



HCT CO., LTD.

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## EMI CERTIFICATION REPORT

**Applicant:**

**LG Electronics MobileComm U.S.A., Inc.**  
1000 Sylvan Avenue, Englewood Cliffs NJ 07632

**Date of Issue: July 23, 2013**

**Test Report No.: HCTE1307FE32**

**Test Site: HCT CO., LTD.**

**HCT FRN: 0005-8664-21**

**FCC ID:**

**ZNFVS980**

Rule Part(s) / Standard(s) : FCC PART 15 Subpart B Class B  
Equipment Type : GSM/WCDMA/CDMA/LTE Phone Bluetooth, WLAN and NFC  
Model Name : LG-VS980  
Port / Connector(s) : USB / Earphone Port  
Date of Test : July 18 , 2013 – July 22, 2013

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 subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

  
Report prepared by

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## DOCUMENT HISTORY

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The revision history for this document is shown in table.

Version	Date	Description
HCTE1307FE32	July 23, 2013	Initial Release

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**ATTACHMENT: TEST SETUP PHOTOGRAPHS**

## 1. GENERAL INFORMATION

### 1.1 Product Description

Equipment Under Test is **EUT type: GSM/WCDMA/CDMA/LTE Phone Bluetooth, WLAN and NFC, Model: LG-VS980** manufactured by **LG Electronics MobileComm U.S.A., Inc.** Its basic purpose is used for communications.

<b>Model</b>	LG-VS980
<b>FCC ID</b>	ZNFVS980
<b>EUT Type</b>	GSM/WCDMA/CDMA/LTE Phone Bluetooth, WLAN and NFC
<b>TX Frequency</b>	824.20 MHz to 848.80 MHz (GSM 850) 1 850.20 MHz to 1 909.80 MHz (GSM 1 900) 826.40 MHz to 846.60 MHz (WCDMA 850) 1 852.4 MHz to 1 907.6 MHz (WCDMA 1 900) 1 710 MHz to 1 755 MHz (LTE B4) 777 MHz to 787 MHz (LTE B13) 824.70 MHz to 848.31 MHz (CDMA BC0) 1 851.25 MHz to 1 908.75 MHz (CDMA BC1)
<b>RX Frequency</b>	869.20 MHz to 893.80 MHz (GSM 850) 1 930.20 MHz to 1 989.80 MHz (GSM 1 900) 871.40 MHz to 891.60 MHz (WCDMA 850) 1 932.4 MHz to 1 987.6 MHz (WCDMA 1 900) 2 110 MHz to 2 155 MHz (LTE B4) 746 MHz to 756 MHz (LTE B13) 869.70 MHz to 893.31 MHz (CDMA BC0) 1 931.25 MHz to 1 988.75 MHz (CDMA BC1)

### 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	Model Name	Manufacturer	FCC ID / DoC	Connected To
EUT	LG-VS980	LG	ZNFVS980	Notebook PC, Ear-phone
USB cable (2.0)	SAMIL12345	INTERFACESAMIL	-	E.U.T, Notebook PC
USB cable (3.0)	LG0107	Ningbo	-	E.U.T, Notebook PC
Ear-phone	LE431	I-SOUND	-	E.U.T
Notebook PC	ProBook6570b	HP	DoC	Notebook PC adaptor
Notebook PC adaptor	PPP012D-S	DELTA Electronics (JIANGSU)LTD.	-	Notebook PC
Mouse	Serial mouse	Radio shack	FSUGMZE3	Notebook PC
Gateway	MV440R	Axesstel	-	Notebook PC, Adaptor
Adaptor	DA-60M12	Yang Ming Industrial	-	Gateway
RJ45 cable	-	-	-	Notebook PC, Gateway

### 1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	Micro USB (USB 2.0)	Y	Y	(P,D)1.2
	Ear-phone	N/A	Y	(D)1.2
	Micro USB (USB 3.0)	Y	Y	(P,D)0.1
Notebook PC	RJ 45	N/A	N	(D)1.5
	Serial (Mouse)	N/A	Y	(D)1.8
	DC in	N	N/A	(P)1.8
Gateway	DC 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
EUT	Micro USB (USB 2.0)	N	N/A	Y	Both End
	Ear-phone	N	N/A	Y	EUT End
	Micro USB (USB 3.0)	N	N/A	Y	Both End
Notebook PC	RJ 45	N	N/A	N	N/A
	Serial (Mouse)	N	N/A	Y	Notebook PC End

## 1.6 Test Methodology

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

## 1.7 Test Facility

Chamber used to collect the test data is located at the 74, SEOICHEON-RO, 578BEON-GIL, MAJANG-MYEON, ICHEON-SI, GYEONGGI-DO, KOREA. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4.

