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EMI REPORT (Certification)

LG Electronics, Inc.

60-39, Kasan-Dong, Kumchon-Gu, Seoul 153-801,
Korea.

Date of Issue: November 29, 2007

Test Report No.: HCT-F07-1119

Test Site: HCT CO., LTD.

FCC ID:

BEJRD3500

Classification/ Standard(s):	FCC PART 15 Subpart B / CISPR 22 CLASS B
Equipment (EUT) Type:	Single-Band CDMA Phone
Trade Name/Model(s):	LG Electronics, Inc. / RD3500
Additional Model Name:	MD3500, ID3500, HD3500, YD3500, KD3500, MC3500, UD3500, CD3500, XD3500, ID3500A, RD3600, MD3600, ID3600, HD3600, YD3600, KD3600, MC3600, UD3600, CD3600, XD3600, ID3600A
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)

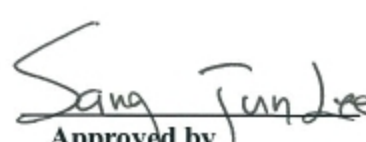
I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking 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).


Report prepared by

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Test engineer of EMC Tech.Part


Approved by

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Manager of EMC Tech.Part

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ATTACHMENT : TEST SETUP PHOTOGRAPHS

1. GENERAL INFORMATION

1.1 Product Description

The LG Electronics, Inc. RD3500 Single-Band CDMA Phone. Its basic purpose is used for communications. It transmits from CDMA 835 (824.7 – 848.31) MHz and receives from CDMA 835 (869.70 – 893.31) MHz.

MODEL	RD3500
FCC ID	BEJRD3500
EUT Type	Single-Band CDMA Phone
TX Frequency	824.70 – 848.31(CDMA 835)
RX Frequency	1869.70 – 893.31(CDMA 835)

1.2 Related Submittal(s) / Grant(s)

ORIGINAL SUBMITTAL ONLY

1.3 Tested System Details

The Model names for all equipment, plus descriptions used in the tested system (including inserted cards) are:

DEVICE TYPE	MANUFACTURER	MODEL NUMBER/ PART NUMBER	FCC ID / DoC	CONNECTED TO
Single-Band CDMA Phone	LG Electronics, Inc.	RD3500	BEJRD3500	Travel Adaptor
Travel Adaptor	Sunlin	STA-U32WR	-	EUT
PC	DELL	OPTIPLEXGX620	DoC	EUT
Monitor	DELL	1704FPTt	DoC	PC
Mouse	DELL	MO56U0	DoC	PC
Keyboard	DELL	SK-8115	DoC	PC
Printer	H.P	C4569A	DoC	PC
Ear phone	-	-	-	EUT
USB Cable	-	-	-	EUT

1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (M)
Single-Band CDMA Phone	DC In	N	N/A	(P)1.8
	USB	Y	Y	(P.D)1.5
	Ear Jack	N/A	N	(D)1.2
PC	USB(Mouse)	N/A	Y	(D)1.8
	USB(Keyboard)	N/A	Y	(D)1.8
	D-Sub(Monitor)	N/A	Y	(D)1.6
	Parallel(Printer)	N/A	Y	(D)1.8
	AC In	N	N/A	(P)1.8
Monitor	AC In	N	N/A	(P)1.8
Printer	AC In	N	N/A	(P)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
Single-Band CDMA Phone	DC In	N	-	Y	EUT end
	USB	N	-	Y	Both end
	Ear-jack	N	-	Y	EUT end
PC	D-Sub	Y	Both end	Y	Both end
	USB(Mouse)	N	-	Y	PC end
	USB(Keyboard)	N	-	Y	PC end
	Parallel(Printer)	N	-	Y	Both 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

