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EMI REPORT (Certification)

LG Electronics, Inc.

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Date of Issue: March 21, 2008

Test Report No.: HCT-F08-0313

Test Site: HCT CO., LTD.

HCT FRN: 0005-8664-21

FCC ID:

BEJKF310

Classification/ Standard(s): FCC PART 15 Subpart B / CISPR 22 CLASS B
Equipment (EUT) Type: PCS GSM/EDGE Phone with Bluetooth
Trade Name/Model(s): LG Electronics, Inc. / KF310
Application Type: Certification
Port/ Connector(s): DC Input Port / Ear Phone 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 denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse of 1988, 21 U.S.C.853(a).

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ATTACHMENT : TEST SETUP PHOTOGRAPHS

1. GENERAL INFORMATION

1.1 Product Description

The LG Electronics, Inc. KF310 PCS GSM/EDGE Phone with Bluetooth. It's basic purpose is used for communications. It transmits from GSM1900 (1850.20 MHz – 1909.80 MHz) and receives from GSM1900 (1930.20 MHz – 1989.80 MHz).

MODEL	KF310
FCC ID	BEJKF310
EUT Type	PCS GSM/EDGE Phone with Bluetooth
TX Frequency	1850.20 MHz – 1909.80 MHz (GSM1900) 2402 MHz – 2480 MHz (Bluetooth)
RX Frequency	1930.20 MHz – 1989.80 MHz (GSM1900) 2402 MHz – 2480 MHz (Bluetooth)

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/ PART NUMBER	FCC ID / DoC	CONNECTED TO
PCS GSM/EDGE Phone with Bluetooth	LG Electronics, Inc.	KF310	BEJKF310	PC, TA
Travel Adaptor	Salcomp	STA-P52ES	-	EUT
Notebook PC	Toshiba	PSMA2K-01D002	DoC	EUT, TA
Notebook PC Adaptor	Delta	SADP-65KB B		Notebook PC
Mouse	Logitech	M-BT96a	DoC	Notebook PC
Ear phone	-	-	-	EUT
USB Cable	I-TECH	SGDY0010901	-	EUT, PC

1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (M)
PCS GSM/EDGE Phone with Bluetooth	DC In	N	N/A	(P)1.8
	Ear Jack	N/A	N	(D)1.4
	USB Data	Y	Y	(P, D)1.6
Notebook PC	USB (Mouse)	N/A	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
PCS GSM/EDGE Phone with Bluetooth	DC-In	N	-	Y	EUT End
	Ear-jack	N	-	Y	EUT End
	USB Data	N	-	Y	Both End
Notebook PC	USB (Mouse)	N	-	Y	Notebook PC End

1.6 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4/2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.7 Test Facility