Measurement Facilities	Reg. No.
Radiated Field strength measurement facility (3m)	90661(Mar. 02, 2011)
Radiated Field strength measurement facility (10m)	90661 (Sep. 03, 2010)

## 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 to 108	1 000
108 to 500	2 000
500 to 1 000	5 000
Above 1 000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower

## 2. SYSTEM TEST CONFIGURATION

### 2.1 Configuration of Test System

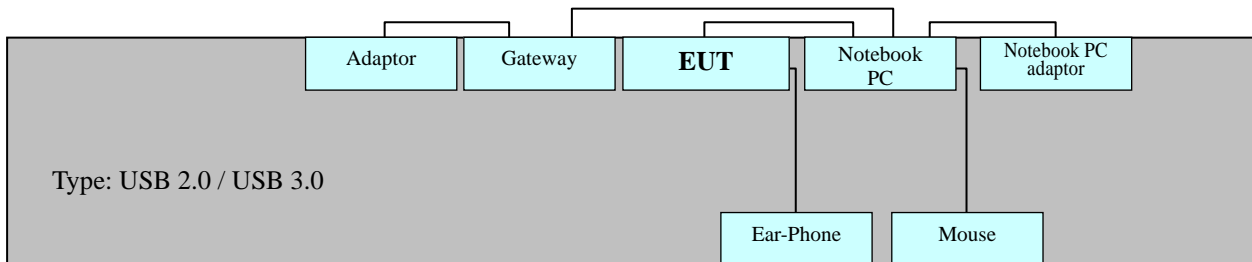
#### 2.1.1 Conducted Emission Test

EUT was connected to LISN via Notebook PC adaptor and Base Station. 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.

#### 2.1.2 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 m semi-anechoic chamber.

[Configuration of Tested System]



Non-Conductive Table  
Power Line: 120 VAC



### **3. PRELIMINARY TEST**

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#### **3.1 Conducted Emission Test**

- It was tested Data Communication mode, after connecting all peripheral devices.

**Operation Mode:**       Data Communication mode (Type: USB 2.0)  
                                  Data Communication mode (Type: USB 3.0)

#### **3. 2 Radiated Emission Test**

- It was tested Data Communication mode, after connecting all peripheral devices.

**Operation Mode:**       Data Communication mode (Type: USB 2.0)  
                                  Data Communication mode (Type: USB 3.0)

## 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.

**[ Type: USB 2.0 ]**

Limit Apply to	: FCC PART 15 Subpart B Class B
Detector	: Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)
Operation Mode	: Data Communication mode
Temperature	: 24.9 °C
Humidity Level	: 55.4 %
Test Date	: July 19, 2013

Frequency (MHz)	Transd (dB)	Conductor	Quasi-Peak			Average		
			Limit (dBuV)	Measurement Level (dBuV)	Result Level (dBuV)	Limit (dBuV)	Measurement Level (dBuV)	Result Level (dBuV)
0.150	9.8	H	66	39.9	49.7	56	15.7	25.5
0.150	10.0	N	66	37.9	47.9	56	-	-
0.158	9.8	H	66	38.3	48.1	56	-	-
0.474	9.8	H	56	29.7	39.5	46	-	-
0.474	10.0	N	56	29.5	39.5	46	-	-
1.120	10.1	N	56	-	-	46	17.5	27.6

※ **NOTE:** Refer to page 11 to page 14 for details.

