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HCT

TEST REPORT

EMI Test for FCC Certification of LM-K330PM Model

APPLICANT
LG Electronics USA, Inc.

REPORT NO.
HCT-EM-2101-FC015

DATE OF ISSUE
January 15, 2021

Tested by
Geon-Hee Jeon (signature)

Technical Manager
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TEST REPORT

EMI Test for FCC Certification

REPORT NO.
HCT-EM-2101-FC015

DATE OF ISSUE
January 15, 2021

FCC ID.
ZNFK330PM

Applicant	LG Electronics USA, Inc. 111 Sylvan Avenue, North Building , Englewood Cliffs NJ 07632 United States
Product Name Model Name Series Model Name	Multi-band GSM/CDMA/WCDMA/LTE Phone with WLAN, Bluetooth LM-K330PM Refer to the clause 1.1 Description of EUT
Travel Adaptor Information	Model name: MCS-V02WR Manufacturer: SUNLIN
Date of Test	January 04, 2021 to January 12, 2021
Test Standard Used	FCC CFR 47 PART 15 Subpart B 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	January 15, 2021	Initial Release

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.

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1. GENERAL INFORMATION

1.1 Description of EUT

FCC ID	ZNFK330PM
Model Name	LM-K330PM
Series Model Name	LM-K330TM, LM-K330MM, LG L460DL, LM-K330QM, LM-K330QM6, LM-K330VM, LM-K330QN, LMK330PM, LMK330TM, LMK330MM, LGL460DL, LMK330QM, LMK330QM6, LMK330VM, LMK330QN, K330PM, K330TM, K330MM, L460DL, K330QM, K330QM6, K330VM, K330QN
Product Name	Multi-band GSM/CDMA/WCDMA/LTE Phone with WLAN, Bluetooth
Frequency Range TX	824.70 MHz to 848.31 MHz (CDMA BC0) 1 851.25 MHz to 1 908.75 MHz (CDMA BC1) 817.90 MHz to 823.10 MHz (CDMA BC10) 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) 699 MHz to 716 MHz (LTE B12) 777 MHz to 787 MHz (LTE B13) 1 850 MHz to 1 915 MHz (LTE B25) 814 MHz to 849 MHz (LTE B26) 2 496 MHz to 2 690 MHz (LTE B41) 2 496 MHz to 2 690 MHz (LTE B41 HPUE) 1 710 MHz to 1 780 MHz (LTE B66) 663 MHz to 698 MHz (LTE B71) 2 402 MHz to 2 480 MHz (Bluetooth) 2 412 MHz to 2 462 MHz (WiFi 2.4 GHz) 5 180 MHz to 5 240 MHz (WiFi 5 GHz_UNII 1) 5 260 MHz to 5 320 MHz (WiFi 5 GHz_UNII 2A) 5 500 MHz to 5 720 MHz (WiFi 5 GHz_UNII 2C) 5 745 MHz to 5 825 MHz (WiFi 5 GHz_UNII 3)

Frequency Range RX	869.70 MHz to 893.31 MHz (CDMA BC0) 1 931.25 MHz to 1 988.75 MHz (CDMA BC1) 862.00 MHz to 894.00 MHz (CDMA BC10) 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) 729 MHz to 746 MHz (LTE B12) 746 MHz to 756 MHz (LTE B13) 1 925 MHz to 1 990 MHz (LTE B25) 859 MHz to 894 MHz (LTE B26) 2 496 MHz to 2 690 MHz (LTE B41) 2 496 MHz to 2 690 MHz (LTE B41 HPUE) 2 110 MHz to 2 200 MHz (LTE B66) 617 MHz to 652 MHz (LTE B71) 2 402 MHz to 2 480 MHz (Bluetooth) 2 412 MHz to 2 462 MHz (WiFi 2.4 GHz) 5 180 MHz to 5 240 MHz (WiFi 5 GHz_UNII 1) 5 260 MHz to 5 320 MHz (WiFi 5 GHz_UNII 2A) 5 500 MHz to 5 720 MHz (WiFi 5 GHz_UNII 2C) 5 745 MHz to 5 825 MHz (WiFi 5 GHz_UNII 3)

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-K330PM	-	LG
USB Cable	EAD64746109	-	NINGBO
Earphone	EAB64468444	-	CRESYN
TA	MCS-V02WR (MCS-V02WR_Tracfone)	-	SUNLIN
Micro SD Card	SAMSUNG EVO+ microSDXC CLASS10 UHS- I (256 GB)	-	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	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	USB Type C	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, 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.
Our laboratories are accredited and designated in accordance with the provisions of Radio Waves ACT and International Standard ISO/IEC 17025:2017. (National Radio Research Agency, Designation No. KR0032)

1.6 Calibration of Measuring Instrument

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in ac cordance 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.

