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**HCT**

# TEST REPORT

EMI Test for FCC Certification of LM-G900VM Model

APPLICANT

LG Electronics USA, Inc.

REPORT NO.

HCT-EM-2007-FC006-R1

DATE OF ISSUE

July 31, 2020

Tested by  
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<p><b>TEST REPORT</b></p> <p>EMI Test for FCC Certification</p>	<p><b>REPORT NO.</b> HCT-EM-2007-FC006-R1</p> <p><b>DATE OF ISSUE</b> July 31, 2020</p> <p><b>FCC ID</b> ZNFG900VM</p>
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<b>Applicant</b>	<b>LG Electronics USA, Inc.</b> 111 Sylvan Avenue, North Building , Englewood Cliffs NJ 07632 United States
<b>Product Name</b>	Multi-band CDMA/GSM/WCDMA/LTE/5G NR Phone with WLAN, Bluetooth and NFC
<b>Model Name</b>	LM-G900VM
<b>Series Model Name</b>	Refer to the clause 1.1 Description of EUT
<b>Date of Test</b>	July 06, 2020 to July 07, 2020
<b>Test Standard Used</b>	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
<b>Test Results</b>	Refer to the present document
<b>Manufacturer</b>	LG Electronics Inc.

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.  
This test results were applied only to the test methods required by the standard.

## REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	July 13, 2020	Initial Release
1	July 31, 2020	Revised the Frequency Range

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 C63.4-2014. (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

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS (Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

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## CONTENTS

1. GENERAL INFORMATION	5
1.1 Description of EUT	5
1.2 Tested System Details	5
1.3 Cable Description	7
1.4 Noise Suppression Parts on Cable. (I/O Cable)	7
1.5 Test Facility	8
1.6 Calibration of Measuring Instrument	8
1.7 Measurement Uncertainty	8
2. DESCRIPTION OF TEST	9
2.1 Measurement of Conducted Emission	9
2.2 Measurement of Radiated Emission	10
2.3 Configuration of Tested System	11
3. PRELIMINARY TEST	12
3.1 Conducted Emission	12
3.2 Radiated Emission	12
4. CONDUCTED EMISSION AND RADIATED EMISSION TEST SUMMARY	13
4.1 Conducted Emission	13
4.2 Radiated Emission Below 1 GHz	20
4.3 Radiated Emission Above 1 GHz	22
5. CONCLUSION	25
6. APPENDIX A. TEST SETUP PHOTO	26

