FCC/IC TEST REPORT

Reference No. : **G-45-2010-02214**

Applicant : **LG Electronics Inc.**

Equipment Under Test (EUT) :

Product Name : Cellular/PCS GSM/EDGE WCDMA Phone with Bluetooth & WLAN

Model Name : LG-720b

Alt. Model Name : E720b, E720B, LG-E720B

Applied Standards : **FCC Part 15 : 2009, Subpart B, Class B**
ANSI C63.4 : 2003
CISPR 22 : 2006
ICES-003 Issue 4 : 2004

Date of Receipt : **August 02, 2010**

Date of Test : **September 02, 2010 ~ September 03, 2010**

Date of Issue : **September 07, 2010**

Test Results : **Complied**

Tested by : **Paul Kang**

Reviewed by : **Forest Lee**

Remarks :

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or Testing done by SGS International Electrical Approvals in connection with distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

Contents

1. General Information....3
1.1 Client Information....3
1.2 Test Laboratory....3
1.3 General Information of E.U.T. 3
1.4 Operating Modes and Conditions....3
1.5 Peripheral Equipments....3
1.6 Cable List....4
1.7 System Configurations....4
1.8 Test System Layout 5
1.9 Applicable Standards for Testing 5
1.10 Summary of Test Results....5
2. Emission Test....6
2.1 Test Results....6
2.2 Test Equipments....6
2.3 Test Site....6
2.4 Conducted Emission Test Data....7
2.5 Radiated Emission Test Data....7
2.6 Modifications....8
Appendix A : Conducted Emission 9

1. General Information

1.1 Client Information

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

1.2 Test Laboratory

Name and Address : SGS Testing Korea Co., Ltd.
18-34, Sanbon-dong, Gunpo, Gyeonggi-do, Korea
435-041

1.3 General Information of E.U.T.

Product Name : Cellular/PCS GSM/EDGE WCDMA Phone with Bluetooth & WLAN
Model Name : LG-E720b
Alt. Model Name : E720b, E720B, LG-E720B
Model Difference : Only model name is different.
FCC ID : BEJE720B
IC Number : 2703C-E720
Serial No. : N/A
Highest Internal Frequency : Max. 320 MHz
Test Voltage : AC 120V, 60Hz(Notebook Computer)

1.4 Operating Modes and Conditions

Operating mode	Operating condition
USB Mode	USB Data Communication

Note: EUT was exercised through Software(Dell Program) during testing.

1.5 Peripheral Equipments

Description	Model	Serial No.	Manufacturer
Notebook Computer	PCG-3AHP	28272287 7000053	Sony Corporation
LCD Monitor	CR22KS	N843H1KP902165L	Samsung Electronics
USB Keyboard	L100	N/A	DELL
USB MOUSE	M-BJ58	N/A	SUZHOU LOGITECH ELECTRONICS CO., LTD.
Local Area Network	N/A	N/A	N/A
Micro SD Card	Mobile Ultra 2GB	N/A	SanDisk

Note: Peripherals are DoC.

