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HCT

TEST REPORT

EMI Test for ISED / FCC Certification of LM-K200QM Model

APPLICANT

LG Electronics USA, Inc.

REPORT NO.

HCT-EM-2011-FI002

DATE OF ISSUE

November 02, 2020

Tested by
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Signature

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EMI Test for
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FCC ID. / IC

ZNFK200QM / 2703C-K200QM

Applicant

LG Electronics USA, Inc.

111 Sylvan Avenue. North Building . Englewood Cliffs NJ 07632 United States

Product Name

Smart Phone

Model Name

LM-K200QM

Series Model Name

Refer to the clause 1.1 Description of EUT

Travel Adaptor Information

Model name: MCS-V01WR

Manufacturer: SUNLIN

Date of Test

October 06, 2020 to October 16, 2020

Test Standard Used

FCC CFR 47 PART 15 Subpart B Class B

ICES-003 Issue 6 Class B

ANSI C63.4-2014

Test Results

Refer to the present document

Manufacturer

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	November 02, 2020	Initial Release

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) / A2LA(American Association for Laboratory Accreditation), which signed the ILAC-MRA.

* The report shall not be reproduced except in full(only partly) without approval of the laboratory.

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1. GENERAL INFORMATION

1.1 Description of EUT

FCC ID	ZNFK200QM
IC	2703C-K200QM
Model Name	LM-K200QM
Series Model Name	LMK200QM, K200QM
Product Name	Smart Phone
TX Frequency	824.70 MHz to 848.31 MHz (CDMA BC0) 1 851.25 MHz to 1 908.75 MHz (CDMA BC1) 824.20 MHz to 848.80 MHz (GSM 850) 1 850.20 MHz to 1 909.80 MHz (GSM 1 900) 1 852.4 MHz to 1 907.6 MHz (WCDMA B2) 1712.4 MHz to 1752.6 MHz (WCDMA B4) 826.40 MHz to 846.60 MHz (WCDMA B5) 1 850 MHz to 1 910 MHz (LTE B2) 1 710 MHz to 1 755 MHz (LTE B4) 824 MHz to 849 MHz (LTE B5) 2 496 MHz to 2570 MHz (LTE B7) 699 MHz to 716 MHz (LTE B12) 777 MHz to 787 MHz (LTE B13) 704 MHz to 716 MHz (LTE B17) 1 850 MHz to 1 915 MHz (LTE B25) 1 710 MHz to 1 780 MHz (LTE B66) 2 402 MHz to 2 480 MHz (Bluetooth) 2 412 MHz to 2 462 MHz (WiFi 2.4 GHz)
RX Frequency	869.70 MHz to 893.31 MHz (CDMA BC0) 1 931.25 MHz to 1 988.75 MHz (CDMA BC1) 869.20 MHz to 893.80 MHz (GSM 850) 1 930.20 MHz to 1 989.80 MHz (GSM 1 900) 1 932.4 MHz to 1 987.6 MHz (WCDMA B2) 2 112.4 MHz to 2 152.6 MHz (WCDMA B4) 871.40 MHz to 891.60 MHz (WCDMA B5) 1 930 MHz to 1 990 MHz (LTE B2) 2 110 MHz to 2 155 MHz (LTE B4) 869 MHz to 894 MHz (LTE B5) 2 516 MHz to 2690 MHz (LTE B7) 729 MHz to 746 MHz (LTE B12) 746 MHz to 756 MHz (LTE B13) 734 MHz to 746 MHz (LTE B17) 1 930 MHz to 1 995 MHz (LTE B25) 2 110 MHz to 2 200 MHz (LTE B66) 2 402 MHz to 2 480 MHz (Bluetooth) 2 412 MHz to 2 462 MHz (WiFi 2.4 GHz)

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-K200QM	-	LG
TA	MCS-V01WR	-	SUNLIN
DATA Cable	EAD62377921	-	LEAGTECH
Earphone	EMB-LGE41STGWE	-	CRESYN
Micro SD Card	Extreme MicroSDHC UHS-I CLASS 10 (32 GB)	-	SANDISK

1.3 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	Micro USB	Y	N/A	(P) 1.0
	Earphone	N/A	N	(D) 1.2