1. Line H = Hot, Line N = Neutral
2. Transd = LISN factor + Cable Loss factor

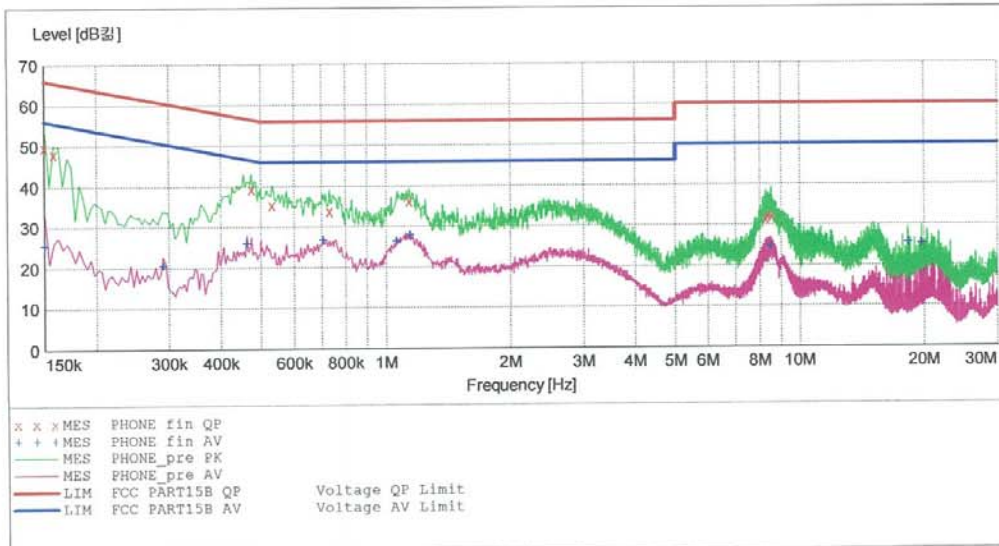
**HCT**

**EMC**

EUT: LG-VS980  
 Manufacturer: LG  
 Operating Condition: DATA MODE (USB 2.0)  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: H

**SCAN TABLE: "FCC CLASS B(H)"**

Short Description:			KN22 CLASS B				
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer	
150.0 kHz	500.0 kHz	4.0 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"**

2013-07-19 3:43 오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	49.70	9.8	66	16.3	---	---
0.158001	48.10	9.8	66	17.4	---	---
0.474001	39.50	9.8	56	16.9	---	---
0.532000	35.40	9.8	56	20.6	---	---
0.732000	33.90	9.8	56	22.1	---	---
1.140000	36.20	9.9	56	19.8	---	---
8.280000	31.50	10.4	60	28.5	---	---
8.384000	32.20	10.4	60	27.8	---	---
8.556000	32.00	10.4	60	28.0	---	---

**MEASUREMENT RESULT: "PHONE\_fin AV"**

2013-07-19 3:43 오후

Frequency MHz	Level dB $\mu$ V	Transd dB	Limit dB $\mu$ V	Margin dB	Line	PE
0.150001	25.50	9.8	56	30.5	---	---
0.290001	20.50	9.8	51	30.0	---	---
0.462001	25.90	9.8	47	20.8	---	---
0.708000	26.70	9.8	46	19.3	---	---
1.064000	26.40	9.8	46	19.6	---	---
1.144000	27.80	9.9	46	18.2	---	---
8.500000	24.60	10.4	50	25.4	---	---
18.244000	25.50	10.9	50	24.5	---	---
19.708000	25.20	10.9	50	24.8	---	---

