



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: August 05, 2013  
Test Report No.: HCTE1308FE01  
Test Site: HCT CO., LTD.  
HCT FRN: 0005-8664-21

**FCC ID:**


**ZNFV500**

Rule Part(s) / Standard(s) : FCC PART 15 Subpart B Class B  
Equipment Type : 2.4G/5G Dual WIFI Tablet  
Model Name : LG-V500  
Additional Model Name : LGV500, V500  
Port / Connector(s) : USB / Earphone Port  
Date of Test : July 30, 2013 – August 02, 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 denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

  
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## DOCUMENT HISTORY

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The revision history for this document is shown in table.

Version	Date	Description
HCTE1308FE01	August 05, 2013	Initial Release

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**ATTACHMENT: TEST SETUP PHOTOGRAPHS**

## 1. GENERAL INFORMATION

### 1.1 Product Description

Equipment Under Test is **EUT type: 2.4G/5G Dual WIFI Tablet, Model: LG-V500** manufactured by **LG Electronics MobileComm U.S.A., Inc.** Its basic purpose is used for communications.

<b>Model</b>	LG-V500
<b>FCC ID</b>	ZNFV500
<b>Additional Model</b>	LGV500, V500
<b>EUT Type</b>	2.4G/5G Dual WIFI Tablet
<b>TX Frequency</b>	2 402 MHz to 2 480 MHz (Bluetooth Ver3.0, Ver4.0) 2 412 MHz to 2 462 MHz (WLAN 2.4 GHz) 5 180 MHz to 5 240 MHz (WLAN 5 GHz(UNII 1)_BW 20) 5 260 MHz to 5 320 MHz (WLAN 5 GHz(UNII 2)_BW 20) 5 500 MHz to 5 700 MHz (WLAN 5 GHz(UNII 3)_BW 20) 5 745 MHz to 5 825 MHz (WLAN 5 GHz(UNII 4)_BW 20) 5 190 MHz to 5 230 MHz (WLAN 5 GHz(UNII 1)_BW 40) 5 270 MHz to 5 310 MHz (WLAN 5 GHz(UNII 2)_BW 40) 5 510 MHz to 5 670 MHz (WLAN 5 GHz(UNII 3)_BW 40) 5 755 MHz to 5 795 MHz (WLAN 5 GHz(UNII 4)_BW 40)
<b>RX Frequency</b>	2 402 MHz to 2 480 MHz (Bluetooth Ver4.0) 2 412 MHz to 2 462 MHz (WLAN 2.4 GHz) 5 180 MHz to 5 240 MHz (WLAN 5 GHz(UNII 1)_BW 20) 5 260 MHz to 5 320 MHz (WLAN 5 GHz(UNII 2)_BW 20) 5 500 MHz to 5 700 MHz (WLAN 5 GHz(UNII 3)_BW 20) 5 745 MHz to 5 825 MHz (WLAN 5 GHz(UNII 4)_BW 20) 5 190 MHz to 5 230 MHz (WLAN 5 GHz(UNII 1)_BW 40) 5 270 MHz to 5 310 MHz (WLAN 5 GHz(UNII 2)_BW 40) 5 510 MHz to 5 670 MHz (WLAN 5 GHz(UNII 3)_BW 40) 5 755 MHz to 5 795 MHz (WLAN 5 GHz(UNII 4)_BW 40)

### 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-V500	LG	ZNFV500	Notebook PC Ear-phone
USB cable	EAD62329702	CRESYN	-	E.U.T Notebook PC
USB cable	EAD62329701	IS	-	E.U.T Notebook PC
Ear-phone	EAB62691116	I-SOUND	-	E.U.T
Notebook PC	ProBook 6560b	H.P	DoC	Notebook PC adaptor
Notebook PC adaptor	PPP009D	DELTA Electronics (JIANGSU)LTD	-	Notebook PC
Gateway	MV440	Axesstel	PH7MV440	Notebook PC, Adaptor
Mouse	Serial mouse	Radio shack	FSUGMZE3	Notebook PC
Adaptor	DA-60M12	Yang Ming Industrial	-	Gateway
RJ45 cable	-	-	-	Notebook PC, Gateway
Micro SD card	8 GB	SanDisk	-	E.U.T

