



HCT CO., LTD.

PRODUCT COMPLIANCE DIVISION
SAN 136-1, AMI-RI, BUBAL-EUP, ICHEON-SI, KYOUNGKI-DO, 467-701, KOREA
TEL : +82 31 639 8539 FAX : +82 31 639 8525 www.hct.co.kr

EMI CERTIFICATION REPORT

Applicant:

LG Electronics Inc.

60-39, Gasan-dong, Gumchon-gu, Seoul
153-023, Korea

Date of Issue: February 23, 2011

Test Report No.: HCTE1102FE21

Test Site: HCT CO., LTD.

HCT FRN: 0005-8664-21

FCC ID:

IC:

BEJV905
2703C-V905

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 Tablet with Bluetooth & WLAN
Trade Name : LG Electronics Inc
Model(s) : V905, LG-V905
Port / Connector(s) : USB Data Port / Headset Port / HDMI Port / DC In 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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ATTACHMENT: TEST SETUP PHOTOGRAPHS

1. GENERAL INFORMATION

1.1 Product Description

Equipment Under Test (E.U.T) is **Cellular/PCS GSM/EDGE/WCDMA Tablet with Bluetooth & WLAN, Model: V905** manufactured by **LG Electronics Inc.** Its basic purpose is used for communications.

FCC / IC Model (s)	V905
FCC / IC Additional Model	LG-V905
FCC ID	BEJV905
IC	2703C-V905
E.U.T Type	Cellular/PCS GSM/EDGE/WCDMA Tablet with Bluetooth & WLAN
TX Frequency	824.20 MHz to 848.80 MHz (GSM 850) 1 850.20 MHz to 1 909.80 MHz (GSM 1 900) 826.40 MHz to 846.60 MHz (WCDMA 850) 1 852.4 MHz to 1 907.6 MHz (WCDMA 1 900)
RX Frequency	869.20 MHz to 893.80 MHz (GSM 850) 1 930.20 MHz to 1 989.80 MHz (GSM 1 900) 871.40 MHz to 891.60 MHz (WCDMA 850) 1 932.4 MHz to 1 987.6 MHz (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 Tablet with Bluetooth & WLAN	LG	V905	BEJV905	Notebook PC TV monitor
Travel adaptor	TEMPO	PATA-D01KT	-	E.U.T
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
TV monitor	LG	W2261Vp-PF 912NDDM0C242	-	E.U.T
Headset	-	-	-	E.U.T
USB cable	-	-	-	E.U.T Notebook PC
HDMI cable	-	-	-	E.U.T TV monitor

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 Tablet with Bluetooth & WLAN	DC in	N	-	(D)1.6
	Headset jack	-	N	(D)1.2
	USB data	Y	Y	(P,D)1.2
	HDMI	N	Y	(D)1.0
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 Tablet with Bluetooth & WLAN	DC in	N	-	Y	E.U.T End
	Headset jack	N	-	Y	E.U.T End
	USB data	N	-	Y	Both End
	HDMI	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 performed 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 chamber used to collect the radiated data is located at the 105-1, Jangam-Ri, Majang-Myeon, Icheon-Si, Kyongki-Do, South Korea, and the conducted measurement facility used to measure the conducted data are located at San 136-1, Ami-Ri Bubal-Eup, Icheon-Si, Kyongki-Do, 467-701, South Korea. Those measurement facilities are constructed in conformance with the requirements 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, 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

