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EMI REPORT (Certification)

LG Electronics, Inc.

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

Date of Issue: July 08, 2008

Test Report No.: HCT-F08-0703

Test Site: HCT CO., LTD.

HCT FRN: 0005-8664-21

FCC ID:

BEJKS500

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. / KS500

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. KS500 PCS GSM/EDGE Phone with Bluetooth**. Its basic purpose is used for communications. It transmits from GSM 850 (824.20 MHz – 848.80 MHz), GSM1900 (1850.20 MHz – 1909.80 MHz), Bluetooth (2402 MHz – 2480 MHz) and receives from GSM 850 (869.20 MHz – 893.80 MHz), GSM1900 (1930.20 MHz – 1989.80 MHz), Bluetooth(2402 MHz – 2480 MHz).

MODEL	KS500
FCC ID	BEJKS500
EUT Type	PCS GSM/EDGE Phone with Bluetooth
TX Frequency	824.20 MHz – 848.80 MHz (GSM850) 1850.20 MHz – 1909.80 MHz (GSM1900) 2402 MHz – 2480 MHz (Bluetooth)
RX Frequency	869.20 MHz – 893.80 MHz (GSM850) 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.	KS500	BEJKS500	TA, PC
Travel Adaptor	SUNLIN	STA-P52ER	-	EUT
Notebook PC	Toshiba	PSMA2K-01D002	DoC	EUT, TA
Notebook PC Adaptor	Delta	SADP-65KB B	-	Notebook PC
Mouse	Microsoft	Intellimouse optical USB and PS/2 compatible	DoC	Notebook PC
Ear phone	I-SOUND	SGEY0003719	-	EUT
USB Cable	KSD	SGDY0010904	-	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)1.7
	Ear Jack	N/A	N	(D)1.1
	USB Data	Y	Y	(P, D)1.5
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, Kyounggi-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)

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

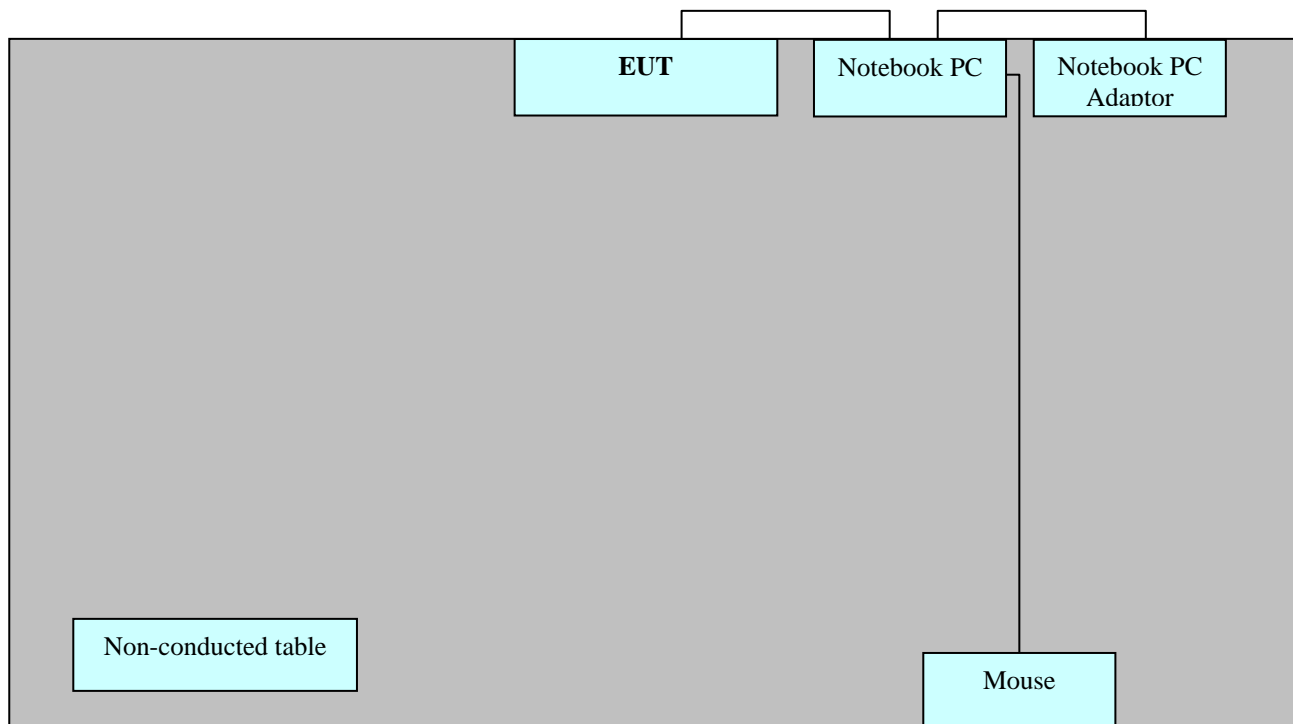
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