### 1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	Micro USB (CRESYN)	Y	Y	(P,D)1.2
	Micro USB (IS)	Y	Y	(P,D)1.2
	Ear-phone	N/A	Y	(D)1.2
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 (CRESYN)	N	N/A	Y	Both End
	Micro USB (IS)	N	N/A	Y	Both End
	Ear-phone	N	N/A	Y	EUT 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

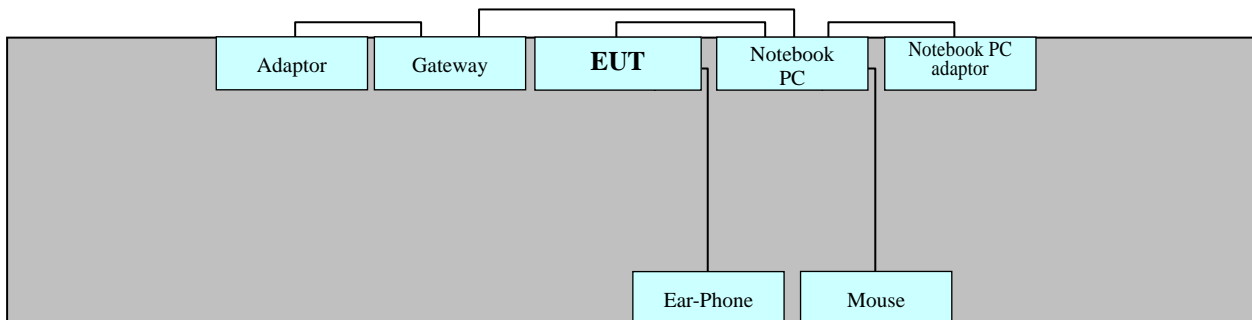
#### 2.1.1 Conducted Emission Test

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 10 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

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

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

**Operation 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.

#### [ USB Cable Type: CRESYN ]

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	: 24.6 °C
Humidity Level	: 55.1 %
Test Date	: July 30, 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	9.80	H	66.00	48.20	58.00	56.00	24.70	34.50
0.158	10.00	N	65.57	46.50	56.50	55.57	21.90	31.90
0.166	10.00	N	65.16	42.70	52.70	55.16	-	-
0.194	9.80	H	63.86	41.50	51.30	53.86	19.00	28.80
0.202	10.00	N	63.53	40.70	50.70	53.53	-	-
1.068	9.80	H	56.00	28.80	38.60	46.00	22.50	32.30

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

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

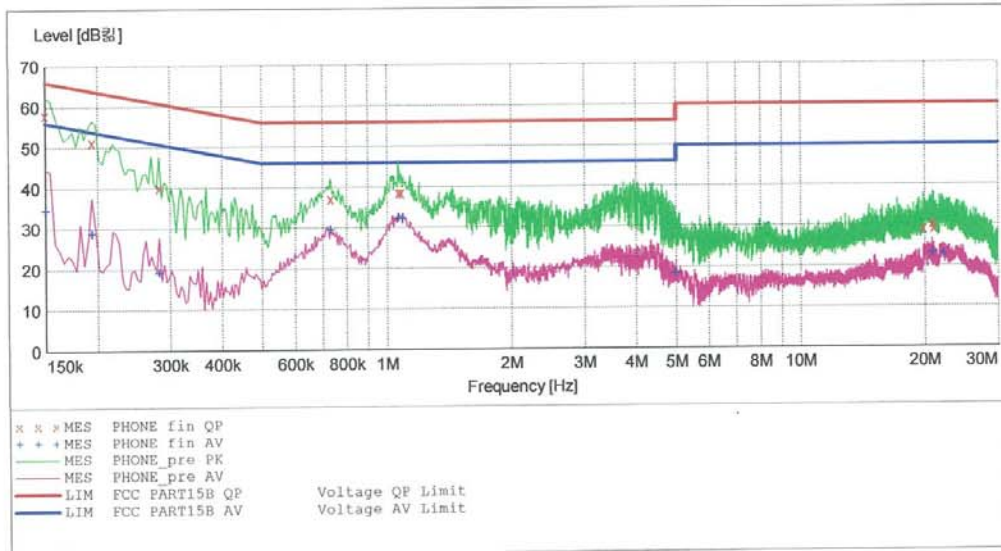
**HCT**

**EMC**

EUT: LG-V500  
 Manufacturer: LG  
 Operating Condition: DATA MODE  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: H (DATA CABLE = CRESYN)

