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EMI CERTIFICATION REPORT

Applicant:
LG Electronics Inc.
60-39, Gasan-dong, Gumchon-gu, Seoul 153-023, Korea

Date of Issue: April 05, 2011
Test Report No.: HCTE1104FE27
Test Site: HCT CO., LTD.
HCT FRN: 0005-8664-21

FCC ID: **BEJC555**
IC: **2703C-C555**

Rule Part(s) / Standard(s)	: FCC PART 15 Subpart B Class B
FCC Listing No	: 90661
IC Recognition No	: IC 5944A-1
Equipment Type	: Cellular/PCS GSM/EDGE/WCDMA Phone with Bluetooth & WLAN
Trade Name	: LG Electronics Inc
Model(s)	: C555, LG-C555
Port / Connector(s)	: USB Data Port / Headset Port

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
: Doo Hwan Ryu
Test Engineer of EMC Team

Approved by
: Sang Jun Lee
Manager of EMC Team

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1. GENERAL INFORMATION

1.1 Product Description

Equipment Under Test (E.U.T) is **Cellular/PCS GSM/EDGE/WCDMA Phone with Bluetooth & WLAN, Model: C555, LG-C555** manufactured by **LG Electronics Inc.** Its basic purpose is used for communications.

FCC / IC Model (s)	C555, LC-C555
FCC ID	BEJC555
IC	2703C-C555
E.U.T Type	Cellular/PCS GSM/EDGE/WCDMA Phone with Bluetooth & WLAN
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)
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)

1.2 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 Number/ Serial Number	FCC ID / DoC	Connected To
Cellular/PCS GSM/EDGE /WCDMA with Bluetooth & WLAN	LG	C555	BEJC555	Notebook PC
Notebook PC	LG	X140-02 *009QTAF022208*	DoC	E.U.T
Notebook PC adaptor	DELTA (JIANG SU)	ADP-40PH AD *EAY60725501*	-	Notebook PC
Mouse	Microsoft	Intellimouse optical USB and PS/2 compatible *3902B008*	DoC	Notebook PC
Headset	I-SOUND	EAB62209201	-	E.U.T
USB cable	KSD	SGDY0018501	-	E.U.T Notebook PC
SD Card(4GB)	HC	-	-	E.U.T

1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
Cellular/PCS GSM/ EDGE/WCDMA with Bluetooth & WLAN	Headset jack	-	N	(D)1.2
	USB data	Y	Y	(P,D)1.2
Notebook PC	USB (Mouse)	-	Y	(D)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
Cellular/PCS GSM/ EDGE/WCDMA with Bluetooth & WLAN	Headset jack	N	-	Y	E.U.T End
	USB data	N	-	Y	Both End
Notebook PC	USB (Mouse)	Y	Notebook PC End	Y	Notebook PC End

1.6 Test Methodology

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

1.7 Test Facility

The 10 m semi anechoic cham ber used to collect the radiated data is located at the 105 -1, Jangam-Ri, Majang-Myeon, Icheon-Si, Kyoungki -Do, South Korea, and the conducted measurement facility us ed to m easure the con ducted data are lo cated at San 1 36-1, Ami-Ri Bubal-Eup, Icheon-Si, Kyoungki-Do, 467-701, South Korea. Those m easurement facilities are constructed in conform ance with the requirem ents of ANSI C63.4 and CISPR Publication 22. Detailed description of test facilities was submitted to the Commission and accepted dated Sep. 03, 2010 (Registration Number: 90661)

1.8 Frequency Range of Radiated Measurements

An unintentional radiator, includin g a digital device, the spectrum shall be investigated f rom the lowest radio frequency signal generated or used in the device, without going below the low est frequency for which a Radiated E mission 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