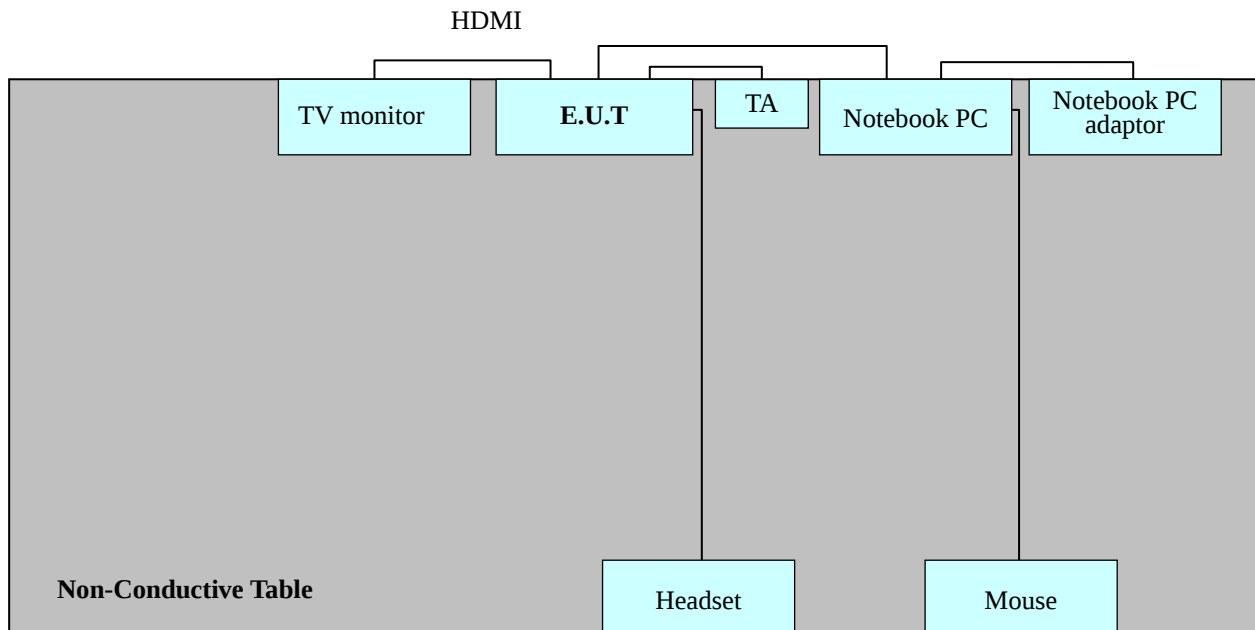
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 to 108	1 000
108 to 500	2 000
500 to 1 000	5 000
Above 1 000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

2. SYSTEM TEST CONFIGURATION

2.1 Configuration of Test System

- Power Line Conducted test : E.U.T was connected to LISN via Notebook PC adaptor.
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.
- 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 kHz)
Temperature	: 24.1 °C
Humidity level	: 45.2 %
Test date	: February 21, 2011

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

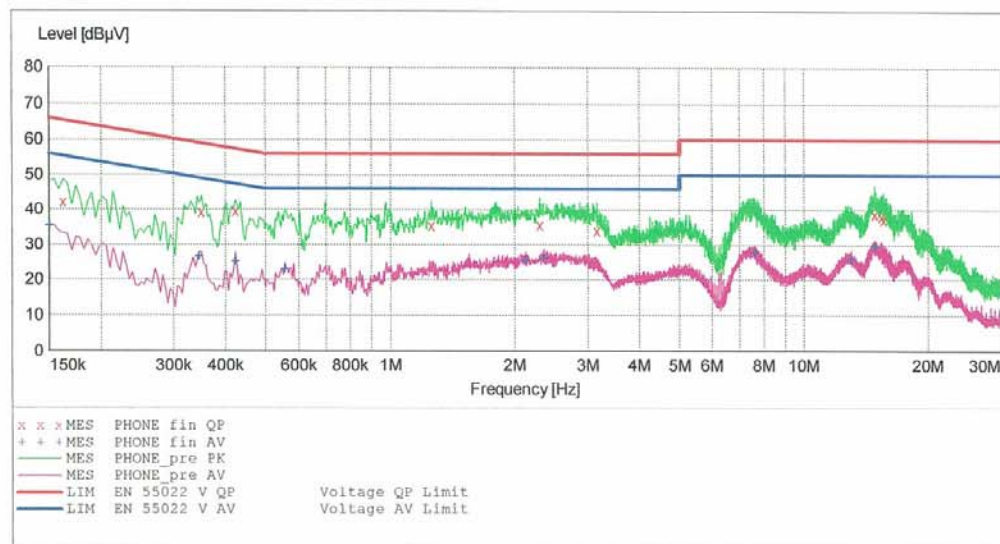
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EUT: V905
Manufacturer: LG
Operating Condition: DATA MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
Test Specification: FCC PART 15 CLASS B
Comment: H

SCAN TABLE: "FCC PART 15 CLASS B"

Short Description:			FCC PART 15 CLASS B			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
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"