**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"**

2013-07-30 7:15오 후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150001	58.00	9.8	66	8.0	---	---
0.194001	51.30	9.8	64	12.6	---	---
0.282001	40.20	9.8	61	20.6	---	---
0.732000	37.20	9.8	56	18.8	---	---
1.068000	38.60	9.8	56	17.4	---	---
1.084000	38.50	9.9	56	17.5	---	---
19.832000	29.00	10.9	60	31.0	---	---
20.872000	30.30	11.0	60	29.7	---	---
20.980000	29.20	11.0	60	30.8	---	---

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

2013-07-30 7:15 오후

Frequency MHz	Level dB <sub>μV</sub>	Transd dB	Limit dB <sub>μV</sub>	Margin dB	Line	PE
0.150001	34.50	9.8	56	21.5	---	---
0.194001	28.80	9.8	54	25.0	---	---
0.282001	19.30	9.8	51	31.5	---	---
0.732000	29.50	9.8	46	16.5	---	---
1.068000	32.30	9.8	46	13.7	---	---
1.096000	32.30	9.9	46	13.7	---	---
5.000000	18.30	10.2	46	27.7	---	---
20.800000	22.90	11.0	50	27.1	---	---
22.176000	22.70	11.0	50	27.3	---	---

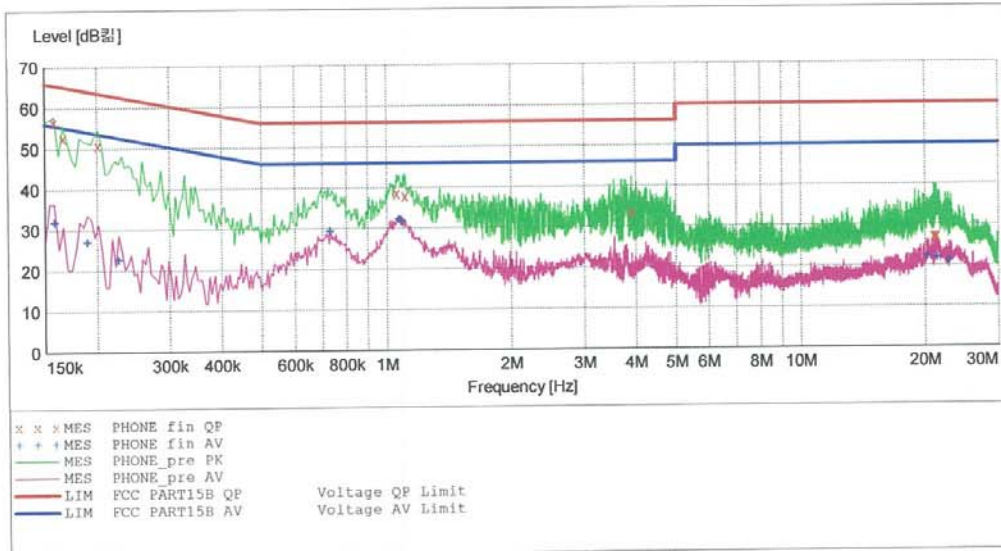
**HCT**

**EMC**

EUT: LG-V500  
 Manufacturer: LG  
 Operating Condition: DATA MODE  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: N (DATA CABLE = CRESYN)

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

Short Description:	Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
KN22 CLASS B	150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
	500.0 kHz	5.0 MHz	4.0 kHz	Average	10.0 ms	9 kHz	None
	5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
				Average	10.0 ms	9 kHz	None