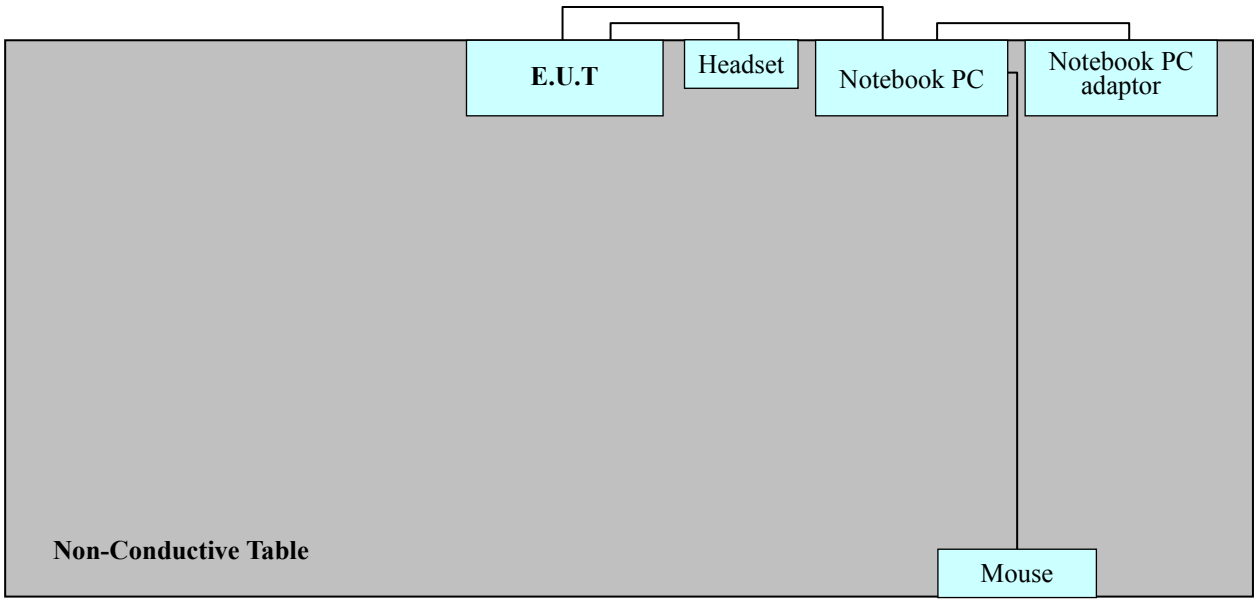
2. SYSTEM TEST CONFIGURATION

2.1 Configuration of Test System

Power Line Conducted test : E.U.T was connected to LISN via Notebook PC adaptor. Preliminary Power Line Conducted Emission tests were perfor med by using the procedure in ANS I C63.4/2003 7.2.3 to determ ine the worst operating conditions.

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]



Power Line: 110 VAC

3. PRELIMINARY TEST

3.1 Conducted Emission Test

■ Test E.U.T with Data Communication mode, after connecting all peripheral devices.

During preliminary tests, the following operating mode was investigated:

Operation Mode	The Worst Operating Condition
Data Communication	○

3. 2 Radiated Emission Test

■ Test E.U.T with Data Communication mode, after connecting all peripheral devices.

During preliminary tests, the following operating mode was investigated:

Operation Mode	The Worst Operating Condition
Data Communication	○

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 ㎑)
Temperature	: 23.1 °C
Humidity level	: 42.7 %
Test date	: March 30, 2011

※ **NOTE:** Refer to page 10 to page 13 for details.

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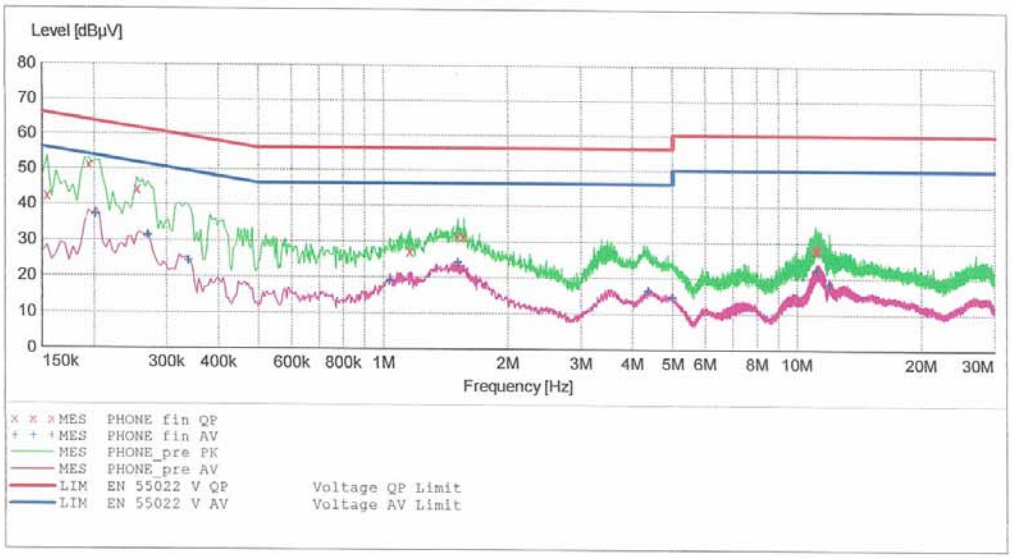
EUT: LG-C555
Manufacturer: LG
Operating Condition: DATA MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
Test Specification: FCC PART 15 CLASS B
Comment: H