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Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.162010	42.20	10.1	65	23.2	---	---
0.350010	39.30	10.1	59	19.7	---	---
0.422010	39.60	10.1	57	17.8	---	---
1.256000	35.60	10.2	56	20.4	---	---
2.300000	35.70	10.3	56	20.3	---	---
3.164000	34.10	10.4	56	21.9	---	---
14.864000	38.90	11.2	60	21.1	---	---
15.428000	38.20	11.2	60	21.8	---	---
15.608000	37.20	11.2	60	22.8	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150010	35.40	10.1	56	20.6	---	---
0.346010	26.60	10.1	49	22.4	---	---
0.422010	25.20	10.1	47	22.2	---	---
0.556000	23.00	10.1	46	23.0	---	---
2.128000	25.70	10.3	46	20.3	---	---
2.352000	26.20	10.3	46	19.8	---	---
7.620000	27.90	10.7	50	22.1	---	---
13.020000	25.90	11.0	50	24.1	---	---
14.888000	29.50	11.2	50	20.5	---	---

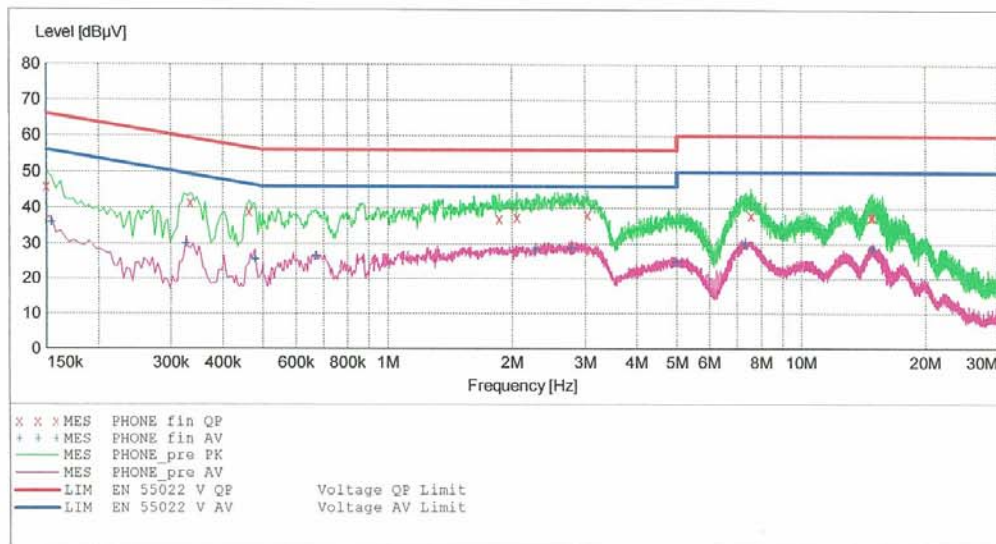
HCT

EMC

EUT: V905
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	Stop	Step	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"

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Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150010	46.00	10.1	66	20.0	---	---
0.334010	41.60	10.1	59	17.7	---	---
0.462010	39.10	10.1	57	17.5	---	---
1.860000	37.10	10.2	56	18.9	---	---
2.056000	37.60	10.3	56	18.4	---	---
3.040000	38.30	10.3	56	17.7	---	---
7.572000	38.20	10.7	60	21.8	---	---
14.772000	37.80	11.1	60	22.2	---	---
14.888000	37.90	11.2	60	22.1	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.154010	35.90	10.1	56	19.9	---	---
0.326010	30.00	10.1	50	19.5	---	---
0.478010	25.70	10.1	46	20.7	---	---
0.672000	26.50	10.1	46	19.5	---	---
2.280000	28.20	10.3	46	17.8	---	---
2.780000	28.70	10.3	46	17.3	---	---
5.000000	24.80	10.5	46	21.2	---	---
7.324000	29.80	10.6	50	20.2	---	---
14.872000	28.50	11.2	50	21.5	---	---

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 : February 18, 2011

Frequency	Reading	Ant. Factor	Cable Loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB/m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
78.7	19.5	8.5	1.2	V	29.2	40.0	10.8
129.2	18.1	11.9	1.4	V	31.4	43.5	12.1
190.6	15.5	10.5	1.8	H	27.8	43.5	15.7
262.8	20.3	11.9	2.1	H	34.3	46.0	11.7
398.3	20.4	15.5	2.6	H	38.5	46.0	7.5
931.6	7.3	23.8	4.1	V	35.2	46.0	10.8

※ **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 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 Number</u>	<u>Serial Number</u>	<u>Next CAL Date</u>
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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	2011.04.05
☒ 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 Tablet with Bluetooth & WLAN, Model: V905, FCC ID: BEJV905** complies with §15.107 and §15.109 of the FCC rules.
IC Model: V905, IC: 2703C-V905 complies with ICES-003 Issue 4 of the IC rule.