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
GSM Idle (850, 1900) Mode	
Camera 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
GSM Idle (850, 1900) Mode	
Camera 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 12.4 dB
Operating Condition	: Data Communication Mode
Detector	: Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)
Temperature	: 26.5 °C
Humidity Level	: 52.2 %
Test Date	: July 01, 2008

Power Line Conducted Emissions				CISPR 22 Class B	
Frequency (MHz)	Amplitude (dBuV)	Conductor	Result	Limit (dBuV)	Margin (dB)
4.8520	42.2	HOT	Quasi-Peak	56.0	13.8
4.8520	33.3	HOT	Average	46.0	12.7
4.8520	42.7	NEUTRAL	Quasi-Peak	56.0	13.3
4.8520	33.6	NEUTRAL	Average	46.0	12.4

Line Conducted Emissions Tabulated Data

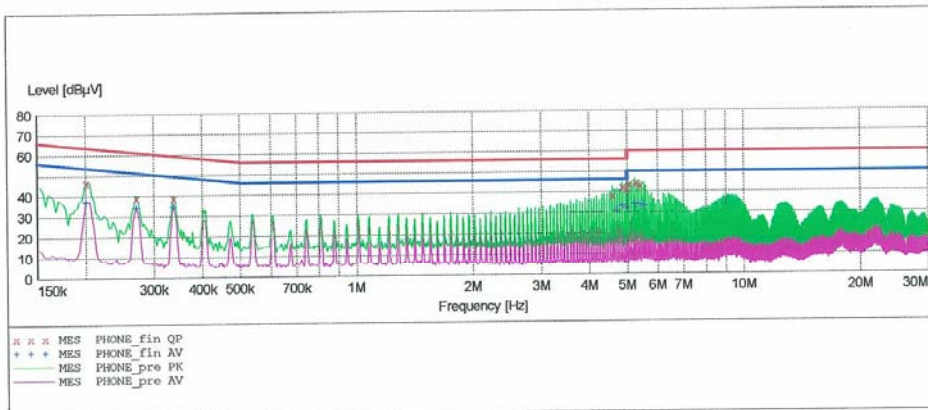
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EMC TEST LAB.

EUT: KS500
Manufacturer: LG
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
0.200100	46.30	10.0	64	17.3	---	---
0.270100	39.10	10.0	61	22.0	---	---
0.337600	38.80	10.0	59	20.5	---	---
4.580000	38.20	10.6	56	17.8	---	---
4.852000	42.20	10.6	56	13.8	---	---
4.984000	41.20	10.6	56	14.8	---	---
5.052000	43.60	10.6	60	16.4	---	---
5.256000	44.40	10.7	60	15.6	---	---
5.392000	43.20	10.7	60	16.8	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.200100	37.20	10.0	54	16.4	---	---
0.270100	34.50	10.0	51	16.6	---	---
0.337600	34.80	10.0	49	14.5	---	---
4.716000	31.20	10.6	46	14.8	---	---
4.852000	33.30	10.6	46	12.7	---	---
4.988000	32.10	10.6	46	13.9	---	---
5.256000	34.40	10.7	50	15.6	---	---
5.392000	34.10	10.7	50	15.9	---	---
5.528000	33.00	10.7	50	17.0	---	---

