.20	30.00

※ NOTE: Refer to page 11 to page 14 for details.

1. Line H = Hot, Line N = Neutral
2. Transd = LISN factor + Cable Loss factor

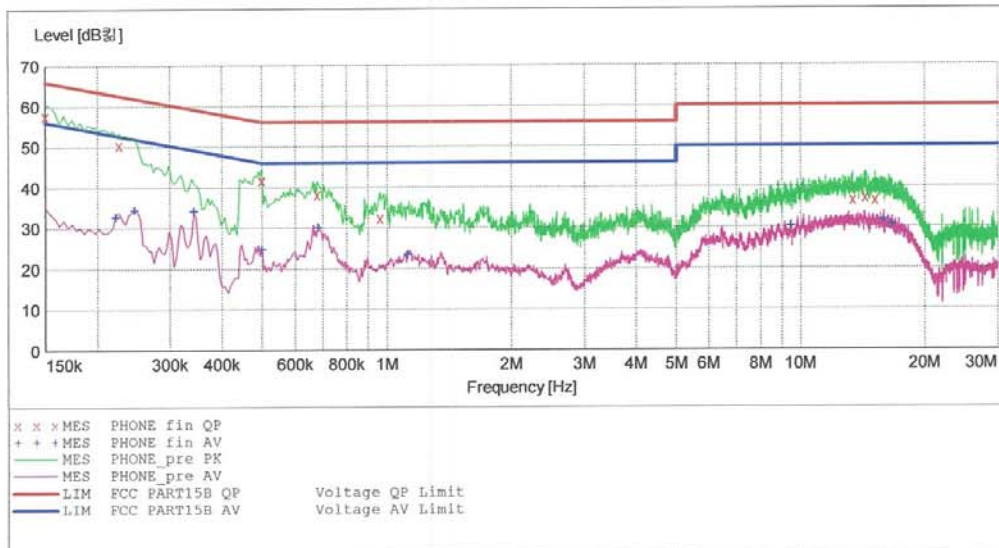
HCT

EMC

EUT: LG-D801
Manufacturer: LG
Operating Condition: DATA MODE (USB 2.0)
Test Site: SHIELD ROOM
Operator: GC YOON
Test Specification: FCC PART15 B
Comment: H

SCAN TABLE: "FCC CLASS B(H)"

Short Description:			KN22 CLASS B			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

2013-05-29 1:36오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	57.70	9.8	66	8.3	---	---
0.226001	50.50	9.8	63	12.0	---	---
0.498001	41.80	9.8	56	14.2	---	---
0.500000	41.70	9.8	56	14.3	---	---
0.680000	38.20	9.8	56	17.8	---	---
0.964000	32.30	9.8	56	23.7	---	---
13.364000	36.60	10.7	60	23.4	---	---
14.340000	37.10	10.7	60	22.9	---	---
15.128000	36.50	10.8	60	23.5	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-05-29 1:36 오후

Frequency MHz	Level dB _{μV}	Transd dB	Limit dB _{μV}	Margin dB	Line	PE
0.222001	32.70	9.8	53	20.0	---	---
0.246001	34.40	9.8	52	17.5	---	---
0.342001	34.10	9.8	49	15.1	---	---
0.500000	24.70	9.8	46	21.3	---	---
0.684000	30.00	9.8	46	16.0	---	---
1.124000	23.30	9.9	46	22.7	---	---
9.492000	30.20	10.4	50	19.8	---	---
15.896000	31.80	10.8	50	18.2	---	---
16.664000	30.50	10.8	50	19.5	---	---