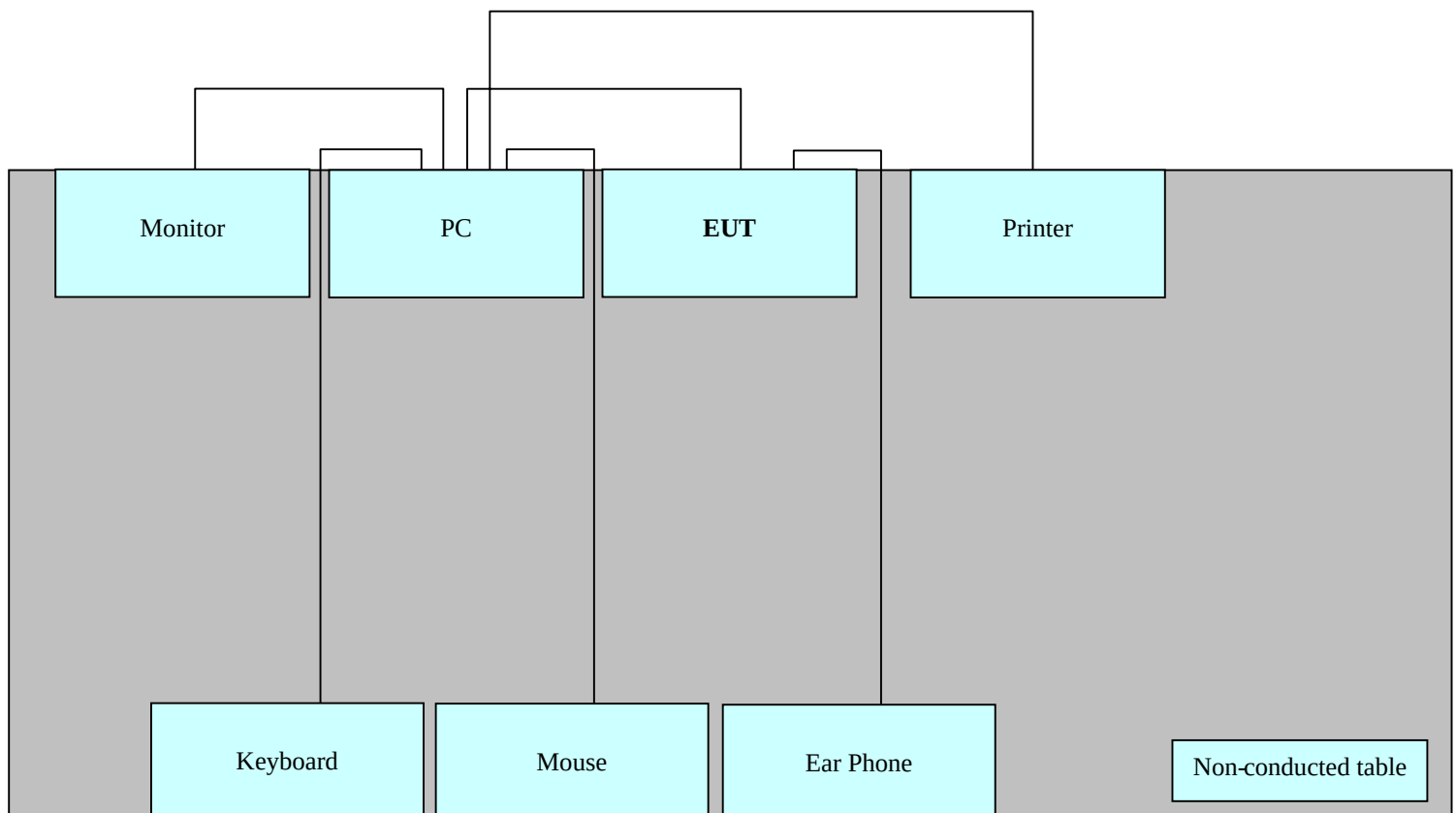
The open area test site and conducted measurement facility used to collect the radiated data are located at the 254-1, Maekok-Ri, Hobup-Myun, Ichon-Si, Kyungki-Do, 467-701, KOREA. The site is constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. Detailed description 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
Idle Mode	○
Data communication Mode	