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

2013-07-30 7:20 오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.158001	56.50	10.0	66	9.1	---	---
0.166001	52.70	10.0	65	12.4	---	---
0.202001	50.70	10.0	64	12.8	---	---
1.060000	38.50	10.1	56	17.5	---	---
1.112000	38.00	10.1	56	18.0	---	---
3.920000	33.70	10.3	56	22.3	---	---
21.012000	27.30	11.3	60	32.7	---	---
21.152000	27.00	11.3	60	33.0	---	---
21.296000	27.20	11.3	60	32.8	---	---

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

2013-07-30 7:20오후

Frequency MHz	Level dB <sub>μV</sub>	Transd dB	Limit dB <sub>μV</sub>	Margin dB	Line	PE
0.158001	31.90	10.0	56	23.7	---	---
0.190001	27.10	10.0	54	27.0	---	---
0.226001	22.60	10.0	53	29.9	---	---
0.732000	29.40	10.0	46	16.6	---	---
1.076000	32.20	10.1	46	13.8	---	---
1.088000	31.70	10.1	46	14.3	---	---
20.204000	22.10	11.3	50	27.9	---	---
21.368000	21.80	11.3	50	28.2	---	---
22.884000	21.00	11.4	50	29.0	---	---

**[ USB Cable Type: IS ]**

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 : 24.6 °C

Humidity Level : 55.1 %

Test Date : July 30, 2013

Frequency (MHz)	Transd (dB)	Conductor	Quasi-Peak			Average		
			Limit	Measurement Level	Result Level	Limit	Measurement Level	Result Level
			(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)
0.154	9.80	H	65.78	46.90	56.70	55.78	24.30	34.10
0.154	10.00	N	65.78	45.50	55.50	55.78	-	-
0.166	9.80	H	65.16	42.60	52.40	55.16	17.90	27.70
1.060	9.80	H	56.00	27.90	37.70	46.00	21.30	31.10
1.060	10.10	N	56.00	-	-	46.00	21.50	31.60
1.084	10.10	N	56.00	-	-	46.00	21.50	31.60

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

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

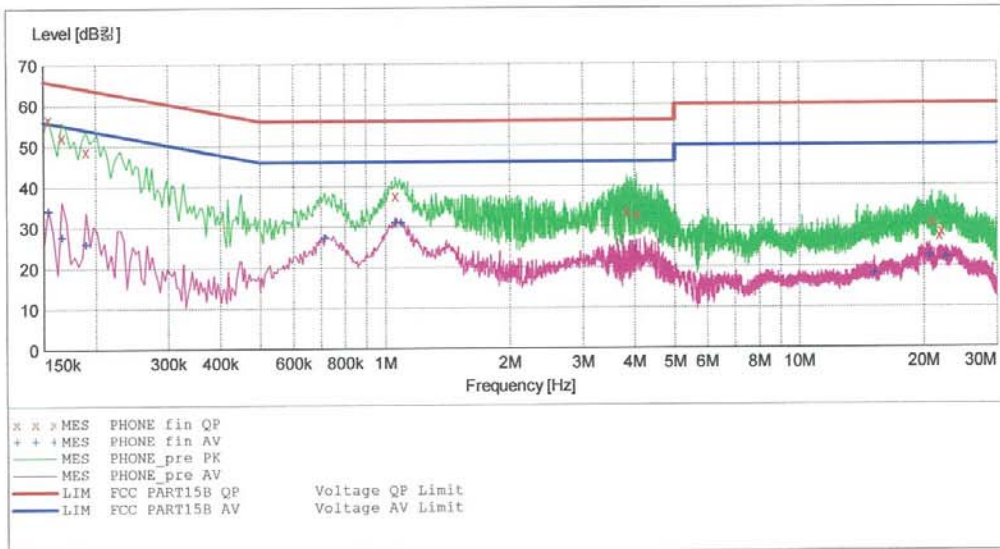
**HCT**

**EMC**

EUT: LG-V500  
 Manufacturer: LG  
 Operating Condition: DATA MODE  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: H (DATA CABLE = IS)