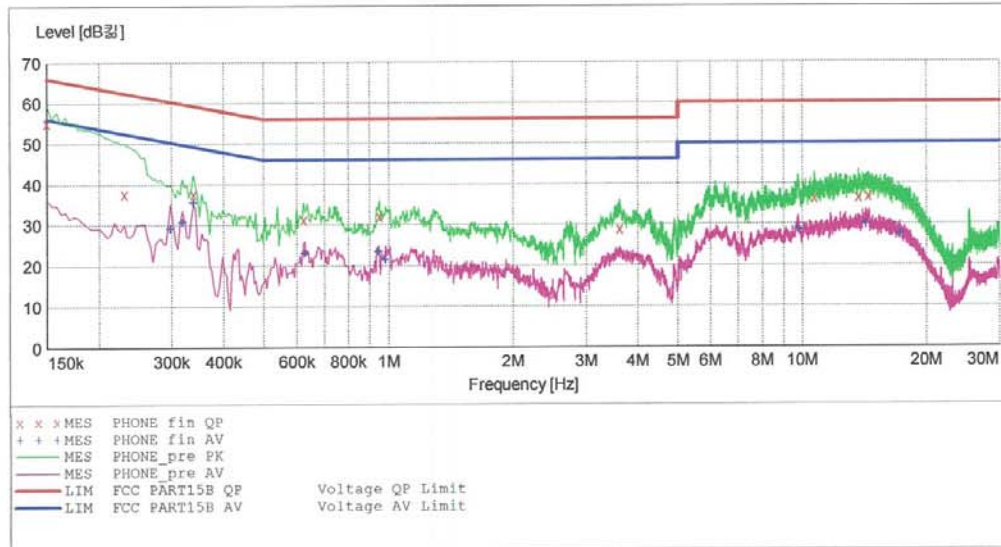
HCT

EMC

EUT: LG-D801
Manufacturer: LG
Operating Condition: DATA MODE (USB 2.0)
Test Site: SHIELD ROOM
Operator: GC YOON
Test Specification: FCC PART15 B
Comment: N

SCAN TABLE: "FCC CLASS B(N)"

Short Description:			KN22 CLASS B			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

2013-05-29 1:39오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	55.10	10.0	66	10.9	---	---
0.230001	37.70	10.0	62	24.8	---	---
0.338001	37.70	10.0	59	21.5	---	---
0.624000	31.30	10.0	56	24.7	---	---
0.952000	32.00	10.0	56	24.0	---	---
3.616000	28.90	10.3	56	27.1	---	---
10.696000	36.20	10.8	60	23.8	---	---
13.664000	36.50	11.0	60	23.5	---	---
14.468000	36.80	11.0	60	23.2	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-05-29 1:39 오후

Frequency MHz	Level dB _{μV}	Transd dB	Limit dB _{μV}	Margin dB	Line	PE
0.298001	29.20	10.0	50	21.1	---	---
0.318001	30.70	10.0	50	19.1	---	---
0.338001	35.50	10.0	49	13.8	---	---
0.628000	23.10	10.0	46	22.9	---	---
0.948000	23.50	10.0	46	22.5	---	---
0.984000	21.50	10.0	46	24.5	---	---
9.772000	28.50	10.7	50	21.5	---	---
14.252000	29.90	11.0	50	20.1	---	---
17.228000	27.60	11.1	50	22.4	---	---

[Type: USB 3.0]

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)

Operation Mode : Data Communication mode

Temperature : 22.3-24.9 °C

Humidity Level : 55.6-59.4 %

Test Date : May 29, 2013 - May 30, 2013

Frequency (MHz)	Transd (dB)	Conductor	Quasi-Peak			Average		
			Limit (dBuV)	Measurement Level (dBuV)	Result Level (dBuV)	Limit (dBuV)	Measurement Level (dBuV)	Result Level (dBuV)
0.154	9.8	H	66	47.2	57.0	56	-	-
0.154	10.0	N	66	46.5	56.5	56	-	-
0.226	10.0	N	63	33.9	43.9	53	-	-
0.226	9.8	H	63	40.5	50.3	53	-	-
0.458	9.8	H	57	32.0	41.8	47	16.50	26.30
0.684	10.0	N	56	-	-	46	17.90	27.90

※ **NOTE:** Refer to page 16 to page 19 for details.