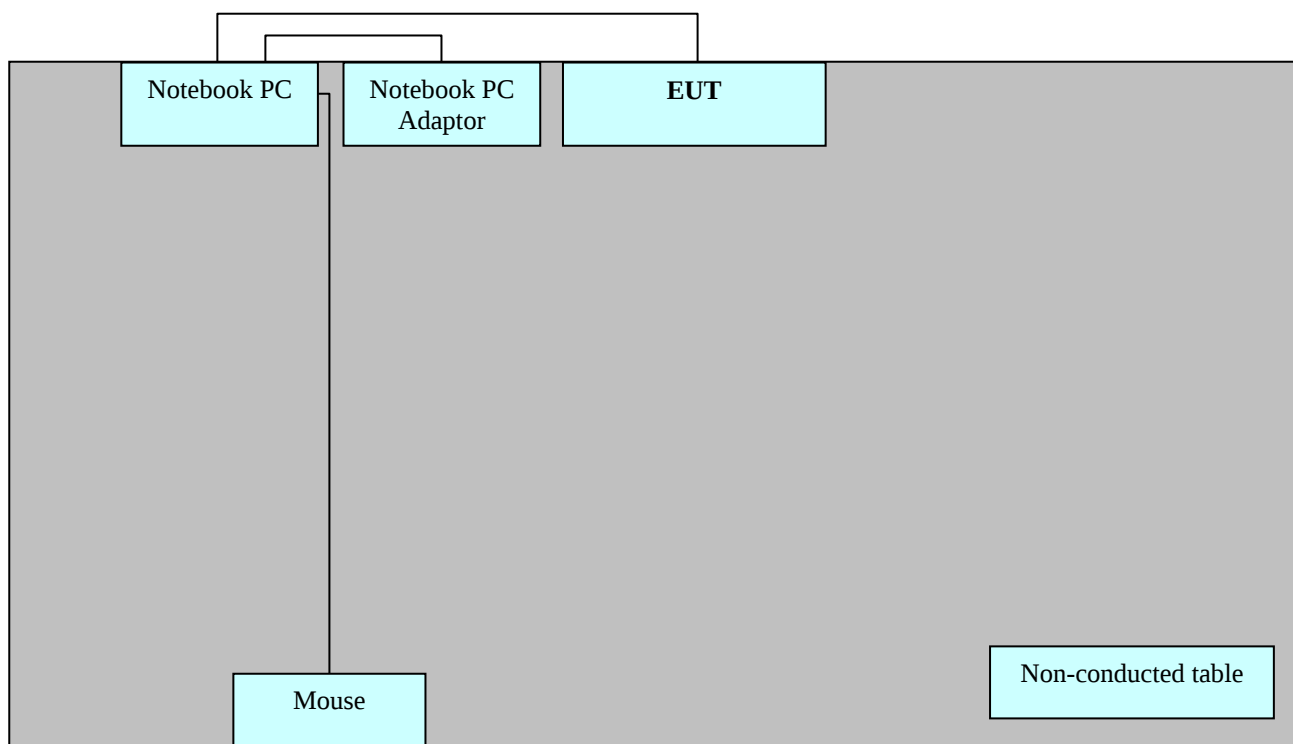
The open area test site and conducted measurement facility used to collect the radiated data are located at the 254-1, Maekok-Ri, Hobup-Myun, Ichon-Si, Kyongki-Do, 467-701, KOREA. The site is constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated July 6, 2006(Registration Number: 90661)

2.SYSTEM TEST CONFIGURATION

2.1 Configuration of Test system

Line Conducted Test : EUT was connected to LISN, all other supporting equipment were Connected to another LISN. 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 meter open area test site.



Power Line: 110V AC

[Configuration of Tested System]

3. PRELIMINARY TEST

3.1 Conducted Emission Test

During Preliminary Tests, the following operating mode was investigated

Operation Mode	The worst operating condition
Camera Mode	
Idle (1900) Mode	
MP3 Mode	
Bluetooth Mode	
Data Communication Mode	○

3. 2 Radiated Emission Test

During Preliminary Test, the Following operation mode was investigated

Operation Mode	The worst operating condition
Camera Mode	○
Idle (1900) Mode	
MP3 Mode	
Bluetooth Mode	
Data Communication Mode	

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	: CISPR 22 CLASS B
Result	: PASSED BY 11.5 dB
Operating Condition	: Data Communication Mode
Detector	: Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)
Temperature	: 16.0 °C
Humidity Level	: 45.0 %
Test Date	: March 20, 2008

Power Line Conducted Emissions					
Frequency (MHz)	Amplitude (dBuV)	Conductor	Result	Limit (dBuV)	Margin (dB)
3.6640	38.5	HOT	Quasi-Peak	56.0	20.2
3.6640	32.8	HOT	Average	46.0	13.2
0.2001	44.4	NEUTRAL	Quasi-Peak	64.0	19.2
3.6680	34.5	NEUTRAL	Average	46.0	11.5