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

Short Description:	Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
KN22 CLASS B	150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
	500.0 kHz	5.0 MHz	4.0 kHz	Average	10.0 ms	9 kHz	None
	5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
				Average	10.0 ms	9 kHz	None



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

2013-07-30 7:29 오후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.154001	56.70	9.8	66	9.1	---	---
0.166001	52.40	9.8	65	12.8	---	---
0.190001	48.80	9.8	64	15.2	---	---
1.060000	37.70	9.8	56	18.3	---	---
3.832000	33.60	10.1	56	22.4	---	---
4.056000	32.90	10.1	56	23.1	---	---
20.944000	30.90	11.0	60	29.1	---	---
21.816000	27.50	11.0	60	32.5	---	---
22.060000	28.60	11.0	60	31.4	---	---



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

2013-07-30 7:29오.췰

Frequency MHz	Level dB췰	Transd dB	Limit dB췰	Margin dB	Line	PE
0.154001	34.10	9.8	56	21.7	---	---
0.166001	27.70	9.8	55	27.5	---	---
0.190001	25.90	9.8	54	28.1	---	---
0.716000	27.40	9.8	46	18.6	---	---
1.060000	31.10	9.8	46	14.9	---	---
1.092000	31.00	9.9	46	15.0	---	---
15.184000	18.10	10.8	50	31.9	---	---
20.656000	22.40	10.9	50	27.6	---	---
22.608000	22.10	11.0	50	27.9	---	---

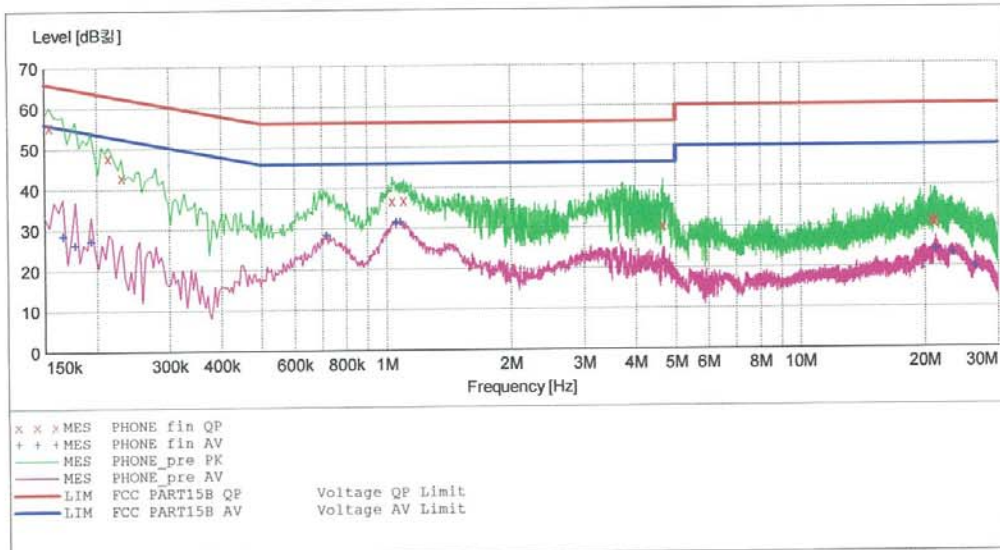
**HCT**

**EMC**

EUT: LG-V500  
 Manufacturer: LG  
 Operating Condition: DATA MODE  
 Test Site: SHIELD ROOM  
 Operator: GC YOON  
 Test Specification: FCC PART15 B  
 Comment: N (DATA CABLE = IS)

**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"**

2013-07-30 7:25오 후

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.154001	55.50	10.0	66	10.3	---	---
0.214001	47.80	10.0	63	15.2	---	---
0.230001	43.00	10.0	62	19.4	---	---
1.036000	36.80	10.1	56	19.2	---	---
1.104000	37.00	10.1	56	19.0	---	---
4.672000	30.30	10.4	56	25.7	---	---
20.712000	31.40	11.3	60	28.6	---	---
21.104000	30.70	11.3	60	29.3	---	---
21.228000	31.80	11.3	60	28.2	---	---