## 1. GENERAL INFORMATION

### 1.1 Description of EUT

<b>FCC ID</b>	ZNFG900VM	
<b>Model Name</b>	LM-G900VM	
<b>Series Model Name</b>	LM-G900VM, LMG900VM, G900VM, LM-G900QM6, LMG900QM6, G900QM6, LM-G902V, LMG902V, G902V	
<b>Product Name</b>	Multi-band CDMA/GSM/WCDMA/LTE/5G NR Phone with WLAN, Bluetooth and NFC	
<b>Frequency Range</b>	<b>RX Frequency</b>	<b>TX Frequency</b>
CDMA BC0	869.70 MHz to 893.31 MHz	824.70 MHz to 848.31 MHz
CDMA BC1	1 931.25 MHz to 1 988.75 MHz	1 851.25 MHz to 1 908.75 MHz
GSM 850	869.20 MHz to 893.80 MHz	824.20 MHz to 848.80 MHz
GSM 1 900	1 930.20 MHz to 1 989.80 MHz	1 850.20 MHz to 1 909.80 MHz
WCDMA B2	1 932.4 MHz to 1 987.6 MHz	1 852.4 MHz to 1 907.6 MHz
WCDMA B5	871.40 MHz to 891.60 MHz	826.40 MHz to 846.60 MHz
LTE B2	1 930 MHz to 1 990 MHz	1 850 MHz to 1 910 MHz
LTE B4	2 110 MHz to 2 155 MHz	1 710 MHz to 1 755 MHz
LTE B5	869 MHz to 894 MHz	824 MHz to 849 MHz
LTE B12	729 MHz to 746 MHz	699 MHz to 716 MHz
LTE B13	746 MHz to 756 MHz	777 MHz to 787 MHz
LTE B46	5 150 MHz to 5 925 MHz	-
LTE B48	3 550 MHz to 3 700 MHz	3 550 MHz to 3 700 MHz
Bluetooth	2 402 MHz to 2 480 MHz	2 402 MHz to 2 480 MHz
WiFi 2.4 GHz	2 412 MHz to 2 462 MHz	2 412 MHz to 2 462 MHz
WiFi 5 GHz_UNII 1	5 180 MHz to 5 240 MHz	5 180 MHz to 5 240 MHz
WiFi 5 GHz_UNII 2A	5 260 MHz to 5 320 MHz	5 260 MHz to 5 320 MHz
WiFi 5 GHz_UNII 2C	5 500 MHz to 5 720 MHz	5 500 MHz to 5 720 MHz
WiFi 5 GHz_UNII 3	5 745 MHz to 5 825 MHz	5 745 MHz to 5 825 MHz
NFC	13.56 MHz	13.56 MHz
5G NR n2	1 930 MHz to 1 990 MHz	1 850 MHz to 1 910 MHz
5G NR n5	869 MHz to 894 MHz	824 MHz to 849 MHz
5G NR n66	2 110 MHz to 2 200 MHz	1 710 MHz to 1 780 MHz
5G NR n260	-	37 000 MHz to 40 000 MHz
5G NR n261	-	27 500 MHz to 28 350 MHz

## 1.2 Tested System Details

All equipment descriptions used in the tested system (including inserted cards) are:

Device Type	Model Name	Serial Number	Manufacturer
EUT	LM-G900VM	-	LG
Notebook PC	ProBook650G2	5CG6331M0P	HP
Notebook PC Adaptor	Series PPP012C-S	-	CHICONY POWER TECHNOLOGY (chongqing)
Gateway	DIR-806M	-	D-Link
Gateway Adaptor	AMS1-0501200FK	-	D-Link
Serial Mouse	Serial 2 Button mouse	02031069	Radio Shack
RJ45 cable	-	-	-
DATA Cable	EAD65830101	-	LUXSHARE
Earphone	EAB63728252	-	BUJEON
Micro SD Card	SAMSUNG EVO+ microSDXC CLASS10 UHS-I	-	SAMSUNG

### 1.3 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	USB Type C	Y	Y	(P,D) 1.0
	Earphone	N/A	N	(D) 1.2
Notebook PC	RJ 45	N/A	N	(D) 1.6
	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

NOTE. The marked "(D)" means the data cable and "(P)" means the power cable.

### 1.4 Noise Suppression Parts on Cable (I/O Cable)

Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
EUT	USB Type C	N	N/A	Y	Both End
	Earphone	N	N/A	Y	EUT End
Notebook PC	RJ 45	N	N/A	N	N/A
	Serial(Mouse)	N	N/A	Y	Notebook End

### 1.5 Test Facility

Test site is located at 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, South Korea. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4-2014. The Normalized site attenuations (30 MHz to 1 GHz) and Site validation (1 GHz to 18 GHz) were performed in accordance with the standard in ANSI C63.4-2014

Measurement Facilities	Designation No.
Radiated Field strength measurement facility 3 m Semi Anechoic chamber	KR0032
Radiated Field strength measurement facility 10 m Semi Anechoic chamber #1	
Radiated Field strength measurement facility 10 m Semi Anechoic chamber #2	

### 1.6 Calibration of Measuring Instrument

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturers recommendations for utilizing calibration equipment, which is traceable to recognized national standards. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5:2017

### 1.7 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of  $k = 2$  to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the  $U_{CISPR}$  measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty
Conducted Emission (0.15 MHz to 30 MHz)	1.8 dB
Radiated Emissions (30 MHz to 1 GHz)	4.8 dB
Radiated Emissions (1 GHz to 18 GHz)	5.4 dB
Radiated Emissions (18 GHz to 40 GHz)	5.7 dB

## 2. DESCRIPTION OF TEST

### 2.1 Measurement of Conducted Emission

The test procedure was in accordance with ANSI C63.4-2014, Clause 7.3

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN).