Test Item	Test Site (Chamber)	Expanded Uncertainty
Conducted Emission (0.15 MHz to 30 MHz)	EMI Shield Room	1.6 dB
Radiated Emissions (30 MHz to 1 GHz)	3 m Semi Anechoic Chamber #1	4.9 dB
Radiated Emissions (1 GHz to 18 GHz)	3 m Semi Anechoic Chamber #1	4.6 dB
Radiated Emissions (18 GHz to 40 GHz)	3 m Semi Anechoic Chamber #1	5.6 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

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 (μV/m)	Quasi-Peak (dBμV/m)	Antenna Distance (m)	Field Strength (μV/m)	Quasi-Peak (dBμV/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

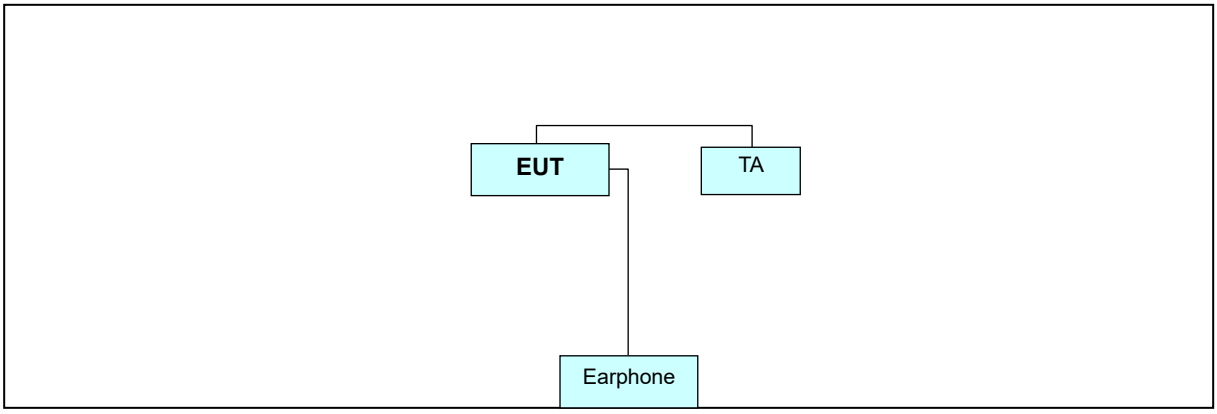
Frequency (MHz)	Antenna Distance (m)	Class A		Class B	
		Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
Above 1 000	3	80	60	74	54

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 ㎓, whichever is lower

2.3 Configuration of Tested System



Non-Conductive Table
Power Line: 120 VAC, 60 Hz

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	ESR7	101910	1 year	09.16.2020
☒	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	USLP 9142-200	-	-
☒	Software	Rohde & Schwarz	EMC32	-	-	-

