

FCC TEST REPORT

Reference No. : G-45-2010-03479

Applicant : LG Electronics Inc.

Equipment Under Test (EUT) :

Product Name : Cellular/PCS GSM/EDGE Phone with Bluetooth

Model Name : LG-S310

Alt. Model Name : S310

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

ANSI C63.4 : 2003

CISPR 22 : 2006

Date of Receipt : December 16, 2010

Date of Test : December 29, 2010 ~ December 30, 2010

Date of Issue : January 03, 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 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 Phone with Bluetooth
Model Name : LG-S310
Alt. Model Name : S310
Model Difference : Only model name is different.
FCC ID : BEJS310
Serial No. : 012CYBD162997
Highest Internal Frequency : Max. 208 MHz
Test Voltage : 120 V a.c., 60 Hz (Personal Computer)
Battery 3.7 V d.c., 900 mAh, 3.4 Wh Inside

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
Personal Computer	DC8CMF	CWDKKBX	DELL INC.
LCD Monitor	M208WA	704KGEF2U812	LG Electronics Inc.
USB Keyboard	KU-0459	7691402003981	Microsoft
USB MOUSE	Basic Optical Mouse 1.0A USB/PS2 Compatible	N / A	MICROSOFT CORPORATION
Local Area Network	N/A	N/A	N/A
Micro SD Card	Mobile Ultra 2GB	N/A	SanDisk

Note: Peripherals are DoC.

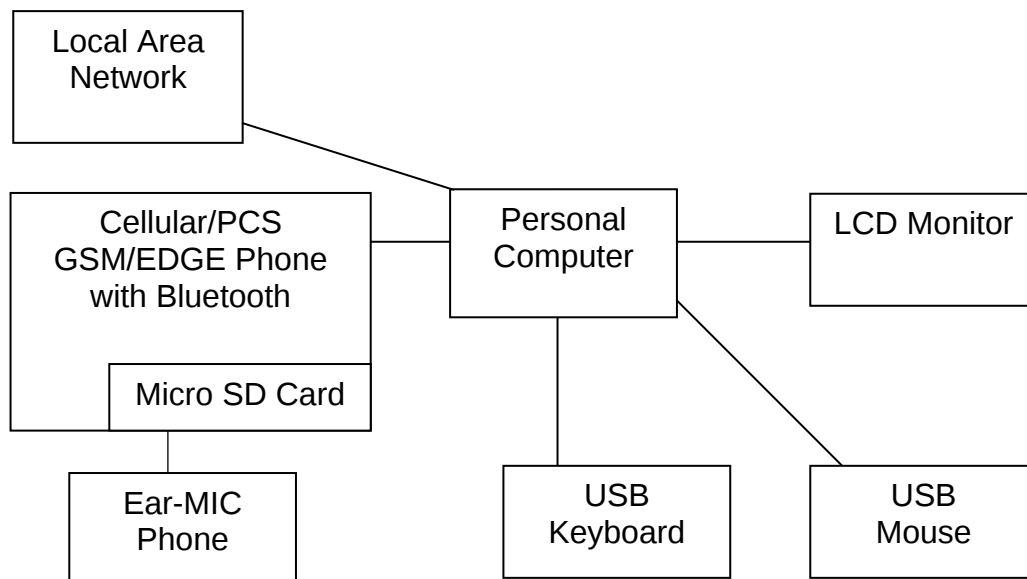
1.6 Cable List

Start		END		Cable Spec.	
Name	I/O Port	Name	I/O Port	Length	Shield
Cellular/PCS GSM/EDGE Phone with Bluetooth	USB	Personal Computer	USB	1.1	Shield
	I/O	Ear-MIC Phone	-	1.0	Unshield
	MicroSD	Micro SD Card	-	-	-
Personal Computer	AC IN	AC Source	-	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

1.7 System Configurations

Description	Model	Serial No.	Manufacturer
Battery	LGIP-550N	DC100709	LG
Ear-MIC Phone	CRESYN	SGEY0003223	LG

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	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	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	2010.01.06
Test Receiver	ESHS10	R & S	2010.07.12
LISN	L3-25	PMM	2010.07.09
Horn Antenna	HF906	R & S	2009.10.08
Bilog Antenna	VULB9163	SCHWARZBECK MESS-ELEKTRONIK	2009.07.22
Test Receiver	ESU26	R & S	2010.04.08
Amplifier	8447F	HP	2010.07.05
Preamplifier	8449B	Agilent	2010.03.31

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 : 20.0

Humidity : 23.0 % RH

Atmospheric Pressure : 100.5 kPa

FREQ. (MHz)	LINE	LEVEL(dBμV)		LIMIT(dBμV)		MARGIN(dB)	
		Q-Peak	Average	Q-Peak	Average	Q-Peak	Average
0.18	N	38.70	36.40	64.72	54.72	26.02	18.32
0.23	N	40.10	37.00	62.63	52.63	22.53	15.63
0.57	H	29.20	25.50	56.00	46.00	26.80	20.50
1.02	H	29.40	24.60	56.00	46.00	26.60	21.40
16.17	H	30.40	25.60	60.00	50.00	29.60	24.40
16.23	N	32.20	28.40	60.00	50.00	27.80	21.60

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 2GHz.