Line Conducted Emissions Tabulated Data

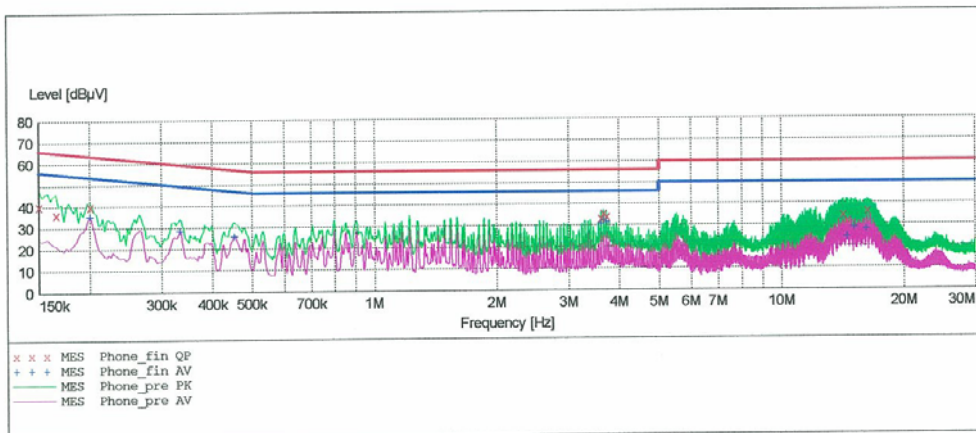
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EMC TEST LAB.

EUT: KF310
 Manufacturer: LG Electronics, Inc.
 Operating Condition: Data Communication Mode
 Test Site: SHIELD ROOM
 Operator: YH.LEE
 Test Specification: CISPR 22 CLASS B
 Comment: H

SCAN TABLE: "CISPR 22 Voltage"

Short Description:			CISPR 22 Voltage			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.1 kHz	500.0 kHz	2.5 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
0.150100	40.30	10.0	66	25.7	---	---
0.165100	36.50	10.0	65	28.7	---	---
0.200100	40.00	10.0	64	23.6	---	---
3.612000	33.40	10.5	56	22.6	---	---
3.664000	35.80	10.5	56	20.2	---	---
3.716000	34.30	10.5	56	21.7	---	---
14.200000	34.50	11.8	60	25.5	---	---
14.520000	32.00	11.8	60	28.0	---	---
16.324000	36.50	12.1	60	23.5	---	---

MEASUREMENT RESULT: "Phone_fin AV"

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Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.200100	35.50	10.0	54	18.1	---	---
0.332600	28.70	10.0	49	20.6	---	---
0.452600	25.80	10.1	47	21.0	---	---
3.612000	31.10	10.5	46	14.9	---	---
3.664000	32.80	10.5	46	13.2	---	---
3.720000	31.70	10.5	46	14.3	---	---
14.520000	24.20	11.8	50	25.8	---	---
15.156000	28.70	11.9	50	21.3	---	---
16.220000	27.80	12.0	50	22.2	---	---

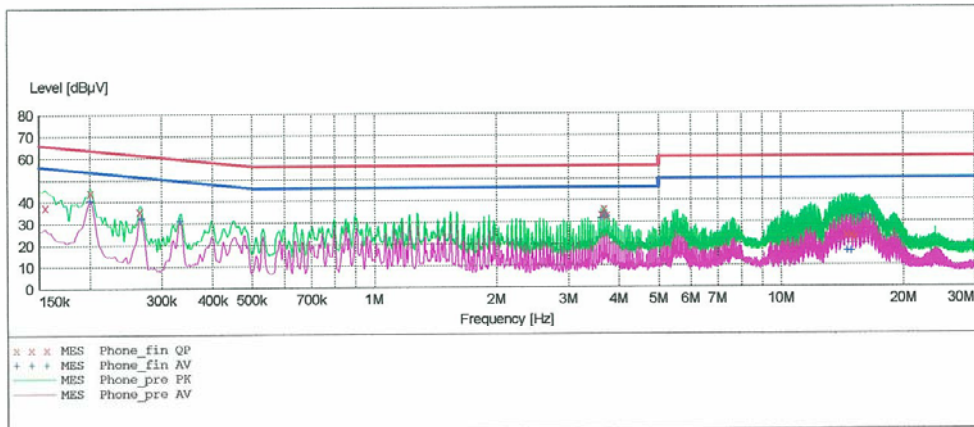
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EMC TEST LAB.