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	Micro USB	N	N/A	Y	Both End
	Earphone	N	N/A	Y	EUT 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	
Filing the EMI Measurement Facility (3 m Semi Anechoic Chamber and Shielded Room)	IC 5944A-4
Filing the EMI Measurement Facility (10 m Semi-Anechoic Chamber)	IC 5944A-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)	1.58 dB
3 m Radiated Emissions (30 MHz to 1 GHz)	4.86 dB
3 m Radiated Emissions (1 GHz to 18 GHz)	4.58 dB
3 m Radiated Emissions (18 GHz to 40 GHz)	5.54 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 (dBμV)	Average (dBμV)	Quasi-Peak (dBμV)	Average (dBμV)
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

- 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.
- The EUT was set 3 m away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- 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.
- 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.
- 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

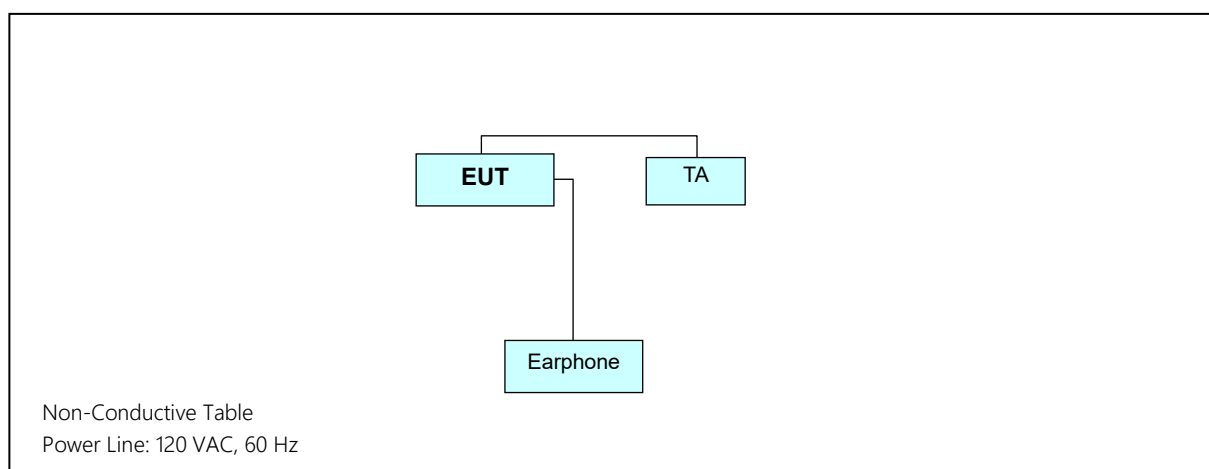
Frequency (MHz)	Class A			Class B		
	Antenna Distance (m)	Field Strength ($\mu\text{V/m}$)	Quasi-Peak (dB $\mu\text{V/m}$)	Antenna Distance (m)	Field Strength ($\mu\text{V/m}$)	Quasi-Peak (dB $\mu\text{V/m}$)
30 to 88	10	90	39.0	3	100	40.0
88 to 216	10	150	43.5	3	150	43.5
216 to 960	10	210	46.4	3	200	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: FRONT CAMERA & MP3 mode

REAR CAMERA & FM RADIO mode

IDLE mode

NOTE. The worst-case emissions are reported.

3.2 Radiated Emission

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

Operating Modes: FRONT CAMERA & MP3 mode

REAR CAMERA & FM RADIO mode

IDLE mode

NOTE. The worst-case emissions are reported.

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
☒	EMI test receiver	Rohde & Schwarz	ESCI	100584	1 year	06.10.2020
☒	LISN	Rohde & Schwarz	ENV216	102245	1 year	09.04.2020
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.19.2020
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-200	-	-
☒	Software	Rohde & Schwarz	EMC32	-	-	-