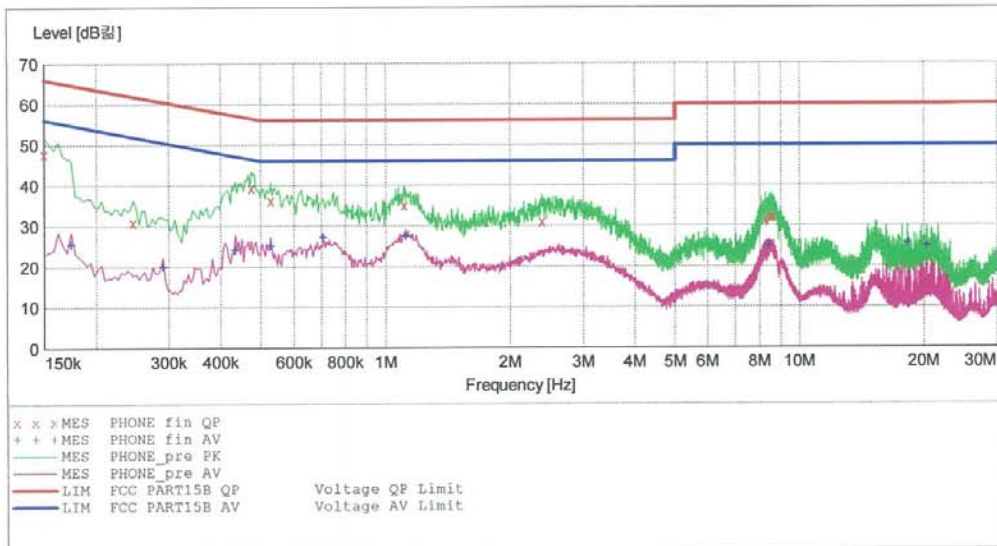
**HCT**

**EMC**

EUT: LG-VS980  
 Manufacturer: LG  
 Operating Condition: DATA MODE (USB 2.0)  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: N

**SCAN TABLE: "FCC CLASS B(N)"**

Short Description:			KN22 CLASS B			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 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"**

2013-07-19 3:40 오후

Frequency MHz	Level dB	Transd dB	Limit dB	Margin dB	Line	PE
0.150001	47.90	10.0	66	18.1	---	---
0.246001	30.90	10.0	62	31.0	---	---
0.474001	39.50	10.0	56	16.9	---	---
0.528000	36.20	10.0	56	19.8	---	---
1.112000	35.10	10.1	56	20.9	---	---
2.388000	31.00	10.2	56	25.0	---	---
8.276000	31.50	10.6	60	28.5	---	---
8.528000	32.10	10.6	60	27.9	---	---
8.596000	32.00	10.6	60	28.0	---	---

**MEASUREMENT RESULT: "PHONE\_fin AV"**

2013-07-19 3:40 오후

Frequency MHz	Level dB <sub>μV</sub>	Transd dB	Limit dB <sub>μV</sub>	Margin dB	Line	PE
0.174001	25.50	10.0	55	29.3	---	---
0.290001	20.00	10.0	51	30.5	---	---
0.434001	24.10	10.0	47	23.1	---	---
0.528000	25.10	10.0	46	20.9	---	---
0.708000	27.20	10.0	46	18.8	---	---
1.120000	27.60	10.1	46	18.4	---	---
8.412000	24.90	10.6	50	25.1	---	---
18.244000	25.60	11.2	50	24.4	---	---
20.260000	24.80	11.3	50	25.2	---	---

[ Type: USB 3.0 ]

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)

Operation Mode : Data Communication mode

Temperature : 24.9 °C

Humidity Level : 55.4 %

Test Date : July 19, 2013

Frequency (MHz)	Transd (dB)	Conductor	Quasi-Peak			Average		
			Limit (dBuV)	Measurement Level (dBuV)	Result Level (dBuV)	Limit (dBuV)	Measurement Level (dBuV)	Result Level (dBuV)
0.150	9.8	H	66	39.7	49.5	56	17.1	26.9
0.150	10.0	N	66	38.7	48.7	56	-	-
0.162	9.8	H	65	38.4	48.2	55	18.7	28.5
0.462	9.8	H	57	29.1	38.9	47	15.1	24.9
0.732	10.0	N	56	-	-	46	17.9	27.9
1.136	10.1	N	56	-	-	46	18.0	28.1

※ **NOTE:** Refer to page 16 to page 19 for details.

