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EMI CERTIFICATION REPORT

Applicant: **LG Electronics MobileComm U.S.A., Inc.** **1000 Sylvan Avenue, Englewood Cliffs NJ 07632** **Date of Receipt: April 02, 2014**	**Date of Issue: April 14, 2014** **Test Report No. HCT-E-1404-F025** **HCT FRN: 0005866421**

FCC ID: **ZNFD851**

Rule Part(s) / Standard(s)	: FCC PART 15 Subpart B Class B
EUT Type	: Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS/AWS WCDMA/HSDPA/HSUPA/DC-HSDPA and LTE B2/B4/B7/ B17 Phone with Bluetooth, WLAN, NFC, Wireless Charging
Model Name	: LG-D851
Additional Model Name	: LGD851, D851
Port / Connector(s)	: USB / Earphone Port
Date of Test	: April 08, 2014 - April 11, 2014

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

Ki-Min Lee
Test Engineer
EMC Team
Certification Division

Reviewed By

Sang-Jun Lee
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-1404-F025	April 14, 2014	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-D851
FCC ID	ZNFD851
Additional Model	LGD851, D851
EUT Type	Cellular/PCS GSM/GPRS/EDGE, Cellular/PCS/AWS WCDMA /HSDPA/HSUPA/DC-HSDPA and LTE B2/B4/B7/B17 Phone with Bluetooth, WLAN, NFC, Wireless Charging
TX Frequency	824.20 ㎒ to 848.80 ㎒ (GSM 850) 1 850.20 ㎒ to 1 909.80 ㎒ (GSM 1 900) 826.40 ㎒ to 846.60 ㎒ (WCDMA 850) 1 852.4 ㎒ to 1 907.6 ㎒ (WCDMA 1 900) 1 850.7 ㎒ to 1 909.3 ㎒ (LTE B2) 1 710 ㎒ to 1 755 ㎒ (LTE B4) 2500 ㎒ to 2570 ㎒ (LTE B7) 704 ㎒ to 716 ㎒ (LTE B17)
RX Frequency	869.20 ㎒ to 893.80 ㎒ (GSM 850) 1 930.20 ㎒ to 1 989.80 ㎒ (GSM 1 900) 871.40 ㎒ to 891.60 ㎒ (WCDMA 850) 1 932.4 ㎒ to 1 987.6 ㎒ (WCDMA 1 900) 1 930.00 ㎒ to 1 990.00 ㎒ (LTE B2) 2 110 ㎒ to 2 155 ㎒ (LTE B4) 2620 ㎒ to 2690 ㎒ (LTE B7) 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.
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-D851	LG	ZNFD851	Notebook PC Ear-phone
USB cable	EAD62588801	CRESYN	-	EUT Notebook PC
USB cable	EAD62329304	KSD	-	EUT Notebook PC
USB cable	EAD62329305	Ningbo Broad	-	EUT Notebook PC
Ear-phone	EAB62910502	CRESYN	-	EUT
Standard cover	-	LG	-	EUT
Wireless charger cover	-	LG	-	EUT
Notebook PC	ProBook6560b	H.P	DoC	EUT Notebook PC adaptor
Notebook PC adaptor	PPP009D	DELTA Electronics (JIANGSU)LTD	-	Notebook PC
Gateway	MV440	Axesstel	PH7MV440	Notebook PC, Adaptor
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	8 GB	Transcend	-	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
	Ear-phone	N/A	N	(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
	Ear-phone	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).
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 ㎑ to 30 ㎒ was searched.

[Conducted Emission Limits]

Frequency (㎒)	Resolution Bandwidth	Quasi-Peak(dB㎶)	Average(dB㎶)
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]