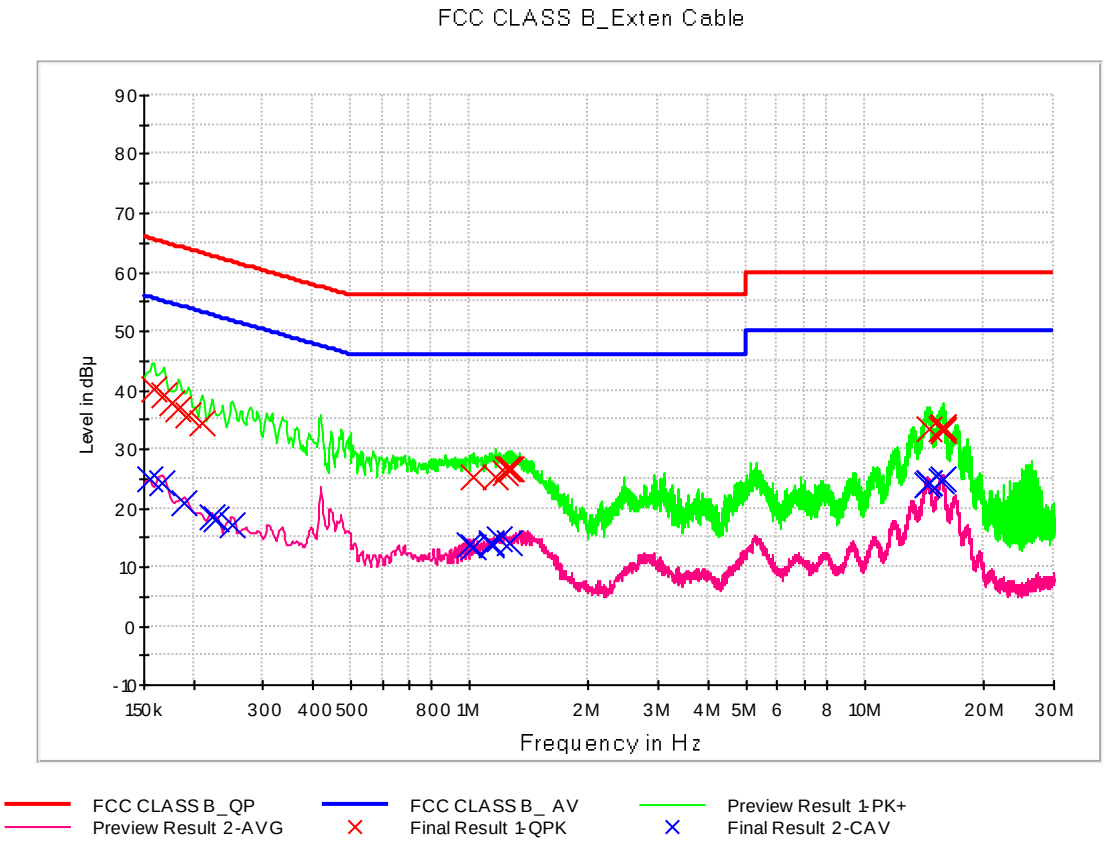
4.1.2 Operating Condition

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 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	REAR CAMERA & FM RADIO mode
Test Site	EMI Shield Room
Temperature	22.9 °C
Relative Humidity	46.0 %
Test Date	January 05, 2021

4.1.3 Measuring Data

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



QuasiPeak Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	40.1	9.000	L1	9.8	25.4	65.5
0.168000	39.2	9.000	L1	9.8	25.9	65.1
0.177000	37.8	9.000	L1	9.8	26.9	64.6
0.183750	36.8	9.000	L1	9.8	27.5	64.3
0.195000	35.6	9.000	L1	9.8	28.2	63.8
0.210750	34.3	9.000	L1	9.8	28.8	63.2
1.022000	25.3	9.000	L1	9.8	30.7	56.0
1.163750	25.4	9.000	L1	9.8	30.6	56.0
1.238000	26.0	9.000	L1	9.8	30.0	56.0
1.251500	26.5	9.000	L1	9.8	29.5	56.0
1.260500	26.5	9.000	L1	9.8	29.5	56.0
1.274000	26.8	9.000	L1	9.8	29.2	56.0
14.486000	33.6	9.000	L1	10.3	26.4	60.0
15.671750	33.5	9.000	L1	10.4	26.5	60.0
15.694250	33.6	9.000	L1	10.4	26.4	60.0
15.716750	33.2	9.000	L1	10.4	26.8	60.0
15.768500	33.7	9.000	L1	10.4	26.3	60.0
15.793250	33.4	9.000	L1	10.4	26.6	60.0