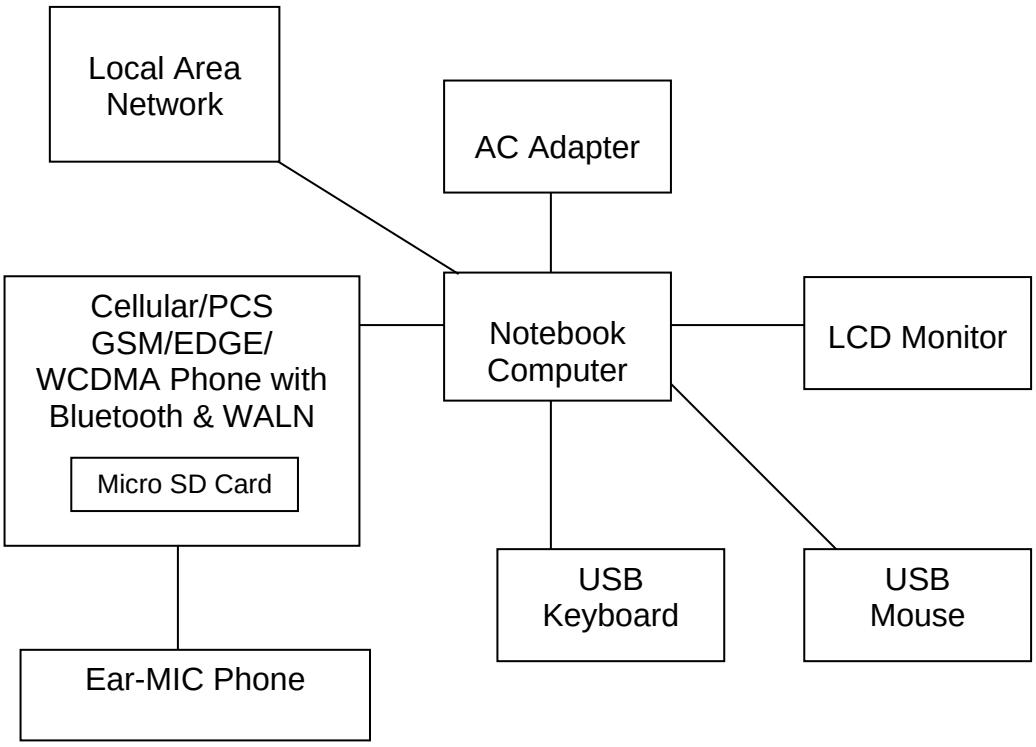
1.6 Cable List

Start		END		Cable Spec.	
Name	I/O Port	Name	I/O Port	Length	Shield
Cellular/PCS GSM/EDGE/ WCDMA Phone with Bluetooth & WLAN	USB	Notebook Computer	USB	1.2	Shield
	IO	Ear-MIC Phone	-	1.1	Unshield
	MicroSD	Micro SD Card	-	-	-
Notebook Computer	DC IN	AC Adapter	DC OUT	1.8	Unshield
	RGB	LCD Monitor	RGB	1.8	Shield
	USB	USB Keyboard	USB	2.0	Shield
	USB	USB Mouse	USB	1.8	Shield
	LAN	Local Area Network	-	6.0	Unshield
AC Adapter	AC IN	AC Source	-	1.0	Unshield

1.7 System Configurations

Description	Model	Serial No.	Manufacturer
Battery	LGIP-430N	DC100811	LG
Ear MIC Phone	N/A	N/A	LG
LCD Panel	N/A	N/A	N/A
Main Board	N/A	N/A	N/A
RF Sub Board	N/A	N/A	N/A

1.8 Test System Layout



1.9 Applicable Standards for Testing

Standards	Status	Deviation
FCC Part 15 : 2009, Subpart B ANSI C63.4 : 2003 CISPR 22 : 2006 ICES-003 Issue 4 : 2004	Applicable	No Deviation

1.10 Summary of Test Results

Test Item	Standards	Results
Conducted Emission	FCC Part 15 : 2009, Subpart B ANSI C63.4 : 2003 CISPR 22 : 2006 ICES-003 Issue 4 : 2004	Complied
Radiated Emission	FCC Part 15 : 2009, Subpart B ANSI C63.4 : 2003 CISPR 22 : 2006 ICES-003 Issue 4 : 2004	Complied

EMISSION

2.1 Test Results

Test Items	Standards	Test Results
Conducted Emission	FCC Part 15 : 2009, Subpart B ANSI C63.4 : 2003 CISPR 22 : 2006 ICES-003 Issue 4 : 2004	**Complied**
Radiated Emission	FCC Part 15 : 2009, Subpart B ANSI C63.4 : 2003 CISPR 22 : 2006 ICES-003 Issue 4 : 2004	**Complied**

2.2 Test Equipments

Equipment	Model	Manufacturer	Last Cal. Date
Two-Line V-Network	ENV216	R&S	2010.01.06
Test Receiver	ESHS10	R&S	2010.07.12
LISN	L3-25	PMM	2010.07.09
Test Receiver	ESU26	R&S	2010.04.08
Amplifier	8447F	HP	2010.07.05
Bi-Log Antenna	VULB9163	SCHWARZBECK MESS-ELEKTRONIK	2009.07.22
Preamplifier	8449B	Agilent	2010.03.31
Horn Antenna	HF906	R&S	2009.10.08

Note : Only the calibration period of Antennas is 2 years but the period of every equipment is 1 year.

2.3 Test Site

Conducted Emission: Shield Room in Gunpo Laboratory

Radiated Emission: 3m Semi-Anechoic chamber in Gunpo Laboratory

2.4 Conducted Emission Test Data

The initial preliminary exploratory scans were performed using a max hold mode incorporating a Peak detector. The final test data was measured using a Quasi-Peak detector and Average detector.