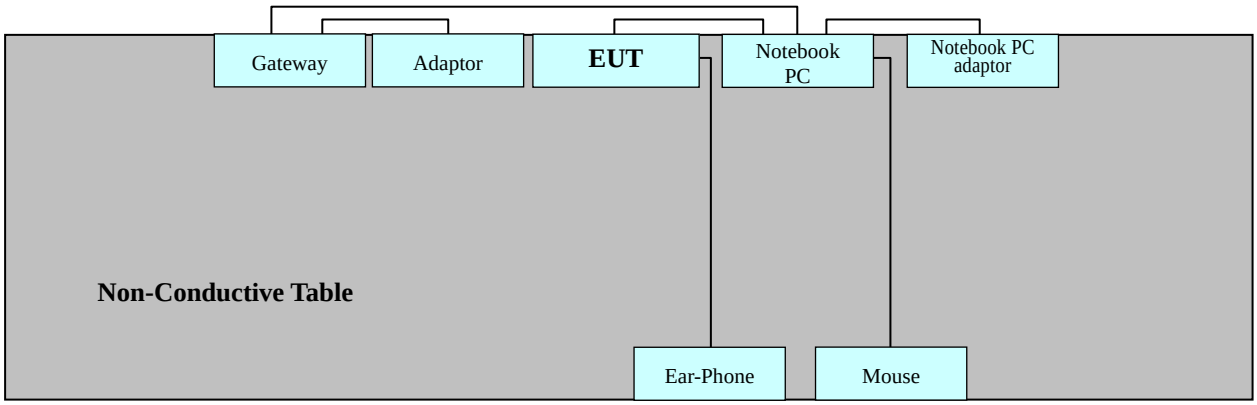
Frequency (㎒)	Antenna Distance (m)	Field Strength (㎶/m)	Quasi-Peak (dB㎶/m)
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0
Frequency (㎒)	**Antenna Distance (m)**	**Peak (dB㎶/m)**	**Average (dB㎶/m)**
Above 1 000	3	74	54

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 (㎒)	Upper frequency of measurement range (㎒)
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

Test Configuration:
☒ USB cable (CRESYN) & Standard cover
☒ USB cable (KSD) & Standard cover
☒ USB cable (Ningbo) & Standard cover
☒ USB cable (CRESYN) & Wireless charger cover
☒ USB cable (KSD) & Wireless charger cover
☒ USB cable (Ningbo) & Wireless charger cover

※The worst-case emissions are reported.

3. 2 Radiated Emission Test

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

Operation Mode: ☒ Data Communication mode

Test Configuration:
☒ USB cable (CRESYN) & Standard cover
☒ USB cable (KSD) & Standard cover
☒ USB cable (Ningbo) & Standard cover
☒ USB cable (CRESYN) & Wireless charger cover
☒ USB cable (KSD) & Wireless charger cover
☒ USB cable (Ningbo) & Wireless charger cover

※The worst-case emissions are reported.

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.

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak, Average (6 dB Bandwidth: 9 ㎑)
Operation Mode : Data Communication mode
Battery & USB Cable Type : Standard Cover & CRESYN
※The worst-case emissions are reported.

Temperature : 20.2°C
Humidity Level : 28.8 %
Test Date : April 08, 2014

Frequency	Corr.	Conductor	Quasi-Peak			Average		
			Limit	Measurement Level	Result Level	Limit	Measurement Level	Result Level
(MHz)	(dB)		(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV]
0.2040	9.7	N	63.4	44.1	53.8	53.4	28.1	37.8
0.1950	9.7	L1	63.8	46.8	56.5	53.8	-	-
0.1995	9.7	L1	63.6	-	-	53.6	30.8	40.5
0.2040	9.7	L1	63.4	46.3	56.0	53.4	-	-
4.6040	10.1	N	56.0	32.3	42.4	46.0	24.1	34.2
4.6220	10.1	N	56.0	-	-	46.0	24.0	34.1

※ Calculation Formula:

1. Conductor L1 = Hot, Conductor N = Neutral
2. Corr. = LISN Factor + Cable Loss
3. Measurement Level (Receiver Reading) = Result Level - Corr.
4. Result Level = Measurement Level + Corr.
** 'Result Level' in above table is same as the 'Quasi-Peak' and 'CAverage' of the Test Data Graph (Refer to page 13 to page 16 for details.)*