1. Line H = Hot, Line N = Neutral
2. Transd = LISN factor + Cable Loss factor

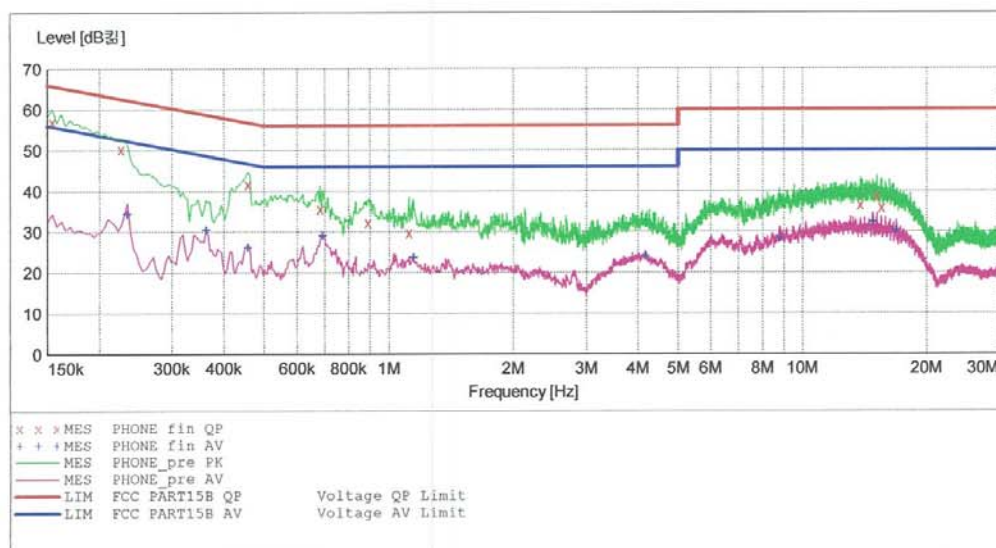
HCT

EMC

EUT: LG-D801
 Manufacturer: LG
 Operating Condition: DATA MODE (USB 3.0)
 Test Site: SHIELD ROOM
 Operator: GC YOON
 Test Specification: FCC PART15 B
 Comment: H

SCAN TABLE: "FCC CLASS B(H)"

Short Description:			KN22 CLASS B			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin_QP"

2013-05-29 1:27오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.154001	57.00	9.8	66	8.8	---	---
0.226001	50.30	9.8	63	12.3	---	---
0.458001	41.80	9.8	57	14.9	---	---
0.684000	35.70	9.8	56	20.3	---	---
0.892000	32.40	9.8	56	23.6	---	---
1.120000	29.80	9.9	56	26.2	---	---
13.820000	36.60	10.7	60	23.4	---	---
15.148000	38.70	10.8	60	21.3	---	---
15.568000	36.00	10.8	60	24.0	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-05-29 1:27오후

Frequency MHz	Level dB _{μV}	Transd dB	Limit dB _{μV}	Margin dB	Line	PE
0.234001	34.30	9.8	52	18.0	---	---
0.362001	30.40	9.8	49	18.3	---	---
0.458001	26.30	9.8	47	20.4	---	---
0.692000	29.00	9.8	46	17.0	---	---
1.148000	23.60	9.9	46	22.4	---	---
4.176000	23.90	10.1	46	22.1	---	---
8.816000	28.30	10.4	50	21.7	---	---
14.812000	32.30	10.8	50	17.7	---	---
16.872000	30.20	10.8	50	19.8	---	---