SCAN TABLE: "FCC PART 15 CLASS B"

Short Description: FCC PART 15 CLASS B

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



MEASUREMENT RESULT: "PHONE_fin QP"

3/30/2011 5:01PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.154010	42.10	10.3	66	23.7	---	---
0.194010	51.00	10.3	64	12.9	---	---
0.254010	44.10	10.3	62	17.5	---	---
1.160000	27.00	10.4	56	29.0	---	---
1.516000	31.50	10.4	56	24.5	---	---
1.568000	31.30	10.4	56	24.7	---	---
11.080000	27.80	11.1	60	32.2	---	---
11.140000	28.20	11.1	60	31.8	---	---
11.256000	28.30	11.1	60	31.7	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

3/30/2011 5:01PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.202010	36.80	10.3	54	16.7	---	---
0.270010	31.20	10.3	51	19.9	---	---
0.338010	24.10	10.3	49	25.2	---	---
1.036000	18.80	10.4	46	27.2	---	---
1.516000	24.00	10.4	46	22.0	---	---
4.380000	16.40	10.7	46	29.6	---	---
5.000000	14.50	10.7	46	31.5	---	---
11.148000	22.30	11.1	50	27.7	---	---
11.944000	18.10	11.2	50	31.9	---	---

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HCT

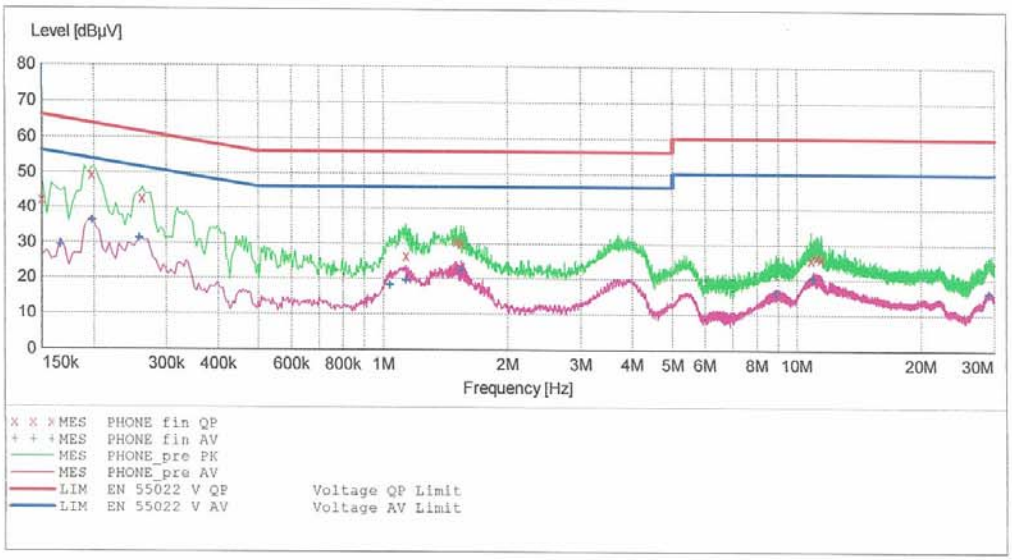
EMC

EUT: LG-C555
Manufacturer: LG
Operating Condition: DATA MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
Test Specification: FCC PART 15 CLASS B
Comment: N

SCAN TABLE: "FCC PART 15 CLASS B"