If the EUT is connected to the PC through USB, the AC power-line adapter of the PC is directly connected to a line impedance stabilization network (LISN).

Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/50uH of coupling impedance for the measuring instrument.

b. Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.

c. The frequency range from 150 kHz to 30 MHz was searched.

#### Conducted Emission Limits

Frequency (MHz)	Resolution Bandwidth (kHz)	Class A		Class B	
		Quasi-Peak (dB $\mu$ V)	Average (dB $\mu$ V)	Quasi-Peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15 to 0.5	9	79	66	66 to 56*	56 to 46*
0.5 to 5	9	73	60	56	46
5 to 30	9	73	60	60	50

NOTE. Decreases with the logarithm of the frequency.

## 2.2 Measurement of Radiated Emission

The test procedure was in accordance with ANSI C63.4-2014, Clause 8.3

- a. The EUT was placed on the top of a turn table 0.8 meters above the ground at a semi-anechoic chamber.  
The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 m away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from 1 m to 4 m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 m to 4 m and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to Peak and Average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- g. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.  
(1 GHz to 40 GHz)

### Radiated Emission Limits

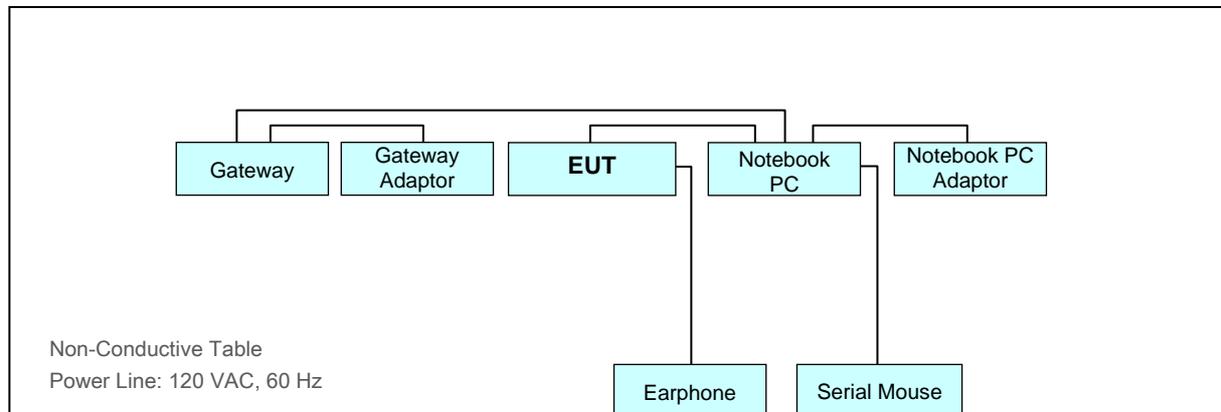
Frequency (MHz)	Class A			Class B		
	Antenna Distance (m)	Field Strength ( $\mu\text{V/m}$ )	Quasi-Peak (dB $\mu\text{V/m}$ )	Antenna Distance (m)	Field Strength ( $\mu\text{V/m}$ )	Quasi-Peak (dB $\mu\text{V/m}$ )
30 to 88	10	90	39.0	3	100	40.0
88 to 216	10	150	43.5	3	150	43.5
216 to 960	10	210	46.4	3	200	46.0
Above 960	10	300	49.5	3	500	54.0
Frequency (MHz)	Antenna Distance (m)	Class A		Class B		
		Peak (dB $\mu\text{V/m}$ )	Average (dB $\mu\text{V/m}$ )	Peak (dB $\mu\text{V/m}$ )	Average (dB $\mu\text{V/m}$ )	
Above 1 000	3	80	60	74	54	

### 2.2.1 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	5th harmonic of the highest frequency or 40 GHz, whichever is lower

### 2.3 Configuration of Tested System



### 3. PRELIMINARY TEST

#### 3.1 Conducted Emission

It was tested the following operating mode, after connecting all peripheral devices.