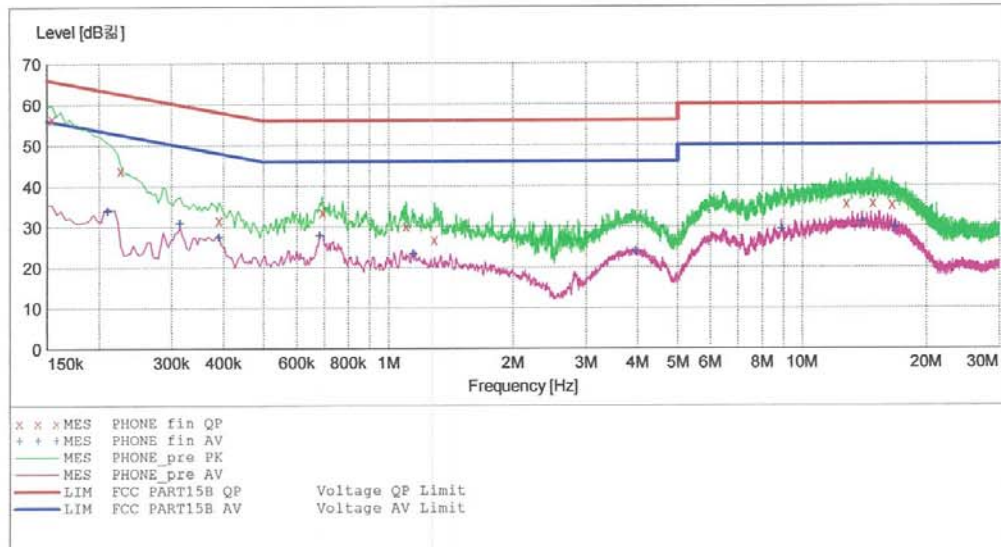
HCT

EMC

EUT: LG-D801
Manufacturer: LG
Operating Condition: DATA MODE (USB 3.0)
Test Site: SHIELD ROOM
Operator: GC YOON
Test Specification: FCC PART15 B
Comment: N

SCAN TABLE: "FCC CLASS B(N)"

Short Description:			KN22 CLASS B			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

2013-05-29 1:23오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.154001	56.50	10.0	66	9.2	---	---
0.226001	43.90	10.0	63	18.7	---	---
0.390001	31.70	10.0	58	26.4	---	---
0.692000	33.70	10.0	56	22.3	---	---
1.104000	30.10	10.1	56	25.9	---	---
1.292000	26.90	10.1	56	29.1	---	---
12.800000	35.50	10.9	60	24.5	---	---
14.836000	35.70	11.0	60	24.3	---	---
16.544000	35.30	11.1	60	24.7	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

2013-05-29 1:23 오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.210001	33.90	10.0	53	19.3	---	---
0.314001	30.90	10.0	50	19.0	---	---
0.390001	27.60	10.0	48	20.4	---	---
0.684000	27.90	10.0	46	18.1	---	---
1.148000	23.30	10.1	46	22.7	---	---
3.964000	23.80	10.3	46	22.2	---	---
8.908000	29.30	10.6	50	20.7	---	---
13.976000	30.90	11.0	50	19.1	---	---
16.768000	29.70	11.1	50	20.3	---	---

4.2 Radiated Emission Test

The following table shows the highest levels of Radiated Emissions on both polarization of horizontal and vertical.

[Type: USB 2.0]

-For measurement below 1 GHz

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak (6 dB Bandwidth: 120 kHz)

Operation Mode : Data Communication mode

Temperature : 24.3-24.9 °C

Humidity Level : 56.9-61.3 %

Test Date : May 27, 2013 - May 28, 2013

Frequency (MHz)	Reading (dBuV)	Polarity (H/V)	Antenna Height (m)	Correction Factor		Limit (dBuV/m)	Level (dBuV/m)	Margin (dB)
				Antenna (dB/m)	Cable (dB)			
31.700	12.70	V	1.0	11.39	3.41	40.0	27.5	12.5
33.900	14.73	V	1.0	11.44	3.43	40.0	29.6	10.4
67.700	13.01	V	1.0	10.88	3.70	40.0	27.6	12.4
222.000	15.03	H	1.0	10.66	4.41	46.0	30.1	15.9
299.100	12.08	H	1.0	13.38	4.64	46.0	30.1	15.9
480.000	9.97	H	1.0	17.23	5.20	46.0	32.4	13.6

-For measurement above 1 GHz

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Peak mode: Peak (RBW: 1 MHz, VBW: 1 MHz)
: Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)

Operation Mode : Data Communication mode

Temperature : 23.7-24.8 °C

Humidity Level : 40.1-40.7 %

Test Date : May 22, 2013 - May 23, 2013

Frequency (GHz)	Peak			POL	Average		
	Total (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)		Total (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
1.2155	56.40	74	17.6	V	31.50	54	22.5
1.6711	52.50	74	21.5	V	34.10	54	19.9
2.7622	53.80	74	20.2	V	33.10	54	20.9

※ NOTE:

1. Measurement above 1 GHz was performed from 1 GHz to the 5th harmonic of highest fundamental frequency. Test was measured by 12 GHz.