1. Line H = Hot, Line N = Neutral
2. Transd = LISN factor + Cable Loss factor

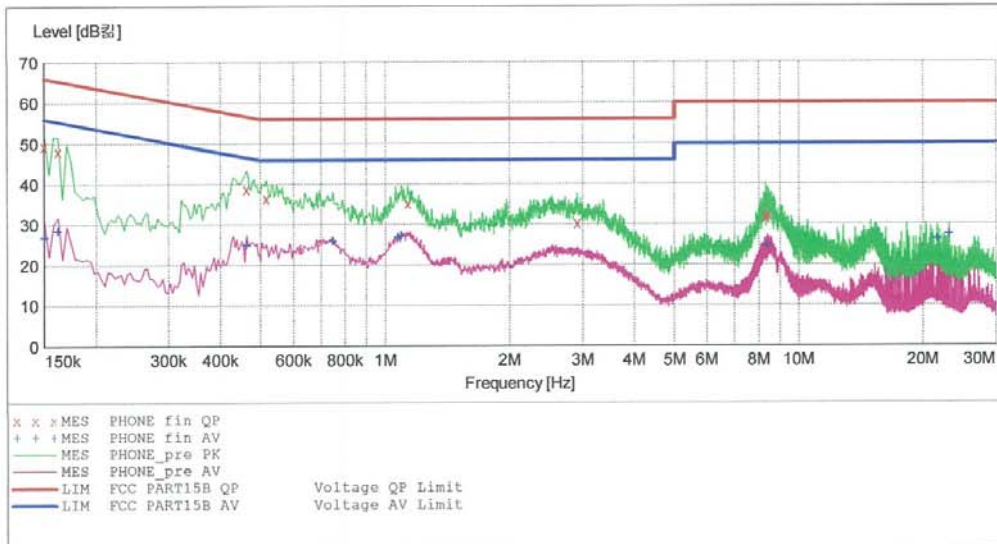
**HCT**

**EMC**

EUT: LG-VS980  
 Manufacturer: LG  
 Operating Condition: DATA MODE (USB 3.0)  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: H

**SCAN TABLE: "FCC CLASS B(H)"**

Short Description:			KN22 CLASS B				
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer	
150.0 kHz	500.0 kHz	4.0 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"**

2013-07-19 3:31오 후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	49.50	9.8	66	16.5	---	---
0.162001	48.20	9.8	65	17.1	---	---
0.462001	38.90	9.8	57	17.8	---	---
0.516000	36.60	9.8	56	19.4	---	---
1.136000	35.30	9.9	56	20.7	---	---
2.916000	30.30	10.0	56	25.7	---	---
8.316000	31.80	10.4	60	28.2	---	---
8.324000	31.90	10.4	60	28.1	---	---
8.432000	32.20	10.4	60	27.8	---	---



**MEASUREMENT RESULT: "PHONE\_fin AV"**

2013-07-19 3:31 오후

Frequency MHz	Level dB <sub>μV</sub>	Transd dB	Limit dB <sub>μV</sub>	Margin dB	Line	PE
0.150001	26.90	9.8	56	29.1	---	---
0.162001	28.50	9.8	55	26.9	---	---
0.462001	24.90	9.8	47	21.8	---	---
0.748000	25.90	9.8	46	20.1	---	---
1.076000	26.90	9.8	46	19.1	---	---
1.092000	27.30	9.9	46	18.7	---	---
8.384000	24.60	10.4	50	25.4	---	---
21.664000	26.40	11.0	50	23.6	---	---
23.128000	27.50	11.1	50	22.5	---	---

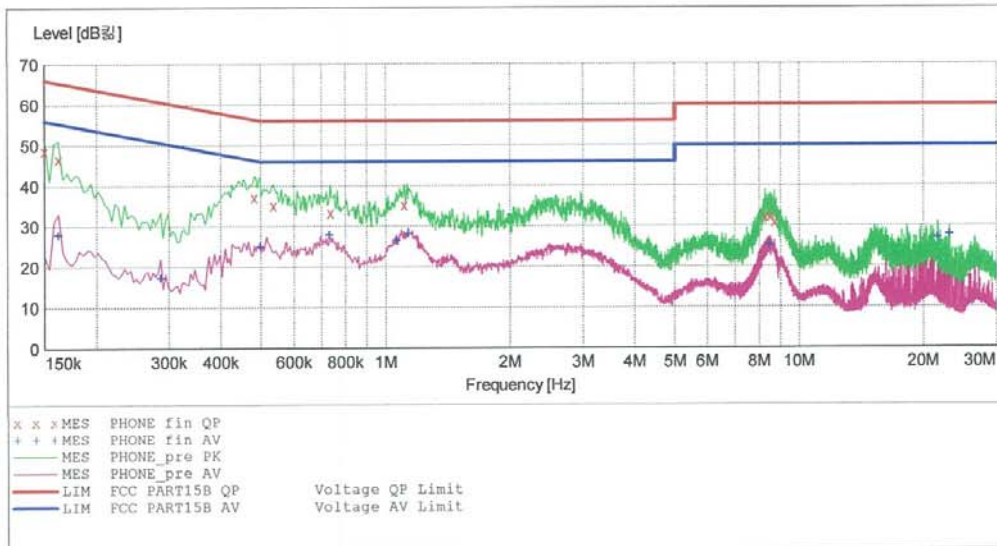
**HCT**

**EMC**

EUT: LG-VS980  
 Manufacturer: LG  
 Operating Condition: DATA MODE (USB 3.0)  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: N