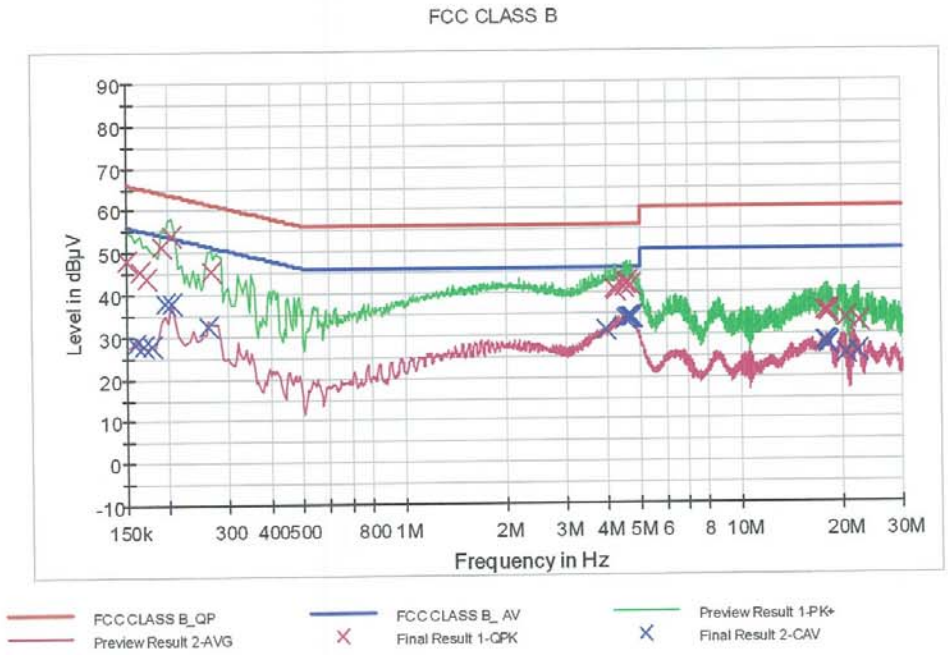
- Test Data Graph

Test 1 / 2

HCT TEST Report

Common Information

Manufacturer:	DATA MODE
Test Site:	SHIELD ROOM
Operating Conditions:	STANDARD CASE_CRESYN
Operator Name:	



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.1	9.000	Off	N	9.7	17.9	66.0
0.163500	45.5	9.000	Off	N	9.7	19.8	65.3
0.172500	43.8	9.000	Off	N	9.7	21.0	64.8
0.190500	51.3	9.000	Off	N	9.7	12.7	64.0
0.204000	53.8	9.000	Off	N	9.7	9.6	63.4
0.267000	45.5	9.000	Off	N	9.7	15.7	61.2
4.181000	40.7	9.000	Off	N	10.1	15.3	56.0
4.253000	40.4	9.000	Off	N	10.1	15.6	56.0
4.464500	41.2	9.000	Off	N	10.1	14.8	56.0
4.532000	42.2	9.000	Off	N	10.1	13.8	56.0
4.604000	42.4	9.000	Off	N	10.1	13.6	56.0
4.676000	41.7	9.000	Off	N	10.1	14.3	56.0
17.640500	35.4	9.000	Off	N	10.7	24.6	60.0
17.780000	35.6	9.000	Off	N	10.7	24.4	60.0
17.973500	34.9	9.000	Off	N	10.7	25.1	60.0
18.063500	35.3	9.000	Off	N	10.7	24.7	60.0

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Test 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
20.475500	33.7	9.000	Off	N	10.8	26.3	60.0
22.316000	33.0	9.000	Off	N	10.9	27.0	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	28.3	9.000	Off	N	9.7	27.2	55.5
0.168000	27.9	9.000	Off	N	9.7	27.2	55.1
0.177000	27.9	9.000	Off	N	9.7	26.7	54.6
0.195000	37.7	9.000	Off	N	9.7	16.1	53.8
0.204000	37.8	9.000	Off	N	9.7	15.6	53.4
0.262500	32.6	9.000	Off	N	9.7	18.8	51.4
3.965000	31.2	9.000	Off	N	10.1	14.8	46.0
4.536500	33.8	9.000	Off	N	10.1	12.2	46.0
4.604000	34.2	9.000	Off	N	10.1	11.8	46.0
4.622000	34.1	9.000	Off	N	10.1	11.9	46.0
4.680500	34.1	9.000	Off	N	10.1	11.9	46.0
4.748000	34.1	9.000	Off	N	10.1	11.9	46.0
17.640500	28.4	9.000	Off	N	10.7	21.6	50.0
17.780000	28.4	9.000	Off	N	10.7	21.6	50.0
17.973500	27.5	9.000	Off	N	10.7	22.5	50.0
18.063500	27.9	9.000	Off	N	10.7	22.1	50.0
20.475500	25.3	9.000	Off	N	10.8	24.7	50.0
22.176500	25.9	9.000	Off	N	10.9	24.1	50.0

