

FCC TEST REPORT

Reference No. : G-45-2011-01145

Applicant : LG Electronics Inc.

Equipment Under Test (EUT) :

Product Name : Cellular/PCS GSM/GPRS/EDGE

Phone with Bluetooth and WLAN

Model Name : LG-P690

Alt. Model Name : P690, LGP690

Applied Standards : FCC Part 15 : 2009, Subpart B, Class B

ANSI C63.4 : 2003

CISPR 22 : 2006

Date of Receipt : April 28, 2011

Date of Test : April 29, 2011 ~ May 02, 2011

Date of Issue : May 04, 2011

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.



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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 Korea Co., Ltd.
18-34, Sanbon-dong, Gunpo, Gyeonggi-do, Korea
435-040

1.3 General Information of E.U.T.

Product Name : Cellular/PCS GSM/GPRS/EDGE
Phone with Bluetooth and WLAN
Model Name : LG-P690
Alt. Model Name : P690, LGP690
Model Difference : Only model name is different.
FCC ID : BEJP690
Serial No. : 112KPAE904880
Highest Internal Frequency : Max. 800 MHz
Test Voltage : 120 V a.c., 60 Hz (Notebook Computer)
Battery 3.7 V d.c., 1500 mAh, 5.6 Wh Inside

1.4 Operating Modes and Conditions

Operating mode	Operating condition
USB Mode	USB Data Communication

Note : EUT was exercised through batch file during testing.

1.5 Peripheral Equipments

Description	Model	Serial No.	Manufacturer
USB Mouse	Basic Optical Mouse 1.0A USB/PS2 Compatible	-	Microsoft Corporation
Micro SD Card	Mobile Ultra 2GB	-	SanDisk
Notebook Computer	LGE-DMLGX14(B)	008QTEQ024836	LG Electronics Co., Ltd.

Note: Peripherals are DoC.

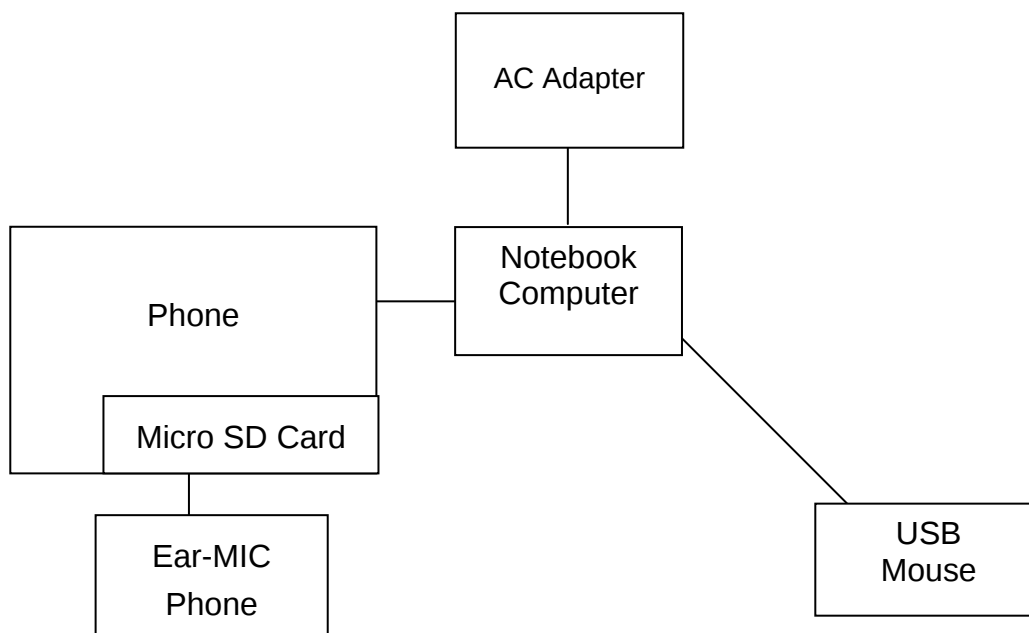
1.6 Cable List

Start		END		Cable Spec.	
Name	I/O Port	Name	I/O Port	Length	Shield
Phone	USB	Notebook Computer	USB	1.2	Shield
	IO	Ear-MIC Phone	-	1.1	Unshield
	MicroSD	Micro SD Card	-	-	-
Notebook Computer	DC IN	AC Source	DC OUT	1.8	Unshield
	USB	USB Mouse	USB	1.8	Shield
AC Adapter	AC IN	Power Source	-	1.7	Shield

1.7 System Configurations

Description	Model	Serial No.	Manufacturer
Battery	BL-44JN	DC110217	LG
Ear-MIC Phone	A187	SGEY0003744	LG

1.8 Test System Layout



1.9 Modifications

There was no modified item during the test.