Temperature : 23.0 ℃

Humidity : 53.0 % RH

Atmospheric Pressure : 100.5 kPa

FREQ. (MHz)	LINE	LEVEL(dBμV)		LIMIT(dBμV)		MARGIN(dB)	
		Q-Peak	Average	Q-Peak	Average	Q-Peak	Average
0.20	H	36.50	22.70	63.61	53.61	27.11	30.91
2.03	N	34.10	27.40	56.00	46.00	21.90	18.60
2.20	H	33.20	26.20	56.00	46.00	22.80	19.80
4.83	N	28.30	22.60	56.00	46.00	27.70	23.40
15.79	H	37.00	29.20	60.00	50.00	23.00	20.80
17.79	N	41.00	32.70	60.00	50.00	19.00	17.30

Note : • Line (H) : Hot • Line (N) : Neutral
• Margin = Limit - Level

See Appendix A (Conducted Emission)

2.5 Radiated Emission Test Data

The initial preliminary exploratory scans were performed using a max hold mode incorporating a Peak detector. The final test data was measured using a Quasi-Peak detector below 1GHz and a Average detector above 1GHz.

Below 1GHz

Temperature : 23.1 ℃
Humidity : 48.0 % RH
Atmospheric Pressure : 100.8 kPa

FREQ. (MHz)	LEVEL (dBμV)	POL (H/V)	A (°)	H (m)	AF (dB)	CL (dB)	Amp (dB)	F/S (dBμV/m)	LIMIT (dBμV/m)	MARGIN (dB)
35.86	47.90	V	84.0	1.00	11.27	0.62	28.30	31.49	40.00	8.51
55.14	45.60	V	101.1	1.11	11.75	0.75	28.21	29.89	40.00	10.11
203.23	50.90	H	285.7	2.60	10.37	1.40	27.61	35.06	43.50	8.44
240.01	41.30	H	112.5	3.42	12.10	1.53	27.42	27.51	46.00	18.49
360.00	43.80	H	1.6	2.88	14.91	1.85	27.75	32.81	46.00	13.19
601.37	44.20	H	79.2	3.14	19.32	2.40	28.87	37.05	46.00	8.95

Note : • AF = Antenna Factor • CL = Cable Loss • F/S = Field Strength
• POL H = Horizontal • POL V = Vertical • Amp = Amplifier Gain
• Margin = Limit – F/S • F/S = Level + AF + CL – Amp
• A : Angle • H : Height

Above 1GHz

Temperature : 23.5 ℃
Humidity : 48.0 % RH
Atmospheric Pressure : 100.6 kPa

FREQ. (MHz)	LEVEL (dBμV)	POL (H/V)	A (°)	H (m)	AF (dB)	CL (dB)	Amp (dB)	F/S (dBμV/m)	LIMIT (dBμV/m)	MARGIN (dB)
Average Detector										
1065.83	36.20	V	177.7	1.94	24.69	3.13	33.15	30.87	54.00	23.13
1190.63	34.80	V	181.6	1.56	25.00	3.43	34.43	28.80	54.00	25.20
1464.58	35.10	V	91.5	1.12	25.29	3.70	35.71	28.38	54.00	25.62
1785.00	35.60	V	350.2	1.10	26.74	4.11	34.73	31.72	54.00	22.28