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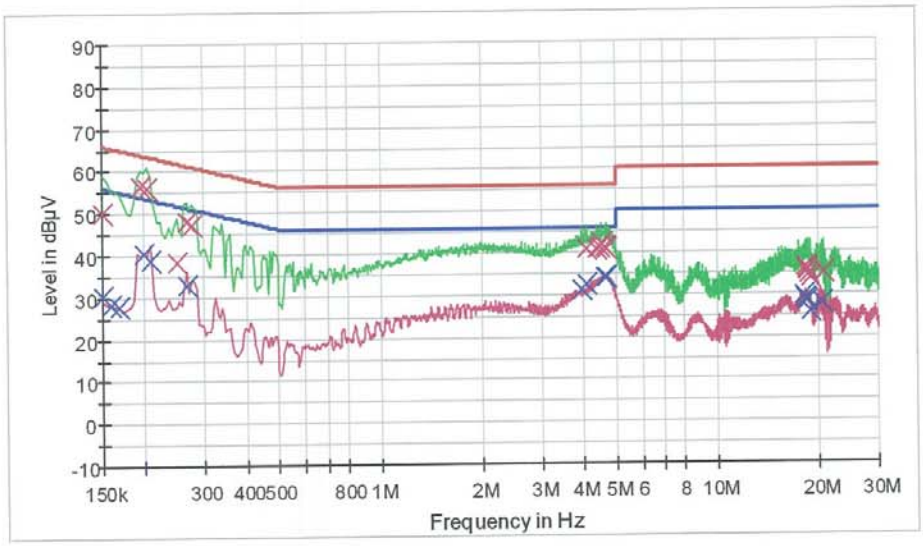
Test 1 / 2

HCT TEST Report

Common Information

Manufacturer:	DATA MODE
Test Site:	SHIELD ROOM
Operating Conditions:	STANDARD CASE_CRESYN
Operator Name:	

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	50.1	9.000	Off	L1	9.7	15.9	66.0
0.195000	56.5	9.000	Off	L1	9.7	7.3	63.8
0.204000	56.0	9.000	Off	L1	9.7	7.4	63.4
0.249000	38.2	9.000	Off	L1	9.7	23.6	61.8
0.267000	47.9	9.000	Off	L1	9.7	13.3	61.2
0.276000	47.0	9.000	Off	L1	9.7	13.9	60.9
4.113500	40.8	9.000	Off	L1	10.1	15.2	56.0
4.397000	40.6	9.000	Off	L1	10.1	15.4	56.0
4.496000	41.4	9.000	Off	L1	10.1	14.6	56.0
4.536500	42.1	9.000	Off	L1	10.1	13.9	56.0
4.626500	41.3	9.000	Off	L1	10.1	14.7	56.0
4.680500	40.9	9.000	Off	L1	10.1	15.1	56.0
18.275000	36.1	9.000	Off	L1	10.8	23.9	60.0
18.369500	36.0	9.000	Off	L1	10.8	24.0	60.0
18.437000	35.6	9.000	Off	L1	10.8	24.4	60.0
18.689000	34.6	9.000	Off	L1	10.8	25.4	60.0

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Test 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
18.860000	33.8	9.000	Off	L1	10.9	26.2	60.0
20.700500	34.9	9.000	Off	L1	10.9	25.1	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	30.5	9.000	Off	L1	9.7	25.5	56.0
0.159000	28.1	9.000	Off	L1	9.7	27.4	55.5
0.168000	27.7	9.000	Off	L1	9.7	27.4	55.1
0.199500	40.5	9.000	Off	L1	9.7	13.1	53.6
0.208500	38.9	9.000	Off	L1	9.7	14.4	53.3
0.267000	32.9	9.000	Off	L1	9.7	18.3	51.2
3.969500	31.1	9.000	Off	L1	10.0	14.9	46.0
4.113500	32.3	9.000	Off	L1	10.1	13.7	46.0
4.608500	34.2	9.000	Off	L1	10.1	11.8	46.0
4.626500	34.0	9.000	Off	L1	10.1	12.0	46.0
4.680500	34.3	9.000	Off	L1	10.1	11.7	46.0
4.689500	34.0	9.000	Off	L1	10.1	12.0	46.0
18.108500	29.3	9.000	Off	L1	10.8	20.7	50.0
18.221000	28.8	9.000	Off	L1	10.8	21.2	50.0
18.437000	28.3	9.000	Off	L1	10.8	21.7	50.0
18.531500	28.1	9.000	Off	L1	10.8	21.9	50.0
18.860000	25.9	9.000	Off	L1	10.9	24.2	50.0
20.489000	27.9	9.000	Off	L1	10.9	22.1	50.0

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Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak, Average (6 dB Bandwidth: 9 ㎑)
Operation Mode : Data Communication mode
Battery & USB Cable Type : Wireless Charger Cover & KSD
※The worst-case emissions are reported.