Short Description: FCC PART 15 CLASS B

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



MEASUREMENT RESULT: "PHONE_fin QP"

3/30/2011 5:05PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.150010	42.00	10.3	66	24.0	---	---
0.198010	49.20	10.3	64	14.5	---	---
0.262010	42.50	10.3	61	18.9	---	---
1.136000	26.40	10.4	56	29.6	---	---
1.504000	30.60	10.4	56	25.4	---	---
1.544000	30.00	10.4	56	26.0	---	---
10.832000	25.70	11.1	60	34.3	---	---
11.188000	26.50	11.1	60	33.5	---	---
11.448000	25.90	11.1	60	34.1	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.166010	29.10	10.3	55	26.1	---	---
0.198010	36.10	10.3	54	17.6	---	---
0.258010	31.20	10.3	52	20.3	---	---
1.040000	18.00	10.4	46	28.0	---	---
1.136000	19.30	10.4	46	26.7	---	---
1.544000	22.20	10.4	46	23.8	---	---
8.904000	16.00	11.0	50	34.0	---	---
10.952000	20.10	11.1	50	29.9	---	---
29.136000	16.00	11.9	50	34.0	---	---

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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.

Limit apply to : FCC PART 15 Subpart B Class B
Detector : Quasi-Peak (6 dB Bandwidth: 120 kHz)
Temperature : 21.5 °C
Humidity level : 41.0 %
Test date : April 05, 2011

Frequency	Reading	Ant. Factor	Cable Loss	Ant. POL	Total	Limit	Margin
MHz	dBμV	dB/m	dB	(H/V)	dBμV/m	dBμV/m	dB
37.2	12.3	11.9	0.8	V	25.0	40.0	15.0
98.2	16.9	9.0	1.3	V	27.2	43.5	16.3
151.7	12.0	13.2	1.5	V	26.7	43.5	16.8
196.6	20.1	10.1	1.6	H	31.8	43.5	11.7
377.9	14.9	14.8	2.5	H	32.2	46.0	13.8
720.1	4.1	21.3	3.6	V	29.0	46.0	17.0

※ **NOTE:**

1. For measurement above 1 GHz, noise level is more than 14 dB below the limit, specified in FCC Part 15.35

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 dBμV is obtained. The antenna factor of 7.4 dB/m and a cable factor of 1.1 dB are added. The 30 dBμV/m value is mathematically converted to its corresponding level in μV/m.

FS = 21.5 + 7.4 + 1.1 = 30 dBμV/m

[Radiated Emission Limits]

Frequency of Emission (㎒)	Field Strength	
	μV/m	dBμV/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

	Type	Manufacturer	Model Number	Serial Number	Next CAL Date
	Conducted Emission				
☒	EMI Test Receiver	Rohde & Schwarz	ESCI	100584	2011.05.28
☒	LISN	Rohde & Schwarz	ESH3-Z5	100282	2012.02.01
☐	LISN	Rohde & Schwarz	ENV216	3560.6550.02	-
☒	Attenuator	Rohde & Schwarz	ESH3-Z2	357.8810.52	2011.10.25
	Radiated Emission				
☐	EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	2011.10.29
☒	EMI Test Receiver	Rohde & Schwarz	ESU26	100241	2011.09.01
☒	Trilog Antenna	Schwarzbeck	VULB9160	3301	2012.09.13
☒	Antenna master	INNCO Systems	MA4000-EP	MA4000/283	-
☒	Turn Table	INNCO Systems	DT3000-3T	DT3000/69	-
☒	Communication Antenna	Schwarzbeck	USLP9142	9142-248	-
☐	RF-Amplifier	MITEQ	AMF-6D-0010 1800-35.20P.PS	-	2011.05.20
☐	Base Station	Rohde & Schwarz	CMU 200	1100000802	2012.02.16

7. CONCLUSION

The data collected shows that the **Cellular/PCS GSM/EDGE/WCDMA Phone with Bluetooth & WLAN, Model: C555, LG-C555, FCC I D: BEJC555** complies with §15.107 and §15.109 of the FCC rules.

IC Model: C555, LG-C555, **IC: 2703C-C555** complies with ICES-003 Issue 4 of the IC rule.