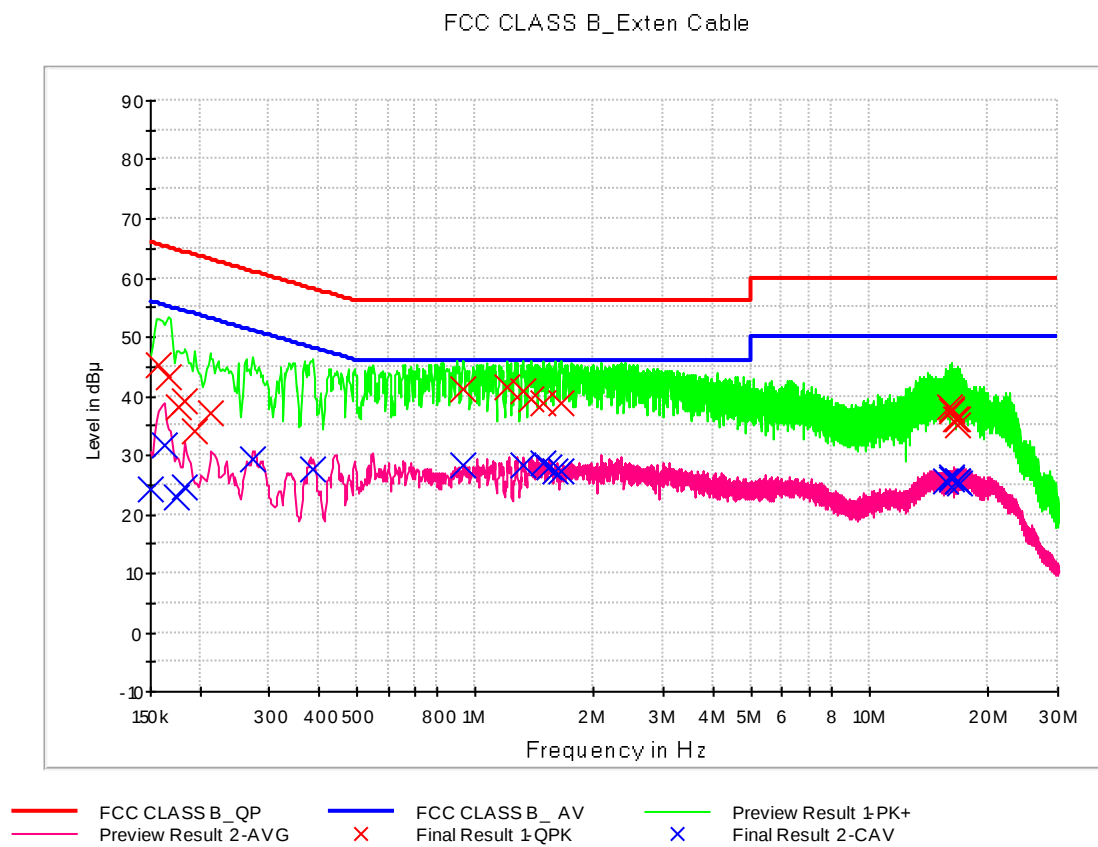
4.1.2 Operating Condition

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

Test Standard Used	FCC CFR 47 PART 15 Subpart B Class B ICES-003 Issue 6 Class B ANSI C63.4-2014
Frequency Range	150 kHz to 30 MHz
Detector	Quasi-Peak, CISPR-Average
Bandwidth	9 kHz (6 dB)
Worst Case of Operating Mode	Idle mode (LTE B5 Middle ch Idle)
Kind of Test Site	EMI Shielded Room
Temperature	24.2 / 23.3 °C
Relative Humidity	47.8 / 46.5 %
Test Date	October 08 / October 13, 2020

4.1.3 Measuring Data

Figure 1: Conducted Emission (150 kHz to 30 MHz), Line (L1)



QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	45.2	9.000	L1	9.8	20.3	65.6
0.166000	43.3	9.000	L1	9.8	21.8	65.2
0.176000	38.2	9.000	L1	9.8	26.5	64.7
0.184000	39.1	9.000	L1	9.8	25.2	64.3
0.194000	34.1	9.000	L1	9.8	29.7	63.9
0.212000	37.2	9.000	L1	9.8	25.9	63.1
0.930000	41.1	9.000	L1	9.8	14.9	56.0
1.210000	41.7	9.000	L1	9.8	14.3	56.0
1.326000	40.7	9.000	L1	9.8	15.3	56.0
1.386000	39.4	9.000	L1	9.8	16.6	56.0
1.492000	38.9	9.000	L1	9.8	17.1	56.0
1.654000	38.8	9.000	L1	9.8	17.2	56.0
15.908000	38.0	9.000	L1	10.4	22.0	60.0
16.064000	37.9	9.000	L1	10.4	22.1	60.0
16.224000	37.5	9.000	L1	10.4	22.5	60.0
16.454000	36.2	9.000	L1	10.4	23.8	60.0
16.704000	36.3	9.000	L1	10.4	23.7	60.0
16.768000	35.2	9.000	L1	10.4	24.8	60.0