[Type: USB 3.0]

-For measurement below 1 GHz

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak (6 dB Bandwidth: 120 kHz)

Operation Mode : Data Communication mode

Temperature : 24.3-24.9 °C

Humidity Level : 56.9-61.3 %

Test Date : May 27, 2013 - May 28, 2013

Frequency (MHz)	Reading (dBuV)	Polarity (H/V)	Antenna Height (m)	Correction Factor		Limit (dBuV/m)	Level (dBuV/m)	Margin (dB)
				Antenna (dB/m)	Cable (dB)			
33.600	13.63	V	1.0	11.44	3.43	40.0	28.5	11.5
36.100	20.06	V	1.0	11.59	3.45	40.0	35.1	4.9
37.300	19.83	V	1.0	11.71	3.46	40.0	35.0	5.0
39.200	13.31	V	1.0	11.92	3.47	40.0	28.7	11.3
59.300	17.32	H	4.0	11.84	3.63	40.0	32.8	7.2
70.900	17.00	V	1.0	10.38	3.72	40.0	31.1	8.9

-For measurement above 1 GHz

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Peak mode: Peak (RBW: 1 MHz, VBW: 1 MHz)
: Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)

Operation Mode : Data Communication mode

Temperature : 23.7-24.8 °C

Humidity Level : 40.1-40.7 %

Test Date : May 22, 2013 - May 23, 2013

Frequency (GHz)	Peak			POL	Average		
	Total (dBμV/m)	Limit (dBμV/m)	Margin (dB)		Total (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1.2103	58.90	74	15.1	V	33.10	54	20.9
1.3004	56.40	74	17.6	V	33.90	54	20.1
1.7211	51.50	74	22.5	V	31.40	54	22.6

※ NOTE:

1. Measurement above 1 GHz was performed from 1 GHz to the 5th harmonic of highest fundamental frequency. Test was measured by 12 GHz.

5. FIELD STRENGTH CALCULATION

The field strength is calculated by adding the antenna factor and cable factor.
The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF$$

Where FS = Field Strength

RA = Receiver Amplitude

AF = Antenna Factor

CF = Cable Attenuation Factor

Assume a receiver reading of 21.5 dB μ V is obtained. The antenna factor of 7.4 dB/m and a cable factor of 1.1 dB are added. The 30 dB μ V/m value is mathematically converted to its corresponding level in μ V/m.

$$FS = 21.5 + 7.4 + 1.1 = 30 \text{ dB}\mu\text{V/m}$$

[Radiated Emission Limits]

Frequency of Emission (MHz)	Field Strength	
	μ V/m	dB μ V/m
30 to 88	100	40.0
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

6. TEST EQUIPMENT

<u>Type</u>	<u>Manufacturer</u>	<u>Model Name</u>	<u>Serial Number</u>	<u>Calibration Cycle</u>	<u>Next CAL Date</u>
<u>Conducted Emission</u>					
☒ EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	2014.04.25
☐ EMI Test Receiver	Rohde & Schwarz	ESCI	100033	1 year	2013.06.18
☐ LISN	Rohde & Schwarz	ESH3-Z5	100282	1 year	2013.07.04
☒ LISN	EMCO	3816/2SH	9706-1070	1 year	2014.04.26
☒ LISN	Rohde & Schwarz	ENV216	100073	1 year	2014.02.06
☐ Attenuator	Rohde & Schwarz	ESH3-Z2	357.8810.352	1 year	2013.07.31

Radiated Emission

-For measurement below 1 GHz

☒ EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2014.04.16
☒ Trilog Antenna	Schwarzbeck	VULB9160	3301	2 year	2014.12.17
☒ Antenna master	HD GmbH	MA240	240/520	N/A	-
☒ Turn Table	HD GmbH	2090	9702/1224	N/A	-

-For measurement above 1 GHz

☒ EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2014.04.16
☒ Antenna master	HD GmbH	MA240	240/520	N/A	-
☒ Turn Table	HD GmbH	2090	9702/1224	N/A	-
☒ Power Amplifier	Rohde & Schwarz	SCU-18	10094	1 year	2013.09.11
☒ Horn Antenna	Schwarzbeck	BBHA 9120D	296	2 year	2014.12.13

7. CONCLUSION

The data collected shows that the **EUT type: Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS/AWS WCDMA/HSDPA/HSUPA/DC-HSDPA and LTE B2/B4/B17 Phone with Bluetooth, WLAN, NFC, FCC ID: ZNFD801, Model: LG-D801** complies with §15.107 and §15.109 of the FCC rules.