**SCAN TABLE: "FCC CLASS B(N)"**

Short Description:			KN22 CLASS B				
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer	
150.0 kHz	500.0 kHz	4.0 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"**

2013-07-19 3:34 오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	48.70	10.0	66	17.3	---	---
0.162001	46.70	10.0	65	18.6	---	---
0.482001	37.20	10.0	56	19.1	---	---
0.536000	35.10	10.0	56	20.9	---	---
0.736000	33.40	10.0	56	22.6	---	---
1.112000	35.30	10.1	56	20.7	---	---
8.272000	32.20	10.6	60	27.8	---	---
8.516000	32.30	10.6	60	27.7	---	---
8.724000	30.90	10.6	60	29.1	---	---

**MEASUREMENT RESULT: "PHONE\_fin AV"**

2013-07-19 3:34 Ω-썈

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.162001	27.90	10.0	55	27.5	---	---
0.286001	17.30	10.0	51	33.4	---	---
0.498001	24.90	10.0	46	21.1	---	---
0.732000	27.90	10.0	46	18.1	---	---
1.064000	26.40	10.1	46	19.6	---	---
1.136000	28.10	10.1	46	17.9	---	---
8.472000	25.20	10.6	50	24.8	---	---
21.664000	27.00	11.3	50	23.0	---	---
23.128000	27.70	11.4	50	22.3	---	---

## 4.2 Radiated Emission Test

The following table shows the highest levels of Radiated Emissions on both polarization of horizontal and vertical.

[ Type: USB 2.0 ]

### -For measurement below 1 GHz

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak (6 dB Bandwidth: 120 kHz)

Operation Mode : Data Communication mode

Temperature : 25.1 °C

Humidity Level : 57.7 %

Test Date : July 18, 2013

Frequency (MHz)	Reading (dBuV)	Polarity (H/V)	Antenna Height (m)	Correction Factor		Limit (dBuV/m)	Level (dBuV/m)	Margin (dB)
				Antenna (dB/m)	Cable (dB)			
95.40	14.98	H	1.0	8.41	3.75	43.5	27.14	16.36
125.00	15.01	V	1.0	12.01	3.90	43.5	30.92	12.58
214.60	23.11	H	1.8	10.37	4.23	43.5	37.71	5.79
320.10	19.47	H	1.3	13.86	4.61	46.0	37.94	8.06
624.00	9.57	V	1.0	19.96	5.39	46.0	34.92	11.08
700.00	6.14	H	1.3	20.79	5.50	46.0	32.43	13.57

**-For measurement above 1 GHz**

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Peak mode: Peak (RBW: 1 MHz, VBW: 1 MHz)  
 : Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)

Operation Mode : Data Communication mode

Temperature : 24.4 °C

Humidity Level : 59.2 %

Test Date : July 22, 2013

Frequency (GHz)	Peak			POL	Average		
	Total (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)		Total (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
2.2476	55.80	74	18.2	V	38.30	54	15.7
2.2476	51.20	74	22.8	H	34.70	54	19.3
2.3927	48.60	74	25.4	V	30.60	54	23.4

※ **NOTE:**

1. Measurement above 1 GHz was performed from 1 GHz to the 5<sup>th</sup> harmonic of highest fundamental frequency. Test was measured by 12 GHz.