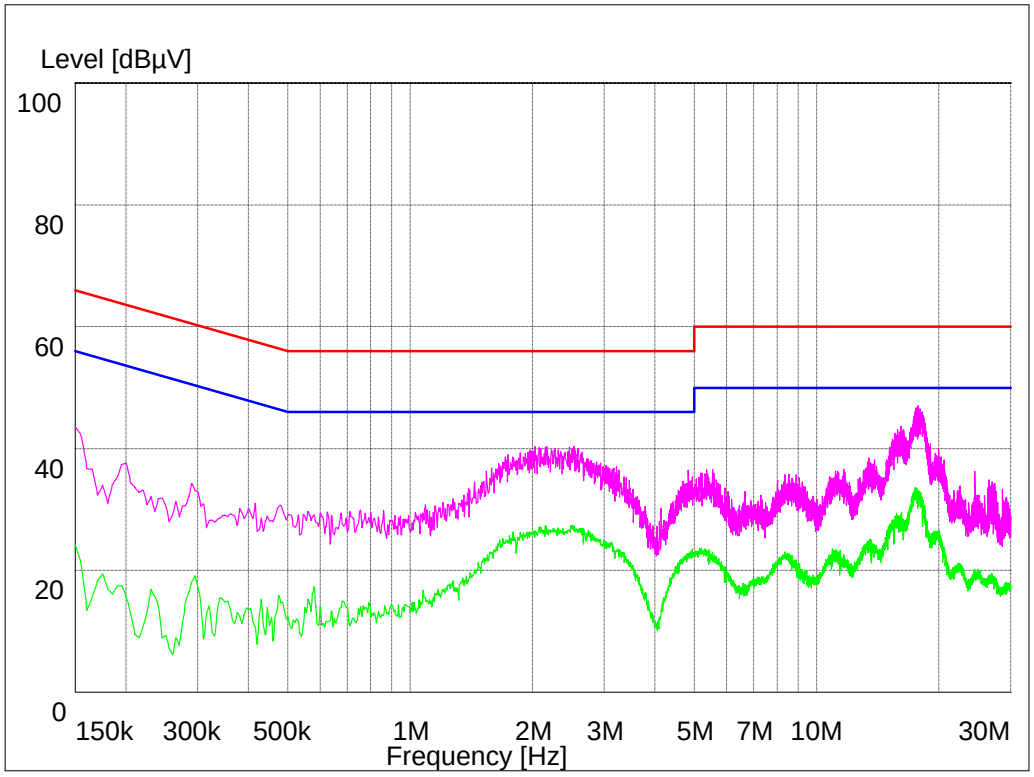
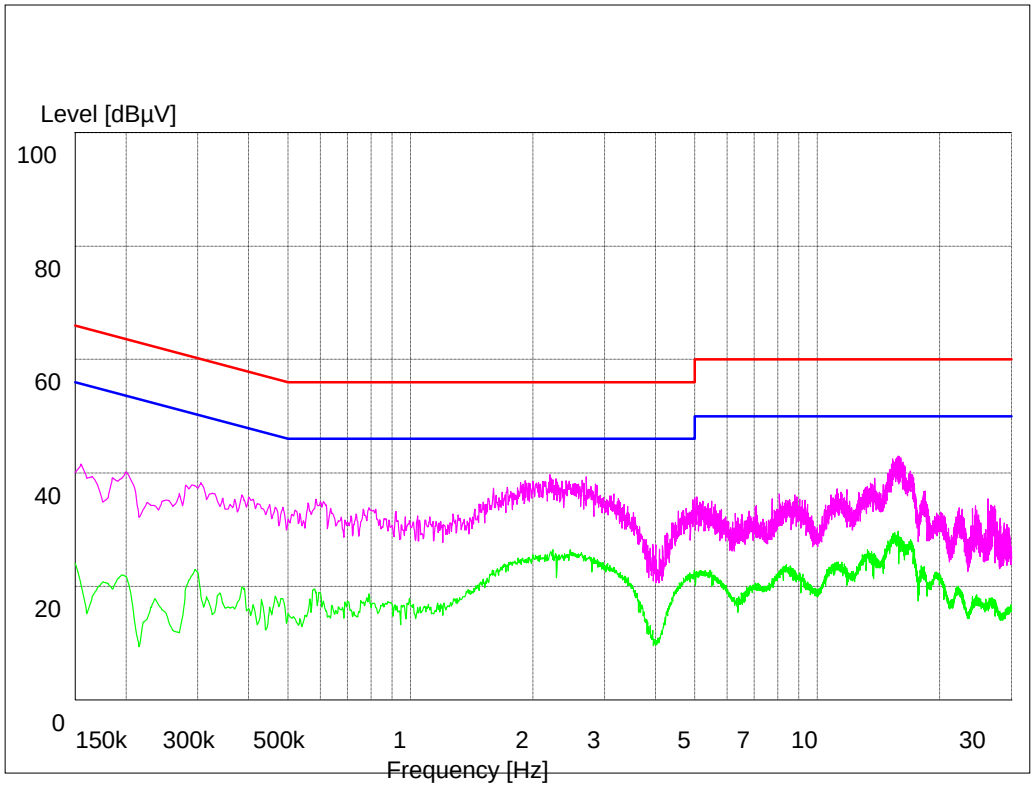
Note: • AF = Antenna Factor • CL = Cable Loss • F/S = Field Strength
• POL H = Horizontal • POL V = Vertical • Amp = Amplifier Gain
• Margin = Limit – F/S • F/S = Level + AF + CL – Amp
• A : Angle • H : Height

2.6 Modifications

There was no modified item during the test.

Appendix A : Conducted Emission

Neutral



Hot