3. 2 Radiated Emission Test

During Preliminary Test, the Following operation mode was investigated

Operation Mode	The worst operating condition
Idle 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 – 13.5 dB
 Operating Condition : Idle mode
 Detector : Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)
 Temperature : 9.0 °C
 Humidity Level : 35.0 %
 Test Date : November 17, 2007

Power Line Conducted Emissions				FCC Class B	
Frequency (MHz)	Amplitude (dBuV)	Conductor	Result	Limit (dBuV)	Margin (dB)
0.4051	41.2	HOT	Quasi-Peak	58.0	-16.5
0.4076	34.2	HOT	Average	48.0	-13.5
0.6500	38.0	NEUTRAL	Quasi-Peak	56.0	-18.0
0.6600	30.1	NEUTRAL	Average	46.0	-15.9

Line Conducted Emissions Tabulated Data

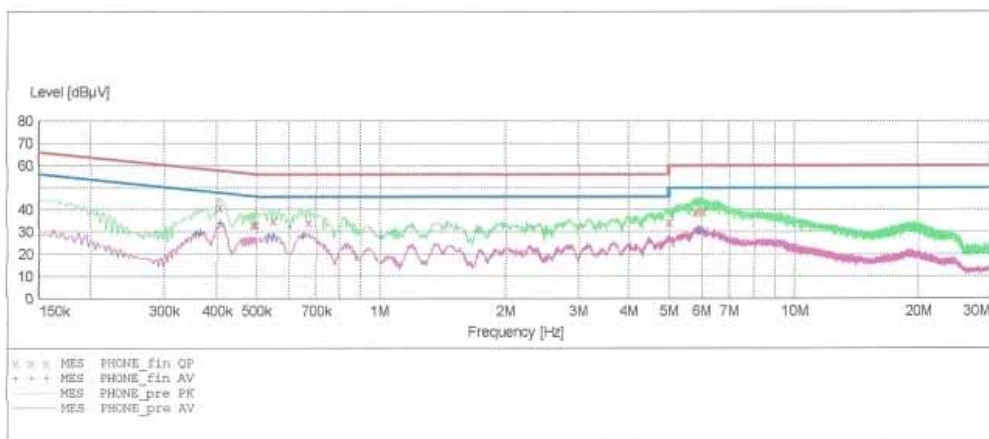
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EMC TEST LAB.

EUT: RD3500
Manufacturer: LG
Operating Condition: IDLE MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
Test Specification: CISPR 22 CLASS B
Comment: H

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage					Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.		
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	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
5.0 MHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				



MEASUREMENT RESULT: "PHONE_fin_QP"

11/17/2007 5:23PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.405100	41.20	10.0	58	16.5	---	---
0.490100	33.60	10.1	56	22.5	---	---
0.497600	33.50	10.1	56	22.6	---	---
0.550000	35.10	10.1	56	20.9	---	---
0.670000	34.60	10.1	56	21.4	---	---
5.000000	34.60	10.6	56	21.4	---	---
5.795000	39.00	10.7	60	21.0	---	---
5.905000	39.70	10.7	60	20.3	---	---
6.025000	39.20	10.8	60	20.8	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

11/17/2007 5:23PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.357600	29.40	10.0	49	19.4	----	----
0.365100	29.70	10.0	49	18.9	----	----
0.407600	34.20	10.0	48	13.5	----	----
0.535000	28.30	10.1	46	17.7	----	----
0.550000	27.90	10.1	46	18.1	----	----
0.650000	28.30	10.1	46	17.7	----	----
5.885000	30.50	10.7	50	19.5	----	----
5.915000	30.60	10.7	50	19.4	----	----
6.045000	30.30	10.8	50	19.7	----	----