Temperature : 20.2°C
Humidity Level : 28.8 %
Test Date : April 08, 2014

Frequency	Corr.	Conductor	Quasi-Peak			Average		
			Limit	Measurement Level	Result Level	Limit	Measurement Level	Result Level
(MHz)	(dB)		(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV]
0.1950	9.7	N	63.8	0.4	10.1	53.8	-	-
0.2085	9.7	N	63.3	1.0	10.7	53.3	27.2	36.9
0.2040	9.7	L1	63.4	42.6	52.3	53.4	27.5	37.2
0.2625	9.7	N	61.4	0.2	9.9	51.4	-	-
0.2670	9.7	L1	61.2	39.9	49.6	51.2	-	-
0.2805	9.7	L1	60.8	39.8	49.5	50.8	22.8	32.5

※ Calculation Formula:

1. Conductor L1 = Hot, Conductor N = Neutral
2. Corr. = LISN Factor + Cable Loss
3. Measurement Level (Receiver Reading) = Result Level - Corr.
4. Result Level = Measurement Level + Corr.
** 'Result Level' in above table is same as the 'Quasi-Peak' and 'CAverage' of the Test Data Graph (Refer to page 18 to page 21 for details.)*

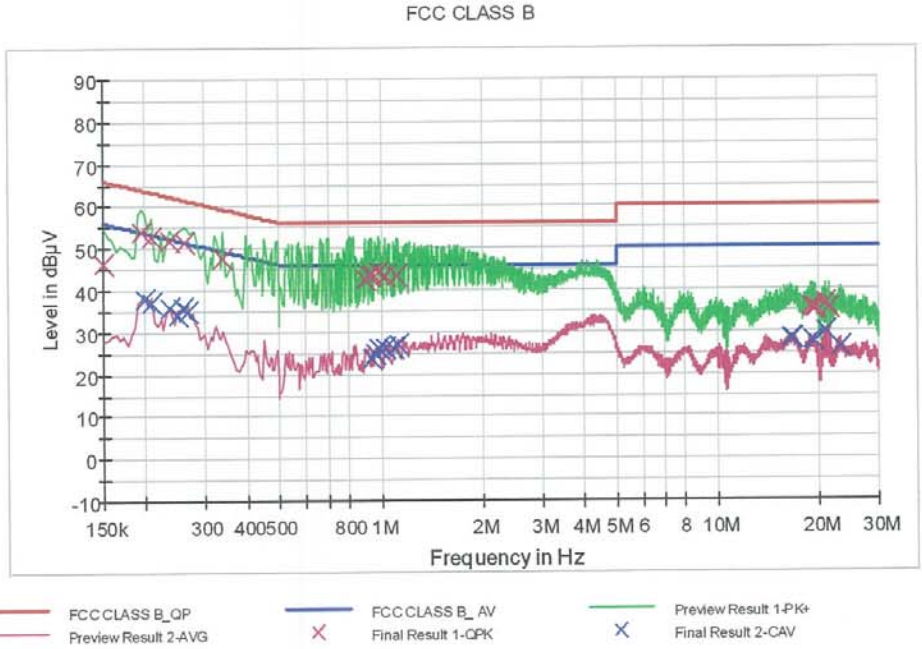
- Test Data Graph

Test 1 / 2

HCT TEST Report

Common Information

Manufacturer:	DATA MODE
Test Site:	SHIELD ROOM
Operating Conditions:	WIRELESS CHARGER CASE_KSD
Operator Name:	



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	46.1	9.000	Off	N	9.7	19.9	66.0
0.195000	53.7	9.000	Off	N	9.7	10.1	63.8
0.208500	52.6	9.000	Off	N	9.7	10.7	63.3
0.235500	51.6	9.000	Off	N	9.7	10.7	62.3
0.262500	51.5	9.000	Off	N	9.7	9.9	61.4
0.339000	47.7	9.000	Off	N	9.7	11.5	59.2
0.896000	42.5	9.000	Off	N	9.8	13.5	56.0
0.927500	43.2	9.000	Off	N	9.8	12.8	56.0
0.941000	43.6	9.000	Off	N	9.8	12.4	56.0
0.986000	44.3	9.000	Off	N	9.8	11.8	56.0
1.031000	43.4	9.000	Off	N	9.8	12.6	56.0
1.116500	43.4	9.000	Off	N	9.8	12.6	56.0
18.927500	35.7	9.000	Off	N	10.8	24.3	60.0
19.161500	35.5	9.000	Off	N	10.8	24.5	60.0
19.287500	35.2	9.000	Off	N	10.8	24.8	60.0
19.494500	35.2	9.000	Off	N	10.8	24.8	60.0