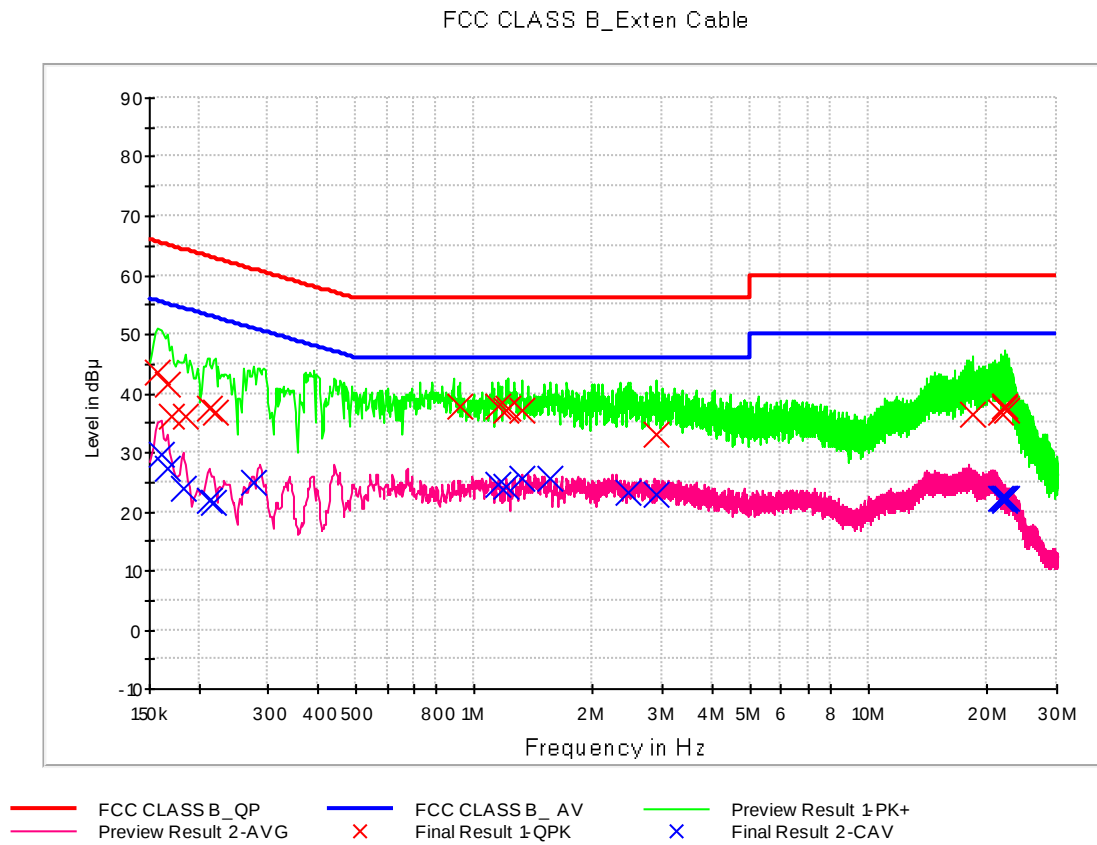
Calculation Formula:

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

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	24.4	9.000	L1	9.8	31.6	56.0
0.162000	31.5	9.000	L1	9.8	23.8	55.4
0.174000	22.8	9.000	L1	9.8	32.0	54.8
0.184000	24.6	9.000	L1	9.8	29.7	54.3
0.272000	29.3	9.000	L1	9.8	21.7	51.1
0.388000	27.5	9.000	L1	9.8	20.6	48.1
0.930000	28.2	9.000	L1	9.8	17.8	46.0
1.326000	28.4	9.000	L1	9.8	17.6	46.0
1.480000	28.6	9.000	L1	9.8	17.4	46.0
1.530000	27.8	9.000	L1	9.8	18.2	46.0
1.602000	27.3	9.000	L1	9.8	18.7	46.0
1.654000	27.2	9.000	L1	9.8	18.8	46.0
15.538000	25.7	9.000	L1	10.4	24.3	50.0
16.064000	26.2	9.000	L1	10.4	23.8	50.0
16.224000	26.1	9.000	L1	10.4	23.9	50.0
16.704000	25.7	9.000	L1	10.4	24.3	50.0
16.768000	25.6	9.000	L1	10.4	24.4	50.0
16.886000	25.3	9.000	L1	10.4	24.7	50.0

Figure 2: Conducted Emission (150 kHz to 30 MHz), Line (N)



QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	43.5	9.000	N	9.8	22.0	65.6
0.166000	41.6	9.000	N	9.8	23.6	65.2
0.170000	36.0	9.000	N	9.8	29.0	65.0
0.186000	36.1	9.000	N	9.8	28.1	64.2
0.212000	37.3	9.000	N	9.8	25.8	63.1
0.220000	36.6	9.000	N	9.8	26.2	62.8
0.914000	37.9	9.000	N	9.8	18.1	56.0
1.152000	37.6	9.000	N	9.8	18.4	56.0
1.206000	37.3	9.000	N	9.8	18.7	56.0
1.220000	37.4	9.000	N	9.8	18.6	56.0
1.316000	37.0	9.000	N	9.8	19.0	56.0
2.884000	33.0	9.000	N	9.9	23.0	56.0
18.374000	36.5	9.000	N	10.6	23.5	60.0
21.498000	36.6	9.000	N	10.7	23.4	60.0
22.044000	37.9	9.000	N	10.8	22.1	60.0
22.060000	37.7	9.000	N	10.8	22.3	60.0
22.220000	37.4	9.000	N	10.8	22.6	60.0
22.320000	37.1	9.000	N	10.8	22.9	60.0

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.160000	29.6	9.000	N	9.8	25.9	55.5
0.166000	27.2	9.000	N	9.8	28.0	55.2
0.182000	23.9	9.000	N	9.8	30.5	54.4
0.212000	21.7	9.000	N	9.8	31.4	53.1
0.218000	21.6	9.000	N	9.8	31.3	52.9
0.274000	24.9	9.000	N	9.8	26.1	51.0
1.152000	24.6	9.000	N	9.8	21.4	46.0
1.206000	24.4	9.000	N	9.8	21.6	46.0
1.316000	25.5	9.000	N	9.8	20.5	46.0
1.552000	25.7	9.000	N	9.8	20.3	46.0
2.442000	23.1	9.000	N	9.9	22.9	46.0
2.884000	23.0	9.000	N	9.9	23.0	46.0
21.498000	22.1	9.000	N	10.7	27.9	50.0
21.948000	22.4	9.000	N	10.7	27.6	50.0
22.044000	22.2	9.000	N	10.8	27.8	50.0
22.060000	22.0	9.000	N	10.8	28.0	50.0
22.120000	22.2	9.000	N	10.8	27.8	50.0
22.320000	22.3	9.000	N	10.8	27.7	50.0

4.2 Radiated Emission Below 1 GHz

4.2.1 Measuring instruments

	Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	Calibration Date
☒	EMI test receiver	Rohde & Schwarz	ESU40	100524	1 year	05.12.2020
☒	Bi-Log antenna	Schwarzbeck	VULB 9168	255	2 year	03.26.2019
☒	Antenna master	INNCO Systems	MA4640-XP-ET	-	N/A	-
☒	Antenna master controller	INNCO Systems	CO3000	CO3000/870/ 35990515/L	N/A	-
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.19.2020
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-200	-	-
☒	Turn table	INNCO Systems	1060	-	N/A	-
☒	Turn table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
☐	UXM 5G wireless test platform	KEYSIGHT	E7515B	MY58300756	1 year	01.07.2020
☐	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-201	-	-
☐	Radio communication test station	ANRITSU	MT8000A	6262036812	1 year	01.06.2020
☐	Radio communication analyzer	ANRITSU	MT8821C	6262044720	1 year	01.06.2020
☒	Software	Rohde & Schwarz	EMC32	-	-	-