EUT: KF310
Manufacturer: LG Electronics, Inc.
Operating Condition: Data Communication Mode
Test Site: SHIELD ROOM
Operator: YH.LEE
Test Specification: CISPR 22 CLASS B
Comment: N

SCAN TABLE: "CISPR 22 Voltage"

Short Description:			CISPR 22 Voltage			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.1 kHz	500.0 kHz	2.5 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
0.155100	37.80	10.0	66	27.9	---	---
0.200100	44.40	10.0	64	19.2	---	---
0.265100	35.60	10.0	61	25.7	---	---
3.616000	33.60	10.5	56	22.4	---	---
3.668000	36.00	10.5	56	20.0	---	---
3.724000	33.20	10.5	56	22.8	---	---
14.504000	24.20	11.8	60	35.8	---	---
14.876000	24.20	11.9	60	35.8	---	---
15.196000	23.40	11.9	60	36.6	---	---

MEASUREMENT RESULT: "Phone_fin AV"

3/20/2008 4:44PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.200100	40.80	10.0	54	12.9	---	---
0.267600	32.50	10.0	51	18.7	---	---
0.332600	31.30	10.0	49	18.1	---	---
3.616000	32.00	10.5	46	14.0	---	---
3.668000	34.50	10.5	46	11.5	---	---
3.720000	32.80	10.5	46	13.2	---	---
14.556000	16.90	11.8	50	33.1	---	---
14.876000	16.50	11.9	50	33.5	---	---
15.860000	32.60	12.0	50	17.4	---	---

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
Result	: PASSED BY 8.9 dB
Operating Condition	: Camera mode
Detector	: Quasi-Peak (6 dB Bandwidth: 120 kHz)
Temperature	: 16.0 °C
Humidity Level	: 45.0 %
Test Date	: March 20, 2008

Frequency	Reading	Ant. Factor	Cable Loss	ANT POL	Total	Limit	Margin
MHz	dBuV/m	dB/m	dB	(H/V)	dBuV/m	dBuV/m	dB
314.0	14.2	13.0	4.3	H	31.5	46	14.5
320.8	15.7	13.2	4.3	H	33.2	46	12.8
326.5	13.2	13.4	4.3	H	30.9	46	15.1
386.0	12.2	14.6	4.6	H	31.4	46	14.6
760.2	8.2	21.1	6.5	V	35.8	46	10.2
289.6	20.7	12.3	4.1	V	37.1	46	8.9

*** For measurement over 1 GHz, noise level was more than 10 dB below the limit.

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 dBuV/m is obtained. The Antenna Factor of 7.4 dB and a Cable Factor of 1.1 dB is added. The 30 dBuV/m value is mathematically converted to its corresponding level in uV/m.

$$FS = 21.5 + 7.4 + 1.1 = 30 \text{ dBuV/m}$$

Radiated emission limits

Frequency of emission	Field strength	
	$\mu\text{V} / \text{m}$	$\text{dB } \mu\text{V} / \text{m}$
30 ~ 88	100	40.0
88 ~ 216	150	43.5
216 ~ 960	200	46.0
Above 960	500	54.0

6. Test Equipment

<u>Type</u>	<u>Manufacture</u>	<u>Model Number</u>	<u>Next CAL Date</u>
EMI Test Receiver	Rohde & Schwarz	ESI40	2008.11.06
EMI Test Receiver	Rohde & Schwarz	ESCI	2008.06.01
LISN	EMCO	703125	2008.05.04
LISN	Rohde & Schwarz	ESH2-Z5	2008.04.20
LISN	Rohde & Schwarz	ESH3-Z5	2008.06.13
LISN	EMCO	3816/2	2008.06.13
Attenuator	Rohde & Schwarz	ESH3-Z2	2008.10.30
TRILOG Antenna	Schwarzbeck	VULB9160	2009.04.20
Communication Antenna	TDK	LPDA-0802	N/A
Antenna Position Tower	HD	240/520/00	N/A
Base Station	Rohde & Schwarz	CMU 200	2009.02.28
Horn Antenna	Schwarzbeck	BBHA 9120D	2008.03.31
RF-Amplifier	MITEQ	AMF-6D-00101800-35.20P.PS	2008.04.25
Bluetooth Base Station	TESCOM	TC-3000A	2009.01.11

7. Conclusion

The data collected shows that the LG Electronics, Inc. PCS GSM/EDGE Phone with Bluetooth.
FCC ID: BEJKF310 Complies with §15.107 and §15.109 of the FCC Rules.