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Test 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
20.979500	36.7	9.000	Off	N	10.9	23.3	60.0
21.402500	35.5	9.000	Off	N	10.9	24.5	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.199500	38.0	9.000	Off	N	9.7	15.6	53.6
0.208500	36.9	9.000	Off	N	9.7	16.4	53.3
0.235500	35.6	9.000	Off	N	9.7	16.7	52.3
0.249000	34.0	9.000	Off	N	9.7	17.8	51.8
0.258000	35.7	9.000	Off	N	9.7	15.8	51.5
0.267000	35.0	9.000	Off	N	9.7	16.2	51.2
0.941000	23.5	9.000	Off	N	9.8	22.5	46.0
0.959000	24.8	9.000	Off	N	9.8	21.2	46.0
0.986000	26.2	9.000	Off	N	9.8	19.8	46.0
1.031000	26.2	9.000	Off	N	9.8	19.8	46.0
1.089500	26.2	9.000	Off	N	9.8	19.8	46.0
1.121000	26.8	9.000	Off	N	9.8	19.2	46.0
16.515500	28.4	9.000	Off	N	10.7	21.6	50.0
16.686500	28.1	9.000	Off	N	10.7	21.9	50.0
19.161500	27.9	9.000	Off	N	10.8	22.1	50.0
19.287500	27.3	9.000	Off	N	10.8	22.7	50.0
20.867000	30.0	9.000	Off	N	10.8	20.0	50.0
23.027000	26.2	9.000	Off	N	10.9	23.8	50.0

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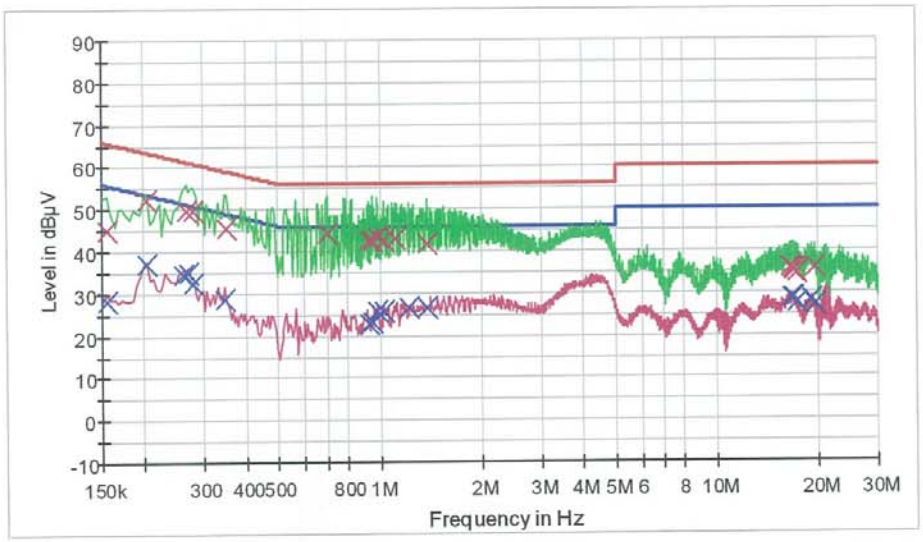
Test(1) 1 / 2

HCT TEST Report

Common Information

Manufacturer:	DATA MODE
Test Site:	SHIELD ROOM
Operating Conditions:	WIRELESS CHARGER CASE_KSD
Operator Name:	