**Operating Modes:** Data Communication mode

#### 3.2 Radiated Emission

It was tested the following operating mode, after connecting all peripheral devices.

**Operating Modes:** Data Communication mode

## 4. CONDUCTED EMISSION AND RADIATED EMISSION TEST SUMMARY

### 4.1 Conducted Emission

#### 4.1.1 Measuring instruments

	Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	Calibration Date
<input checked="" type="checkbox"/>	EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	06.10.2020
<input checked="" type="checkbox"/>	LISN	Rohde & Schwarz	ENV216	102245	1 year	09.11.2019
<input checked="" type="checkbox"/>	LISN	Rohde & Schwarz	ENV216	100073	1 year	04.27.2020
<input checked="" type="checkbox"/>	Software	Rohde & Schwarz	EMC32	-	-	-

#### 4.1.2 Operating Condition

The test results of conducted emission at mains ports provide the following information:

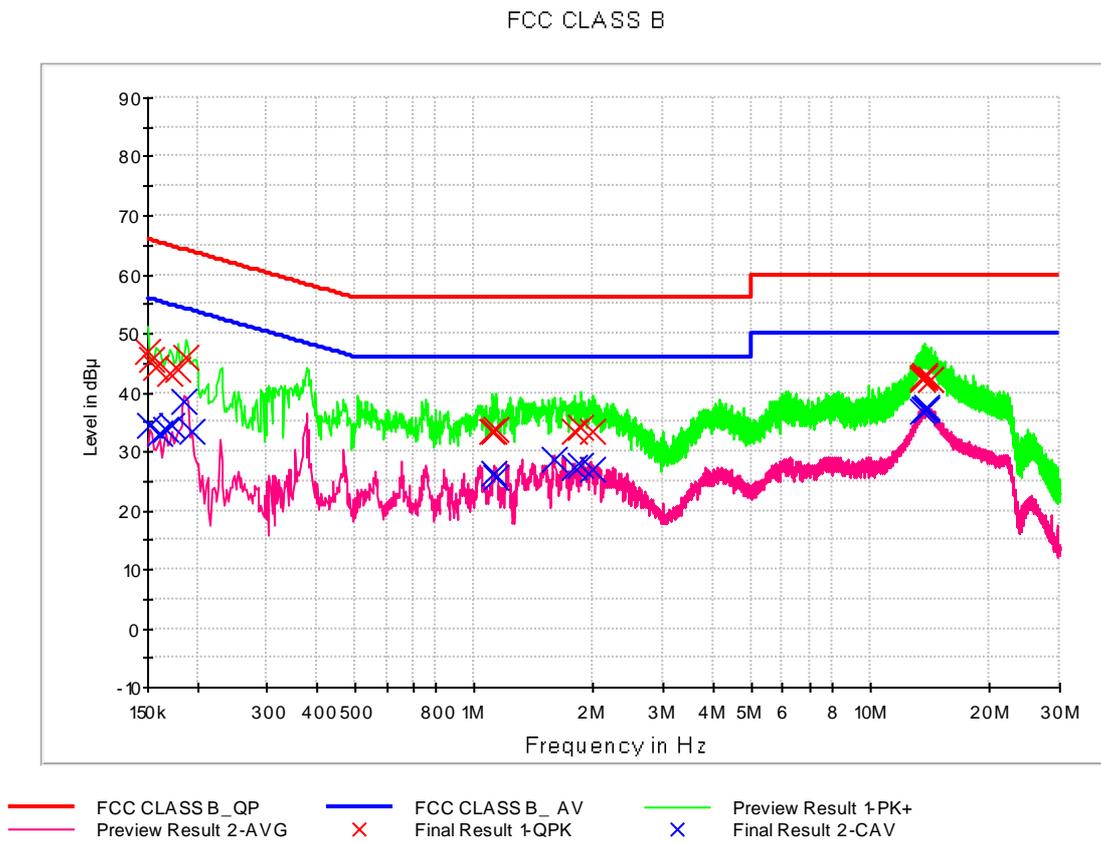
<b>Test Standard Used</b>	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
<b>Frequency Range</b>	150 kHz to 30 MHz
<b>Detector</b>	Quasi-Peak, CISPR-Average
<b>Bandwidth</b>	9 kHz (6 dB)
<b>Operating Mode</b>	Data Communication mode
<b>Worst Case of Data Cable</b>	LUXSHARE (EAD65830101)
<b>Kind of Test Site</b>	EMI Shielded Room
<b>Temperature</b>	23.5 °C
<b>Relative Humidity</b>	45.4 %
<b>Test Date</b>	July 06, 2020