Below 1GHz (3m method)

Temperature : 22.8

Humidity : 18.0 % RH

Atmospheric Pressure : 100.4 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)
35.98	38.40	V	168.7	1.00	11.30	0.62	28.30	22.02	40.00	17.98
55.91	49.20	H	57.6	4.00	11.70	0.76	28.21	33.45	40.00	6.55
84.00	38.50	V	105.5	4.00	8.70	0.92	28.14	19.98	40.00	20.02
124.37	42.50	H	88.6	2.00	8.63	1.10	27.97	24.26	43.50	19.24
143.98	41.60	V	332.3	1.00	7.58	1.18	27.89	22.47	43.50	21.03
240.01	45.50	H	11.1	3.00	12.10	1.53	27.42	31.71	46.00	14.29

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 : 22.8

Humidity : 18.0 % RH

Atmospheric Pressure : 100.4 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										
1498.54	48.50	V	357.3	1.10	25.32	3.81	35.79	41.84	74.00	32.16
1866.67	48.00	V	154.9	2.00	27.35	4.31	34.81	44.85	74.00	29.15
Average Detector										
1498.54	28.70	V	357.3	1.10	25.32	3.81	35.79	22.04	54.00	31.96
1866.67	27.50	V	154.9	2.00	27.35	4.31	34.81	24.35	54.00	29.65

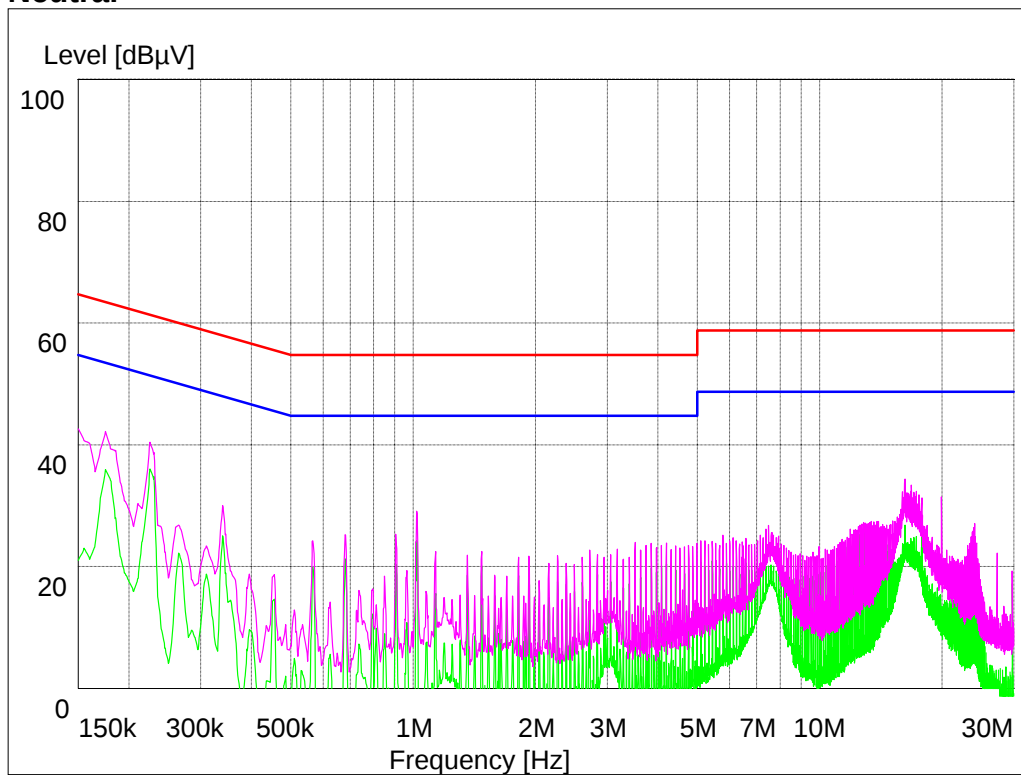
Note : • AF = Antenna Factor • CL = Cable Loss • F/S = Field Strength
• POL H = Horizontal • POL V = Vertical • Amp = Amplifier Gain
• Margin = Limit – F/S • F/S = Level + AF + CL – Amp
• A : Angle • H : Height

2.6 Modifications

There was no modified item during the test.

Appendix A : Conducted Emission

Neutral



Hot