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	45.0	9.000	Off	L1	9.7	20.8	65.8
0.204000	52.3	9.000	Off	L1	9.7	11.1	63.4
0.267000	49.6	9.000	Off	L1	9.7	11.6	61.2
0.280500	49.5	9.000	Off	L1	9.7	11.3	60.8
0.352500	45.6	9.000	Off	L1	9.7	13.3	58.9
0.698000	44.0	9.000	Off	L1	9.7	12.0	56.0
0.927500	42.6	9.000	Off	L1	9.7	13.4	56.0
0.954500	42.5	9.000	Off	L1	9.7	13.5	56.0
0.986000	43.5	9.000	Off	L1	9.7	12.5	56.0
1.026500	42.7	9.000	Off	L1	9.7	13.3	56.0
1.116500	43.0	9.000	Off	L1	9.8	13.0	56.0
1.386500	41.5	9.000	Off	L1	9.8	14.5	56.0
16.452500	35.6	9.000	Off	L1	10.7	24.4	60.0
16.583000	35.3	9.000	Off	L1	10.7	24.7	60.0
16.812500	35.4	9.000	Off	L1	10.7	24.6	60.0
16.839500	35.0	9.000	Off	L1	10.7	25.0	60.0

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Test(1) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
17.168000	34.4	9.000	Off	L1	10.8	25.6	60.0
19.427000	35.6	9.000	Off	L1	10.9	24.4	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	28.4	9.000	Off	L1	9.7	27.4	55.8
0.204000	37.2	9.000	Off	L1	9.7	16.2	53.4
0.262500	34.4	9.000	Off	L1	9.7	17.0	51.4
0.271500	35.1	9.000	Off	L1	9.7	16.0	51.1
0.280500	32.5	9.000	Off	L1	9.7	18.3	50.8
0.348000	28.6	9.000	Off	L1	9.7	20.4	49.0
0.927500	22.7	9.000	Off	L1	9.7	23.3	46.0
0.954500	23.2	9.000	Off	L1	9.7	22.8	46.0
0.986000	25.8	9.000	Off	L1	9.7	20.2	46.0
1.026500	25.8	9.000	Off	L1	9.7	20.2	46.0
1.220000	26.7	9.000	Off	L1	9.8	19.3	46.0
1.386500	26.5	9.000	Off	L1	9.8	19.5	46.0
16.583000	28.6	9.000	Off	L1	10.7	21.4	50.0
16.812500	28.5	9.000	Off	L1	10.7	21.5	50.0
16.839500	28.7	9.000	Off	L1	10.7	21.3	50.0
17.168000	27.3	9.000	Off	L1	10.8	22.8	50.0
19.157000	28.2	9.000	Off	L1	10.9	21.8	50.0
19.427000	26.9	9.000	Off	L1	10.9	23.1	50.0

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4.2 Radiated Emission Test

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

-For Measurement Below 1 ㎓

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak
6 ㏈ Bandwidth: : RBW 120 ㎑, VBW 300 ㎑

Operation Mode : Data Communication mode
Battery & USB Cable Type : Standard Cover & KSD
※The worst-case emissions are reported.

Temperature : 22.0°C
Humidity Level : 31.6 %
Test Date : April 11, 2014

Frequency (MHz)	Reading (dBuV)	Polarity (H/V)	Antenna Height (m)	Correction Factor		Limit (dBuV/m)	Total Level (dBuV/m)	Margin (dB)
				Antenna (dB/m)	Cable (dB)			
61.2	10.3	V	1.3	11.7	3.5	40.0	25.5	14.5
79.2	16.7	V	1.0	8.2	3.7	40.0	28.6	11.4
375.0	15.7	H	1.0	15.1	4.8	46.0	35.6	10.4
625.0	15.3	V	1.4	20.0	5.4	46.0	40.7	5.3

※ Calculation Formula:

1. Polarity H = Horizontal, Polarity V = Vertical
2. Reading (Receiver Reading) = Total Level – Correction Factor
3. Margin = Limit - Total Level
4. Total Level = Quasi-Peak

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak
6 dB Bandwidth: : RBW 120 ㎑, VBW 300 ㎑

Operation Mode : Data Communication mode
Battery & USB Cable Type : Wireless Charger Cover & CRESYN
※The worst-case emissions are reported.

Temperature : 22.0°C
Humidity Level : 31.6 %
Test Date : April 11, 2014

Frequency (MHz)	Reading (dBuV)	Polarity (H/V)	Antenna Height (m)	Correction Factor		Limit (dBuV/m)	Total Level (dBuV/m)	Margin (dB)
				Antenna (dB/m)	Cable (dB)			
60.3	12.2	V	1.0	11.8	3.5	40.0	27.5	12.5
79.2	22.2	H	2.5	8.2	3.7	40.0	34.1	5.9
625.0	12.9	V	1.0	20.0	5.4	46.0	38.3	7.7

※ Calculation Formula:

1. Polarity H = Horizontal, Polarity V = Vertical
2. Reading (Receiver Reading) = Total Level – Correction Factor
3. Margin = Limit - Total Level
4. Total Level = Quasi-Peak

-For Measurement Above 1 ㎓

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Peak mode: Peak (RBW: 1 ㎒, VBW: 3 ㎒)
Average mode: Peak (RBW: 1 ㎒, VBW: 10 ㎐)

Operation Mode : Data Communication mode

Battery & USB Cable Type : Standard Cover & CERSYN

※The worst-case emissions are reported.