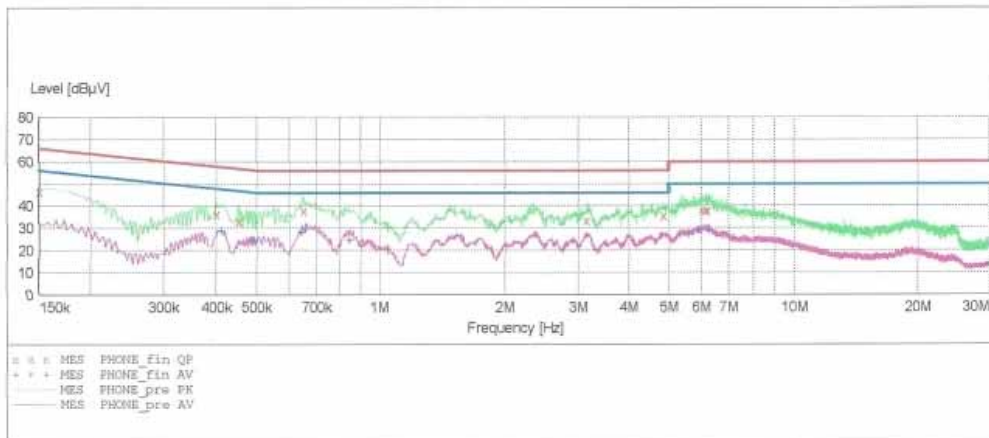
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EMC TEST LAB.

EUT: RD3500
Manufacturer: LG
Operating Condition: IDLE MODE
Test Site: SHIELD ROOM
Operator: DH-RYU
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	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	5.0 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	46.70	10.0	66	19.3	---	---
0.400100	36.40	10.0	58	21.5	---	---
0.452600	33.20	10.1	57	23.7	---	---
0.650000	38.00	10.1	56	18.0	---	---
3.150000	33.60	10.4	56	22.4	---	---
4.845000	35.60	10.6	56	20.4	---	---
6.020000	38.10	10.8	60	21.9	---	---
6.140000	38.10	10.8	60	21.9	---	---
6.185000	38.10	10.8	60	21.9	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

11/17/2007 5:08PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.412600	29.20	10.0	48	18.4	---	---
0.487600	24.90	10.1	46	21.3	---	---
0.495100	24.80	10.1	46	21.3	---	---
0.645000	28.60	10.1	46	17.4	---	---
0.660000	30.10	10.1	46	15.9	---	---
0.845000	24.70	10.1	46	21.3	---	---
5.580000	27.20	10.7	50	22.8	---	---
5.940000	29.10	10.7	50	20.9	---	---
6.245000	28.80	10.8	50	21.2	---	---

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 – 3.8 dB
Operating Condition : Idle mode
Detector            : Quasi-Peak (6 dB Bandwidth: 120 kHz)
Temperature         : 10.0 °C
Humidity Level      : 45.0 %
Test Date           : November 27, 2007
=====

```

Frequency MHz	Reading dBuV	Ant. Factor dB	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
36.6	22.4	12.4	1.4	V	36.2	40.0	-3.8
84.1	15.9	8.3	2.2	H	26.4	40.0	-13.6
84.3	16.9	8.3	2.2	V	27.4	40.0	-12.6
107.1	14.4	9.7	2.5	V	26.6	43.5	-16.9
150.4	13.5	13.1	2.9	H	29.5	43.5	-14.0
156.7	15.5	13.0	3.0	H	31.5	43.5	-12.0

*** For measurement over 1 GHz, noise level is 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	2008.02.03
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	VULB9168	2008.03.19
Communication Antenna	TDK	LPDA-0802	N/A
Antenna Position Tower	HD	240/520/00	N/A
AC Power Source	PACIFIC	Magnetic Module	N/A
Base Station	Rohde & Schwarz	CMU 200	2008.02.27
Horn Antenna	Schwarzbeck	BBHA 9120D	2008.03.31
RF-Amplifier	MITEQ	AMF-6D-00101800-35.20P.PS	2008.01.24
Bluetooth Base Station	TESCOM	TC-3000A	2008.01.19

7. Conclusion

The data collected shows that the LG Electronics, Inc. Single-Band CDMA Phone. FCC ID: BEJRD3500 Complies with §15.107 and §15.109 of the FCC Rules.