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

2013-07-30 7:25오후

Frequency MHz	Level dB <sub>μV</sub>	Transd dB	Limit dB <sub>μV</sub>	Margin dB	Line	PE
0.166001	28.60	10.0	55	26.6	---	---
0.178001	26.30	10.0	55	28.3	---	---
0.194001	27.30	10.0	54	26.6	---	---
0.720000	28.40	10.0	46	17.6	---	---
1.060000	31.60	10.1	46	14.4	---	---
1.084000	31.60	10.1	46	14.4	---	---
21.228000	24.10	11.3	50	25.9	---	---
23.316000	23.10	11.4	50	26.9	---	---
26.460000	19.70	11.6	50	30.3	---	---

## 4.2 Radiated Emission Test

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

### [ USB Cable Type: CRESYN ]

#### -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 : 24.1 °C

Humidity Level : 54.5 %

Test Date : August 02, 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)			
77.10	20.66	H	2.50	9.73	1.60	40.0	31.99	8.01
97.30	22.11	H	2.00	8.17	1.79	43.5	32.07	11.43
125.00	23.59	V	1.00	10.51	2.03	43.5	36.11	7.39
240.30	21.24	H	1.20	11.17	2.81	46.0	35.22	10.78
374.90	18.52	H	1.00	15.16	3.53	46.0	37.21	8.79
625.90	10.05	V	1.00	20.26	4.65	46.0	34.94	11.06

**-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 : 24.1 °C

Humidity Level : 54.5 %

Test Date : August 02, 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)
2.0101	54.70	74	19.30	V	29.10	54	24.90
2.0747	54.10	74	19.90	V	28.00	54	26.00
5.5027	56.70	74	17.30	H	37.50	54	16.50

※ **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.

**[ USB Cable Type: IS ]**

**-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 : 24.1 °C

Humidity Level : 54.5 %

Test Date : August 02, 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)			
77.10	21.00	H	2.70	9.73	1.60	40.0	32.33	7.67
97.90	22.38	H	2.00	8.19	1.80	43.5	32.37	11.13
124.90	22.42	V	1.00	10.49	2.03	43.5	34.94	8.56
232.30	19.62	H	2.00	10.83	2.76	46.0	33.21	12.79
266.00	18.94	H	2.00	12.14	2.96	46.0	34.04	11.96
375.40	16.43	H	1.00	15.17	3.54	46.0	35.14	10.86

**-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 : 24.1 °C

Humidity Level : 54.5 %

Test Date : August 02, 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)
2.0011	53.70	74	20.30	V	28.70	54	25.30
2.0745	52.90	74	21.10	V	28.00	54	26.00
5.5022	55.90	74	18.10	H	37.00	54	17.00

※ **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	EMCO	3816/2SH	9706-1070	1 year	2014.04.26
<input checked="" type="checkbox"/> LISN	Rohde & Schwarz	ENV216	100073	1 year	2014.02.06
<input type="checkbox"/> Attenuator	Rohde & Schwarz	ESH3-Z2	357.8810.352	1 year	2014.07.03

### **Radiated Emission**

-For measurement below 1 GHz

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

-For measurement above 1 GHz

<input type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESI40	831564103	1 year	2014.04.16
<input type="checkbox"/> Antenna master	HD GmbH	MA240	240/520	N/A	-
<input type="checkbox"/> Turn Table	HD GmbH	2090	9702/1224	N/A	-
<input checked="" type="checkbox"/> EMI Test Receiver	Rohde & Schwarz	ESU 26	100241	1 year	2014.07.01
<input checked="" type="checkbox"/> Antenna master	INNCO Systems	MA4000-EP	MA4000/283	N/A	-
<input checked="" type="checkbox"/> Turn Table	INNCO Systems	DT3000-3T	DT3000/69	N/A	-
<input checked="" type="checkbox"/> Power Amplifier	CERNEX	CBLU1183540	21691	1 year	2014.07.24
<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: 2.4G/5G Dual WIFI Tablet, FCC ID: ZNFV500, Model: LG-V500** complies with §15.107 and §15.109 of the FCC rules.