Temperature : 21.7°C

Humidity Level : 31.3 %

Test Date : April 10, 2014

Frequency (㎓)	Polarity (H/V)	Antenna Height (m)	Peak			Average		
			Total Level (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)	Total Level (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1.3301	V	1.0	51.5	74	22.5	26.9	54	27.1
1.9922	V	1.0	56.4	74	17.6	31.3	54	22.7
2.6665	V	1.0	52.2	74	21.8	30.5	54	23.5

※ Calculation Formula:

1. Polarity H = Horizontal, Polarity V = Vertical
2. Margin = Limit - Total Level

Limit Apply to	: FCC PART 15 Subpart B Class B
Detector	: Peak mode: Peak (RBW: 1 ㎒, VBW: 3 ㎒) Average mode: Peak (RBW: 1 ㎒, VBW: 10 ㎐)
Operation Mode	: Data Communication mode
Battery & USB Cable Type	: Wireless Charger Cover & KSD ※The worst-case emissions are reported.
Temperature	: 21.7°C
Humidity Level	: 31.3 %
Test Date	: April 10, 2014

Frequency (㎓)	Polarity (H/V)	Antenna Height (m)	Peak			Average		
			Total Level (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)	Total Level (dB㎶/m)	Limit (dB㎶/m)	Margin (dB)
1.3277	V	1.0	49.2	74	24.8	31.4	54	22.6
1.9948	V	1.0	56.8	74	17.2	39.3	54	14.7
2.6622	V	1.1	46.9	74	27.1	32.4	54	21.6

※ Calculation Formula:

1. Polarity H = Horizontal, Polarity V = Vertical
2. Margin = Limit - Total Level

5. LIST OF TEST EQUIPMENT

Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	Next CAL Date
Conducted Emission					
☒ EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	2015.01.24
☒ LISN	EMCO	3816/2SH	9706-1070	1 year	2014.04.26
☒ LISN	Rohde & Schwarz	ENV216	100073	1 year	2015.01.29
☐ EMI Test Receiver	Rohde & Schwarz	ESCI	100033	1 year	2014.06.23
☐ LISN	Rohde & Schwarz	ESH3-Z5	100282	1 year	2014.07.03
☐ Attenuator	Rohde & Schwarz	ESH3-Z2	357.8810.352	1 year	2014.07.03
☒ Software	Rohde & Schwarz	EMC32	-	-	-
Radiated Emission					
-For measurement below 1 ㎓					
☒ EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2015.04.07
☒ 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	-
☐ EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	2014.07.01
☐ Trilog Antenna	Schwarzbeck	VULB9168	185	2 year	2015.04.16
☐ 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 ㎓					
☒ EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2015.04.07
☒ Antenna master	HD GmbH	MA240	240/520	N/A	-
☒ Turn Table	HD GmbH	2090	9702/1224	N/A	-
☒ Power Amplifier	CERNEX	CBLU1183540	21691	1 year	2014.07.24
☐ Power Amplifier	CERNEX	CBLU1183540	21690	1 year	2014.07.12
☐ Power Amplifier	CERNEX	CBLU1183540	22964	1 year	2014.07.24
☒ Horn Antenna	Schwarzbeck	BBHA 9120D	296	2 year	2014.12.13
☐ EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	2014.07.01
☐ Antenna master	INNCO Systems	MA4000-EP	MA4000/283	N/A	-
☐ Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
☒ Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170124	2 year	2014.10.30
☒ Power Amplifier	CERNEX	CBL18265035	22966	1 year	2014.07.24
☒ Power Amplifier	CERNEX	CBL26405040	19660	1 year	2014.04.16
☒ Software	Rohde & Schwarz	EMC32	-	-	-

6. 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/B7/B17 Phone with Bluetooth, WLAN, NFC, Wireless Charging, FCC ID: ZNFD851, Model: LG-D851** complies with §15.107 and §15.109 of the FCC rules.