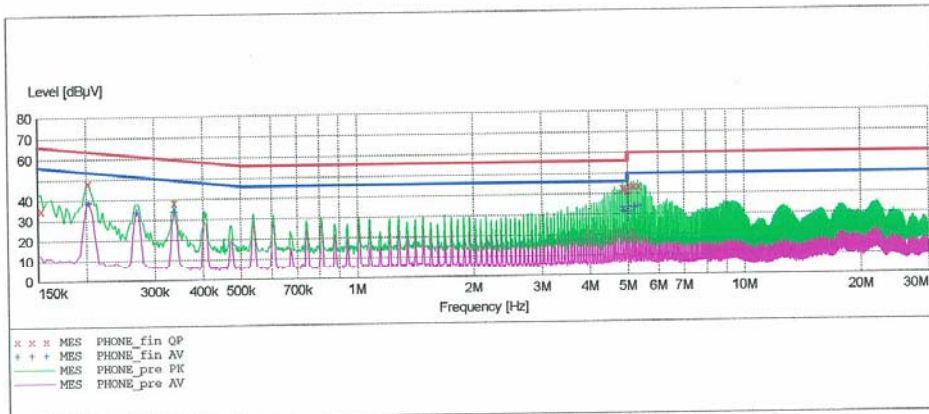
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EMC TEST LAB.

EUT: KS500
Manufacturer: LG
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 dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
0.152600	35.30	10.0	66	30.5	---	---
0.202600	48.30	10.0	64	15.3	---	---
0.337600	38.50	10.0	59	20.7	---	---
4.852000	42.70	10.6	56	13.3	---	---
4.916000	42.00	10.6	56	14.0	---	---
4.988000	41.20	10.6	56	14.8	---	---
5.052000	44.40	10.6	60	15.6	---	---
5.188000	43.80	10.6	60	16.2	---	---
5.324000	44.00	10.7	60	16.0	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.202600	39.10	10.0	54	14.4	---	---
0.270100	34.10	10.0	51	17.0	---	---
0.337600	34.20	10.0	49	15.1	---	---
4.852000	33.60	10.6	46	12.4	---	---
4.916000	31.70	10.6	46	14.3	---	---
4.988000	31.50	10.6	46	14.5	---	---
5.052000	34.00	10.6	50	16.0	---	---
5.188000	33.70	10.6	50	16.3	---	---
5.324000	34.20	10.7	50	15.8	---	---

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 3.0 dB
Operating Condition	: Data Communication Mode
Detector	: Quasi-Peak (6 dB Bandwidth: 120 kHz)
Temperature	: 26.5 °C
Humidity Level	: 52.2 %
Test Date	: July 01, 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
120.0	22.4	10.4	2.6	V	35.4	43.5	8.1
192.0	24.3	9.9	3.3	V	37.5	43.5	6.0
192.0	27.3	9.9	3.3	H	40.5	43.5	3.0
589.7	17.0	18.8	5.7	V	41.5	46.0	4.5
937.2	10.1	23.3	7.6	V	41.0	46.0	5.0

*** 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	
	V / m	dB V / 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	2009.06.01
LISN	EMCO	703125	2009.05.04
LISN	Rohde & Schwarz	ESH2-Z5	2009.04.18
LISN	Rohde & Schwarz	ESH3-Z5	2009.06.13
LISN	EMCO	3816/2SH	2009.02.01
Attenuator	Rohde & Schwarz	ESH3-Z2	2009.10.30
TRILOG Antenna	Schwarzbeck	VULB9168	2009.01.18
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	2009.03.18
RF-Amplifier	MITEQ	AMF-6D-00101800-35.20P.PS	2009.04.25
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: BEJKS500 Complies with §15.107 and §15.109 of the FCC Rules.