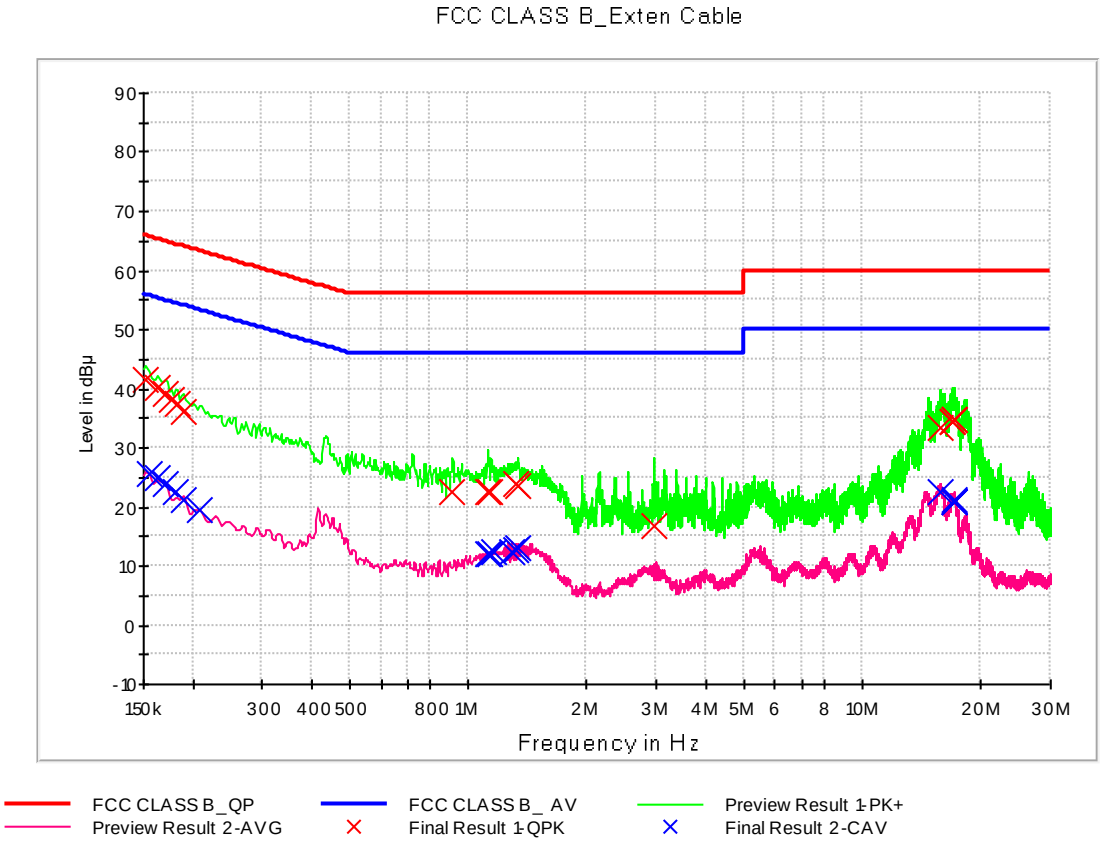
Calculation Formula:

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

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	25.0	9.000	L1	9.8	30.8	55.8
0.165750	24.4	9.000	L1	9.8	30.8	55.2
0.190500	20.7	9.000	L1	9.8	33.3	54.0
0.222000	18.4	9.000	L1	9.8	34.4	52.7
0.228750	18.0	9.000	L1	9.8	34.5	52.5
0.251250	17.2	9.000	L1	9.8	34.5	51.7
1.001750	13.9	9.000	L1	9.8	32.1	46.0
1.024250	13.5	9.000	L1	9.8	32.5	46.0
1.130000	13.9	9.000	L1	9.8	32.1	46.0
1.141250	14.2	9.000	L1	9.8	31.8	46.0
1.195250	14.8	9.000	L1	9.8	31.2	46.0
1.253750	14.2	9.000	L1	9.8	31.8	46.0
14.407250	24.0	9.000	L1	10.3	26.0	50.0
14.488250	24.1	9.000	L1	10.3	25.9	50.0
14.508500	24.2	9.000	L1	10.3	25.8	50.0
14.513000	24.2	9.000	L1	10.3	25.8	50.0
15.599750	24.5	9.000	L1	10.4	25.5	50.0
15.768500	24.9	9.000	L1	10.4	25.1	50.0

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



QuasiPeak Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.152250	41.4	9.000	N	9.8	24.4	65.9
0.163500	40.2	9.000	N	9.8	25.1	65.3
0.170250	39.2	9.000	N	9.8	25.7	64.9
0.177000	38.3	9.000	N	9.8	26.3	64.6
0.183750	37.6	9.000	N	9.8	26.7	64.3
0.190500	36.2	9.000	N	9.8	27.8	64.0
0.911750	22.7	9.000	N	9.8	33.3	56.0
1.118750	22.6	9.000	N	9.8	33.4	56.0
1.141250	22.4	9.000	N	9.8	33.6	56.0
1.314500	23.7	9.000	N	9.8	32.3	56.0
1.334750	23.6	9.000	N	9.8	32.4	56.0
2.963750	16.7	9.000	N	9.9	39.3	56.0
15.827000	33.6	9.000	N	10.5	26.4	60.0
16.934000	34.4	9.000	N	10.5	25.6	60.0
16.958750	34.4	9.000	N	10.5	25.6	60.0
17.055500	34.7	9.000	N	10.6	25.3	60.0
17.080250	34.7	9.000	N	10.6	25.4	60.0
17.105000	34.9	9.000	N	10.6	25.1	60.0