#### Calculation Formula:

1. Conductor L1 = Hot, Conductor N = Neutral
2. Corr. = LISN Factor + Cable Loss
3. QuasiPeak or CAverage= Receiver Reading + Corr.
4. Margin = Limit – QuasiPeak or CAverage

4.1.3 Measuring Data

Figure 1: Conducted Emission, AC Main Port, Line (L1)



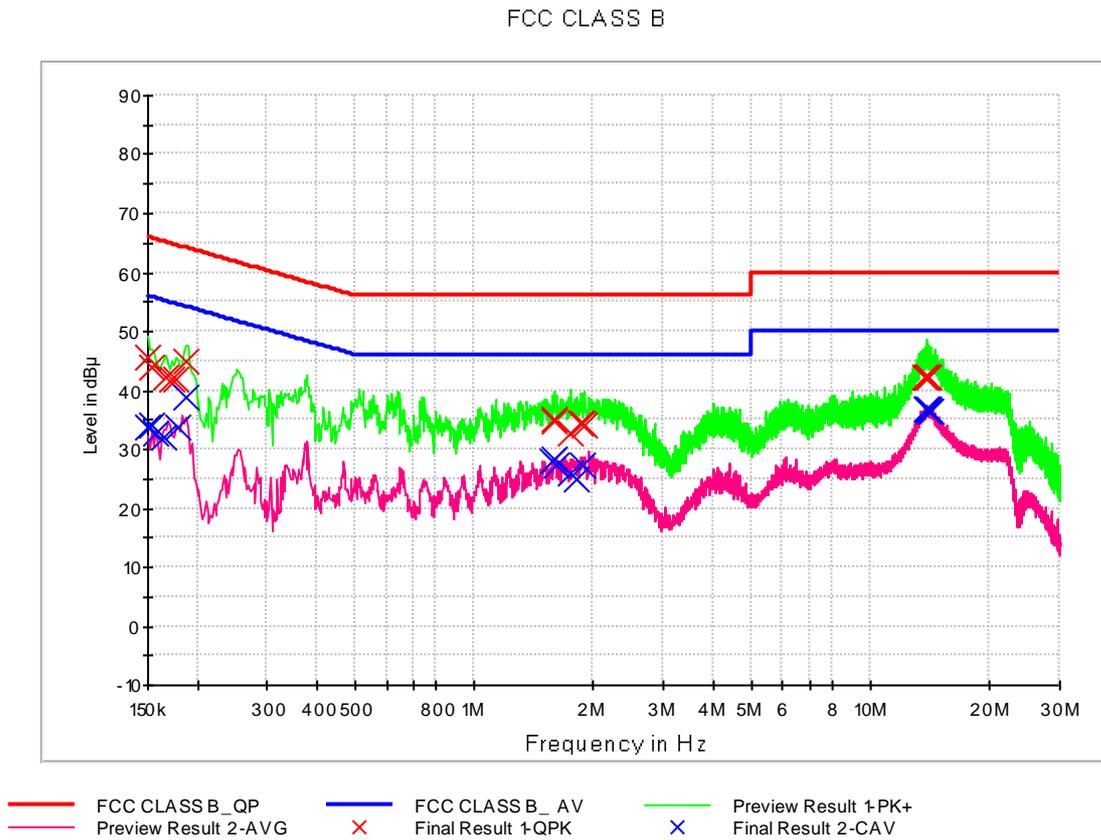
## QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	46.9	9.000	L1	9.7	19.1	66.0
0.154000	45.4	9.000	L1	9.7	20.3	65.8
0.158000	44.1	9.000	L1	9.7	21.4	65.6
0.170000	43.3	9.000	L1	9.7	21.7	65.0
0.178000	44.0	9.000	L1	9.7	20.6	64.6
0.188000	45.9	9.000	L1	9.7	18.2	64.1
1.114000	33.3	9.000	L1	9.7	22.7	56.0
1.118000	33.5	9.000	L1	9.7	22.5	56.0
1.132000	33.8	9.000	L1	9.7	22.2	56.0
1.786000	33.6	9.000	L1	9.8	22.4	56.0
1.864000	34.1	9.000	L1	9.8	21.9	56.0
1.986000	33.6	9.000	L1	9.8	22.4	56.0
13.478000	42.2	9.000	L1	10.0	17.8	60.0
13.586000	42.6	9.000	L1	10.0	17.4	60.0
13.670000	42.7	9.000	L1	10.0	17.3	60.0
13.776000	42.5	9.000	L1	10.0	17.5	60.0
14.150000	42.2	9.000	L1	10.0	17.8	60.0
14.164000	42.3	9.000	L1	10.0	17.7	60.0

## CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.152000	34.5	9.000	L1	9.7	21.3	55.9
0.160000	33.2	9.000	L1	9.7	22.3	55.5
0.166000	33.6	9.000	L1	9.7	21.5	55.2
0.172000	34.5	9.000	L1	9.7	20.4	54.9
0.186000	38.6	9.000	L1	9.7	15.7	54.2
0.194000	33.4	9.000	L1	9.7	20.5	53.9
1.118000	26.4	9.000	L1	9.7	19.6	46.0
1.140000	25.7	9.000	L1	9.7	20.3	46.0
1.594000	28.5	9.000	L1	9.8	17.5	46.0
1.786000	27.3	9.000	L1	9.8	18.7	46.0
1.864000	27.5	9.000	L1	9.8	18.5	46.0
1.986000	27.0	9.000	L1	9.8	19.0	46.0
13.478000	36.8	9.000	L1	10.0	13.2	50.0
13.670000	37.2	9.000	L1	10.0	12.8	50.0
13.702000	37.2	9.000	L1	10.0	12.8	50.0
13.776000	37.2	9.000	L1	10.0	12.8	50.0
13.800000	37.2	9.000	L1	10.0	12.8	50.0
13.808000	37.3	9.000	L1	10.0	12.7	50.0

Figure 2: Conducted Emission, AC Main Port, Line (N)



## QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	45.7	9.000	N	9.7	20.3	66.0
0.154000	43.8	9.000	N	9.7	22.0	65.8
0.166000	42.3	9.000	N	9.7	22.9	65.2
0.172000	41.9	9.000	N	9.7	23.0	64.9
0.176000	41.7	9.000	N	9.7	22.9	64.7
0.188000	45.1	9.000	N	9.7	19.1	64.1
1.594000	35.0	9.000	N	9.8	21.0	56.0
1.598000	34.8	9.000	N	9.8	21.2	56.0
1.752000	32.8	9.000	N	9.8	23.2	56.0
1.860000	34.3	9.000	N	9.8	21.7	56.0
1.866000	34.4	9.000	N	9.8	21.6	56.0
1.888000	34.0	9.000	N	9.8	22.0	56.0
13.744000	42.1	9.000	N	10.0	18.0	60.0
13.798000	42.2	9.000	N	10.0	17.8	60.0
13.804000	42.1	9.000	N	10.0	17.9	60.0
13.848000	42.2	9.000	N	10.0	17.8	60.0
13.908000	42.2	9.000	N	10.0	17.8	60.0
14.074000	42.0	9.000	N	10.0	18.0	60.0

## CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	33.7	9.000	N	9.7	22.3	56.0
0.154000	34.2	9.000	N	9.7	21.6	55.8
0.158000	32.5	9.000	N	9.7	23.0	55.6
0.164000	32.1	9.000	N	9.7	23.1	55.3
0.178000	33.6	9.000	N	9.7	21.0	54.6
0.188000	38.8	9.000	N	9.7	15.4	54.1
1.582000	28.0	9.000	N	9.8	18.0	46.0
1.598000	28.4	9.000	N	9.8	17.6	46.0
1.604000	27.5	9.000	N	9.8	18.5	46.0
1.752000	25.9	9.000	N	9.8	20.1	46.0
1.806000	25.1	9.000	N	9.8	20.9	46.0
1.866000	27.3	9.000	N	9.8	18.7	46.0
13.804000	36.8	9.000	N	10.0	13.2	50.0
13.824000	36.7	9.000	N	10.0	13.3	50.0
13.844000	36.8	9.000	N	10.0	13.2	50.0
14.074000	36.6	9.000	N	10.0	13.4	50.0
14.102000	36.7	9.000	N	10.0	13.3	50.0
14.172000	36.4	9.000	N	10.0	13.6	50.0

## 4.2 Radiated Emission Below 1 GHz

### 4.2.1 Measuring instruments

Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	Calibration Date
<input checked="" type="checkbox"/> EMI test receiver	Rohde & Schwarz	ESU40	100524	1 year	05.12.2020
<input checked="" type="checkbox"/> Bi-Log antenna	Schwarzbeck	VULB 9168	255	2 year	03.26.2019
<input checked="" type="checkbox"/> Antenna master	INNCO Systems	MA4640-XP-ET	-	N/A	-
<input checked="" type="checkbox"/> Antenna master controller	INNCO Systems	CO3000	CO3000/870/ 35990515/L	N/A	-
<input checked="" type="checkbox"/> Turn table	INNCO Systems	1060	-	N/A	-
<input checked="" type="checkbox"/> Turn table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
<input checked="" type="checkbox"/> Software	Rohde & Schwarz	EMC32	-	-	-

### 4.2.2 Operating Condition

The test results of radiated emission provide the following information:

<b>Used Test Standard</b>	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
<b>Frequency Range</b>	30 MHz to 1 000 MHz
<b>Detector</b>	Quasi-Peak
<b>Bandwidth</b>	120 kHz (6 dB)
<b>Operating Mode</b>	Data Communication mode
<b>Worst Case of Data Cable</b>	LUXSHARE (EAD65830101)
<b>Kind of Test Site</b>	3 m semi anechoic chamber
<b>Temperature</b>	23.6 °C
<b>Relative Humidity</b>	45.2 %
<b>Test Date</b>	July 07, 2020

## 4.2.3 Measuring Data

Frequency (MHz)	Quasi Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
54.536600	26.7	100.0	V	110.0	19.6	13.3	40.0
69.081800	30.2	100.0	V	325.0	18.2	9.8	40.0
140.551400	32.0	225.0	H	315.0	19.0	11.5	43.5
157.065400	31.7	174.8	H	336.0	19.7	11.8	43.5
216.666000	32.9	125.2	H	276.0	17.3	13.1	46.0
724.335400	36.5	100.0	H	355.0	29.1	9.5	46.0