[ Type: USB 3.0 ]

**-For measurement below 1 GHz**

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Quasi-Peak (6 dB Bandwidth: 120 kHz)

Operation Mode : Data Communication mode

Temperature : 25.1 °C

Humidity Level : 57.7 %

Test Date : July 18, 2013

Frequency (MHz)	Reading (dBUV)	Polarity (H/V)	Antenna Height (m)	Correction Factor		Limit (dBUV/m)	Level (dBUV/m)	Margin (dB)
				Antenna (dB/m)	Cable (dB)			
100.90	14.02	H	1.0	9.33	3.76	43.5	27.11	16.39
125.00	13.22	V	1.0	12.01	3.90	43.5	29.13	14.37
214.30	21.37	H	1.3	10.36	4.23	43.5	35.94	7.56
248.40	19.17	V	1.0	11.71	4.34	46.0	35.22	10.78
348.80	15.97	V	1.0	14.49	4.71	46.0	35.17	10.83
624.00	7.89	V	1.0	19.96	5.39	46.0	33.24	12.76

**-For measurement above 1 GHz**

Limit Apply to : FCC PART 15 Subpart B Class B

Detector : Peak mode: Peak (RBW: 1 MHz, VBW: 1 MHz)  
: Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)

Operation Mode : Data Communication mode

Temperature : 24.4 °C

Humidity Level : 59.2 %

Test Date : July 22, 2013

Frequency (GHz)	Peak			POL	Average		
	Total (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)		Total (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
2.4114	51.40	74	22.6	V	37.10	54	16.9

**※ NOTE:**

1. Measurement above 1 GHz was performed from 1 GHz to the 5<sup>th</sup> harmonic of highest fundamental frequency. Test was measured by 12 GHz.

## 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 dB $\mu$ V is obtained. The antenna factor of 7.4 dB/m and a cable factor of 1.1 dB are added. The 30 dB $\mu$ V/m value is mathematically converted to its corresponding level in  $\mu$ V/m.

$$FS = 21.5 + 7.4 + 1.1 = 30 \text{ dB}\mu\text{V}/\text{m}$$

### [Radiated Emission Limits]

Frequency of Emission (MHz)	Field Strength	
	$\mu$ V/m	dB $\mu$ V/m
30 to 88	100	40.0
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0



## 6. TEST EQUIPMENT

<u>Type</u>	<u>Manufacturer</u>	<u>Model Name</u>	<u>Serial Number</u>	<u>Calibration Cycle</u>	<u>Next CAL Date</u>
<b><u>Conducted Emission</u></b>					
<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	2014.04.25
<input type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESCI	100033	1 year	2014.06.23
<input type="checkbox"/> LISN	Rohde & Schwarz	ESH3-Z5	100282	1 year	2014.07.03
<input checked="" type="checkbox"/> LISN	Rohde & Schwarz	ENV216	100073	1 year	2014.02.06
<input checked="" type="checkbox"/> LISN	EMCO	3816/2SH	9706-1070	1 year	2014.04.26
<input type="checkbox"/> Attenuator	Rohde & Schwarz	ESH3-Z2	357.8810.352	1 year	2014.07.03

### **Radiated Emission**

-For measurement below 1 GHz

<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2014.04.16
<input checked="" type="checkbox"/> Trilog Antenna	Schwarzbeck	VULB9160	3301	2 year	2014.12.17
<input checked="" type="checkbox"/> Antenna master	HD GmbH	MA240	240/520	N/A	-
<input checked="" type="checkbox"/> Turn Table	HD GmbH	2090	9702/1224	N/A	-
<input type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	2014.07.01
<input type="checkbox"/> Trilog Antenna	Schwarzbeck	VULB9168	185	2 year	2015.04.16
<input type="checkbox"/> Antenna master	INNCO Systems	MA4000-EP	MA4000/283	N/A	-
<input type="checkbox"/> Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-

-For measurement above 1 GHz

<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2014.04.16
<input checked="" type="checkbox"/> Antenna master	HD GmbH	MA240	240/520	N/A	-
<input checked="" type="checkbox"/> Turn Table	HD GmbH	2090	9702/1224	N/A	-
<input type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	2014.07.01
<input type="checkbox"/> Antenna master	INNCO Systems	MA4000-EP	MA4000/283	N/A	-
<input type="checkbox"/> Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
<input checked="" type="checkbox"/> Power Amplifier	Rohde & Schwarz	SCU-18	10094	1 year	2013.09.11
<input checked="" type="checkbox"/> Horn Antenna	Schwarzbeck	BBHA 9120D	296	2 year	2014.12.13

## **7. CONCLUSION**

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The data collected shows that the **EUT type: GSM/WCDMA/CDMA/LTE Phone Bluetooth, WLAN and NFC, FCC ID: ZNFVS980, Model: LG-VS980** complies with §15.107 and §15.109 of the FCC rules.