CAverage Final Result

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	25.6	9.000	N	9.8	30.2	55.8
0.163500	24.9	9.000	N	9.8	30.4	55.3
0.170250	23.9	9.000	N	9.8	31.0	54.9
0.181500	22.4	9.000	N	9.8	32.0	54.4
0.190500	21.1	9.000	N	9.8	32.9	54.0
0.208500	19.4	9.000	N	9.8	33.9	53.3
1.123250	12.0	9.000	N	9.8	34.0	46.0
1.139000	12.1	9.000	N	9.8	33.9	46.0
1.154750	12.2	9.000	N	9.8	33.8	46.0
1.292000	12.5	9.000	N	9.8	33.5	46.0
1.316750	12.6	9.000	N	9.8	33.4	46.0
1.341500	12.9	9.000	N	9.8	33.1	46.0
15.856250	22.5	9.000	N	10.5	27.5	50.0
17.053250	21.1	9.000	N	10.6	28.9	50.0
17.071250	21.0	9.000	N	10.6	29.0	50.0
17.075750	21.0	9.000	N	10.6	29.0	50.0
17.125250	21.0	9.000	N	10.6	29.0	50.0
17.129750	21.0	9.000	N	10.6	29.0	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	-
☒	Turn table	INNCO Systems	1060	-	N/A	-
☒	Turn table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.19.2020
☒	Antenna (for communication)	Schwarzbeck	USLP9142	USLP 9142-200	-	-
☒	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 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	REAR CAMERA & FM RADIO mode
Test Site	3 m semi anechoic chamber
Temperature	21.9 °C
Relative Humidity	44.9 %
Test Date	January 04, 2021

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)
30.349480	**19.0**	**174.8**	**V**	**206.0**	**18.3**	**21.0**	**40.0**
61.726720	**18.6**	**174.8**	**V**	**114.0**	**19.1**	**21.4**	**40.0**
114.513280	**21.6**	**207.7**	**V**	**270.0**	**16.8**	**21.9**	**43.5**
162.173200	**19.0**	**100.0**	**V**	**114.0**	**19.7**	**24.5**	**43.5**
488.864160	**24.5**	**325.1**	**V**	**50.0**	**24.9**	**21.5**	**46.0**
683.649880	**28.6**	**174.9**	**H**	**234.0**	**28.5**	**17.4**	**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	-
☒	Turn table	INNCO Systems	1060	-	N/A	-
☒	Turn table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.19.2020
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	USLP 9142-200	-	-
☒	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
☒	Horn antenna	Schwarzbeck	BBHA 9170	BBHA9170#786	1 year	11.18.2020
☒	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	5 825 MHz
Tested Frequency Range	1 GHz to 30 GHz
Worst Case of Operating Mode	REAR CAMERA & FM RADIO mode
Test Site	3 m semi anechoic chamber
Temperature	22.4 / 23.1 °C
Relative Humidity	45.1 / 44.2 %
Test Date	January 11 / January 12, 2021

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)
2498.900000	38.4	232.6	H	259.0	-24.0	35.6	74.0
5268.390000	36.0	149.9	V	87.0	-17.4	38.0	74.0
7460.375000	41.1	249.7	V	4.0	-12.0	32.9	74.0
11335.370000	45.8	307.4	V	327.0	-4.5	28.2	74.0
14481.170000	48.2	249.8	H	200.0	-0.4	25.8	74.0
17929.660000	55.2	176.6	V	308.0	8.6	18.8	74.0

Frequency (MHz)	CAverage (dBμV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
2498.900000	32.3	232.6	H	259.0	-24.0	21.7	54.0
5268.390000	23.6	149.9	V	87.0	-17.4	30.4	54.0
7460.375000	28.3	249.7	V	4.0	-12.0	25.7	54.0
11335.370000	32.3	307.4	V	327.0	-4.5	21.7	54.0
14481.170000	35.4	249.8	H	200.0	-0.4	18.6	54.0
17929.660000	42.5	176.6	V	308.0	8.6	11.5	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 GSM/CDMA/WCDMA/LTE Phone with WLAN, Bluetooth, Model: LM-K330PM** 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-2101-FC015-P	January 15, 2021	Initial Release

End of report