1.10 Applicable Standards for Testing

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

1.11 Summary of Test Results

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

2.2 Test Equipments

Equipment	Model	Manufacturer	Last Cal. Date
Two-Line V-Network	ENV216	R & S	2011.01.06
Artificial Mains Networks	ESH2-Z5	R & S	2011.04.06
Test Receiver	ESPC	R & S	2010.07.15
Horn Antenna	HF906	R & S	2009.10.08
Test Receiver	ESU26	R & S	2010.08.16
Amplifier	8447F	HP	2010.07.05
Preamplifier	8449B	Agilent	2011.03.31
Bilog Antenna	HL562	R & S	2010.02.05

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 : 21.5

Humidity : 20.0 % RH

Atmospheric Pressure : 101.4 kPa

FREQ. (MHz)	LINE	LEVEL(dB μ V)		LIMIT(dB μ V)		MARGIN(dB)	
		Q-Peak	Average	Q-Peak	Average	Q-Peak	Average
0.15	N	52.80	38.20	66.00	56.00	13.20	17.80
0.20	H	49.30	37.30	63.61	53.61	14.31	16.31
0.24	N	42.80	27.20	62.27	52.27	19.47	25.07
2.12	H	30.10	24.40	56.00	46.00	25.90	21.60
2.13	N	29.30	24.10	56.00	46.00	26.70	21.90
13.56	N	42.20	38.60	60.00	50.00	17.80	11.40

Measurement Uncertainty : ± 3.37 dB (The confidential level is about 95%, K=2)

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 Peak and Average detector above 1GHz. This test was performed up to 5GHz.

Below 1GHz (3m method)

Temperature : 21.1

Humidity : 20.0 % RH

Atmospheric Pressure : 101.4 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)
31.25	37.30	V	340.0	1.00	11.07	0.57	28.30	20.64	40.00	19.36
43.96	42.20	V	250.0	1.00	12.30	0.67	28.26	26.91	40.00	13.09
58.99	41.80	V	280.0	1.00	11.50	0.78	28.21	25.87	40.00	14.13
92.90	42.40	V	100.0	1.00	11.18	0.96	28.13	26.41	43.50	17.09
127.20	46.80	V	100.0	1.00	8.24	1.11	27.96	28.19	43.50	15.31
201.65	53.10	H	100.0	1.00	10.35	1.40	27.62	37.23	43.50	6.27

Measurement Uncertainty (Horizontal) : ± 5.00dB (The confidential level is about 95%, K=2)

Measurement Uncertainty (Vertical) : ± 5.36dB (The confidential level is about 95%, K=2)

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 (3m method)

Temperature : 21.4

Humidity : 20.0 % RH

Atmospheric Pressure : 101.4 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)
Peak Detector										
1327.92	49.90	H	175.0	1.00	25.01	3.61	35.37	43.15	74.00	30.85
3579.38	46.70	H	10.0	2.00	31.32	5.96	35.26	48.71	74.00	25.29
Average Detector										
1327.92	34.80	H	175.0	1.00	25.01	3.61	35.37	28.05	54.00	25.95
3579.38	32.10	H	10.0	2.00	31.32	5.96	35.26	34.11	54.00	19.89

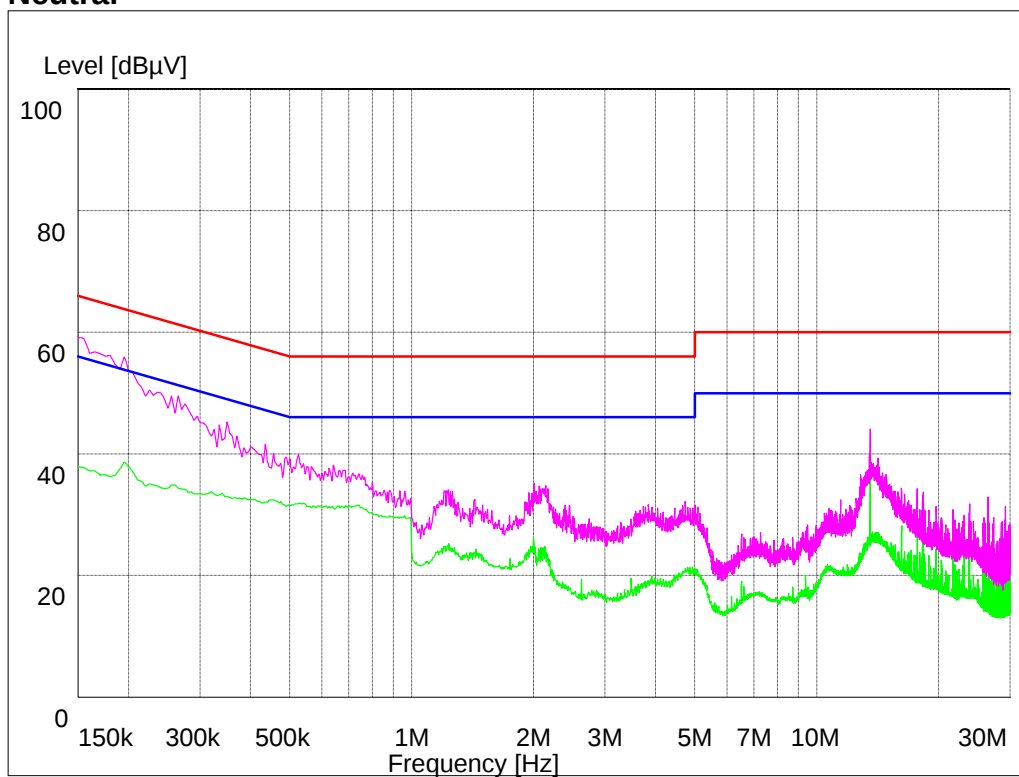
Measurement Uncertainty (Horizontal) : ± 4.89dB (The confidential level is about 95%, K=2)

Measurement Uncertainty (Vertical) : ± 4.93dB (The confidential level is about 95%, K=2)

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

Appendix A : Conducted Emission

Neutral



Hot