4.2.2 Operating Condition

The test results of radiated emission provide the following information:

Used Test Standard	FCC CFR 47 PART 15 Subpart B Class B ICES-003 Issue 6 Class B ANSI C63.4-2014
Frequency Range	30 MHz to 1 000 MHz
Detector	Quasi-Peak
Bandwidth	120 kHz (6 dB)
Worst Case of Operating Mode	Idle mode (LTE B5 Middle ch Idle)
Kind of Test Site	3 m semi anechoic chamber
Temperature	24.3 / 23.2 °C
Relative Humidity	47.5 / 45.4 %
Test Date	October 06 / October 08, 2020

4.2.3 Measuring Data

Frequency (MHz)	Quasi Peak (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
32.087000	30.5	100.0	V	216.0	18.4	9.5	40.0
62.840720	21.5	100.0	V	69.0	19.0	18.5	40.0
102.773800	22.5	274.8	H	84.0	15.5	21.0	43.5
287.874840	28.2	100.0	H	89.0	20.1	17.8	46.0
510.876400	25.5	307.7	V	34.0	25.4	20.5	46.0
688.367600	29.1	274.7	V	104.0	28.5	16.9	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
☒	EMI test receiver	Rohde & Schwarz	ESU40	100524	1 year	05.12.2020
☒	Antenna master	INNCO Systems	MA4640-XP-ET	-	N/A	-
☒	Antenna master controller	INNCO Systems	CO3000	CO3000/870/ 35990515/L	N/A	-
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.19.2020
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-200	-	-
☒	Turn table	INNCO Systems	1060	-	N/A	-
☒	Turn table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
☒	Low noise amplifier	TESTEK	TK-PA18H	170034-L	1 year	03.03.2020
☐	Low noise amplifier	TESTEK	TK-PA1840H	170030-L	1 year	02.13.2020
☒	Horn antenna	Schwarzbeck	BBHA 9120D	01836	1 year	07.23.2020
☐	Radio communication test station	ANRITSU	MT8000A	6262036812	1 year	01.06.2020
☐	Radio communication analyzer	ANRITSU	MT8821C	6262044720	1 year	01.06.2020
☐	UXM 5G wireless test platform	KEYSIGHT	E7515B	MY58300756	1 year	01.07.2020
☐	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-201	-	-
☐	Horn antenna	Schwarzbeck	BBHA 9120D	1641	1 year	06.24.2020
☐	Horn antenna	Schwarzbeck	BBHA 9170	BBHA9170#786	1 year	12.03.2019
☒	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 ICES-003 Issue 6 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	2 690 MHz
Tested Frequency Range	1 GHz to 18 GHz
Worst Case of Operating Mode	Idle mode (LTE B5 Middle ch Idle)
Kind of Test Site	3 m semi anechoic chamber
Temperature	21.4 / 21.6 °C
Relative Humidity	44.2 / 46.2 %
Test Date	October 12 / October 16, 2020

4.3.3 Measuring Data

Frequency (MHz)	Peak (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1388.245000	29.5	100.0	V	181.0	-27.9	44.5	74.0
2600.075000	32.6	150.1	V	89.0	-23.7	41.4	74.0
5528.330000	35.9	249.9	V	62.0	-17.1	38.1	74.0
9606.965000	43.8	150.0	V	13.0	-9.3	30.2	74.0
14525.935000	47.5	137.8	V	294.0	-0.4	26.5	74.0
17981.735000	55.9	292.6	H	318.0	9.4	18.1	74.0

Frequency (MHz)	CAverage (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
1388.245000	16.1	100.0	V	181.0	-27.9	37.9	54.0
2600.075000	19.6	150.1	V	89.0	-23.7	34.4	54.0
5528.330000	23.4	249.9	V	62.0	-17.1	30.6	54.0
9606.965000	30.9	150.0	V	13.0	-9.3	23.1	54.0
14525.935000	35.2	137.8	V	294.0	-0.4	18.8	54.0
17981.735000	42.9	292.6	H	318.0	9.4	11.1	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: Smart Phone / Model Name: LM-K200QM** 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;

File No.	Date of Issue	Description
HCT-EM-2011-FI002-P	November 02, 2020	Initial Release

End of report