**- Calculation Formula:**

1. POL. H = Horizontal, POL. V = Vertical
2. QuasiPeak = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor + Cable Loss
4. Margin = Limit - QuasiPeak

### 4.3 Radiated Emission Above 1 GHz

#### 4.3.1 Measuring instruments

	Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	Calibration Date
<input checked="" type="checkbox"/>	EMI test receiver	Rohde & Schwarz	ESU40	100524	1 year	05.12.2020
<input checked="" type="checkbox"/>	Antenna master	INNCO Systems	MA4640-XP-ET	-	N/A	-
<input checked="" type="checkbox"/>	Antenna master controller	INNCO Systems	CO3000	CO3000/870/ 35990515/L	N/A	-
<input checked="" type="checkbox"/>	Turn table	INNCO Systems	1060	-	N/A	-
<input checked="" type="checkbox"/>	Turn table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
<input checked="" type="checkbox"/>	Low noise amplifier	TESTEK	TK-PA18H	170034-L	1 year	03.03.2020
<input checked="" type="checkbox"/>	Low noise amplifier	TESTEK	TK-PA1840H	170030-L	1 year	02.13.2020
<input checked="" type="checkbox"/>	Horn antenna	Schwarzbeck	BBHA 9120D	01836	1 year	07.19.2019
<input checked="" type="checkbox"/>	Horn antenna	Schwarzbeck	BBHA 9170	BBHA9170#786	1 year	12.03.2019
<input checked="" type="checkbox"/>	Software	Rohde & Schwarz	EMC32	-	-	-

#### 4.3.2 Operating Condition

The test results of radiated emission provide the following information:

Used Test Standard	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
Detector	Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)
Highest Frequency	40 000 MHz
Tested Frequency Range	1 GHz to 40 GHz
Operating Mode	Data Communication mode
Worst Case of Data Cable	LUXSHARE (EAD65830101)
Kind of Test Site	3 m semi anechoic chamber
Temperature	24.3 °C
Relative Humidity	45.7 %
Test Date	July 06, 2020

## 4.3.3 Measuring Data

Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1409.920000	46.0	215.4	H	195.0	-28.2	28.0	74.0
1600.085000	47.0	299.6	V	221.0	-27.6	27.0	74.0
2476.735000	41.9	100.0	V	20.0	-24.2	32.1	74.0
3997.985000	42.5	249.9	V	0.0	-20.4	31.5	74.0
13796.155000	45.6	216.6	V	112.0	-2.6	28.4	74.0
17957.925000	55.6	160.6	H	45.0	9.0	18.4	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1409.920000	28.7	215.4	H	195.0	-28.2	25.3	54.0
1600.085000	26.6	299.6	V	221.0	-27.6	27.4	54.0
2476.735000	22.0	100.0	V	20.0	-24.2	32.0	54.0
3997.985000	25.0	249.9	V	0.0	-20.4	29.0	54.0
13796.155000	32.8	216.6	V	112.0	-2.6	21.2	54.0
17957.925000	42.7	160.6	H	45.0	9.0	11.3	54.0

**- Calculation Formula:**

1. POL. H = Horizontal, POL. V = Vertical
2. Peak or CAverage = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor+ Cable Loss –Amplifier Gain
4. Margin = Limit - Peak or CAverage

## 5. CONCLUSION

The data collected shows that the **Product Name: Multi-band CDMA/GSM/WCDMA/LTE/5G NR Phone with WLAN, Bluetooth and NFC, Model Name: LM-G900VM** complies with §15.107 and §15.109 of the FCC rules.

## 6. APPENDIX A. TEST SETUP PHOTO

Please refer to Appendix. A and test setup photo file no. as follows;

<b>File No.</b>	<b>Date of Issue</b>	<b>Description</b>
HCT-EM-2007-FC006-P	July 13, 2020	Initial Release

End of report