On your side

TEST REPORT

EMI Test for FCC Certification / ISED of LM-K300UM Model

APPLICANT

LG Electronics USA, Inc.

REPORT NO.

HCT-EM-2003-FI005

DATE OF ISSUE

March 16, 2020

HCT Co., Ltd.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 645 6300 Fax. +82 31 645 6401

HCT Co., Ltd.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 645 6300 Fax. +82 31 645 6401

TEST REPORT

EMI Test for FCC Certification / ISED

REPORT NO.
HCT-EM-2003-FI005

DATE OF ISSUE
March 16, 2020

FCC ID / IC
ZNFK300UM / 2703C-K300WM

Applicant	LG Electronics USA, Inc. 1000 Sylvan Avenue, Englewood Cliffs NJ 07632 United States
Product Name	SMART PHONE
Model Name	LM-K300UM
Series Model Name	Refer to the clause 1.1 Description of EUT
Date of Test	March 03, 2020 to March 13, 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.

Tested by
Kyoung-Hee Yoon (signature)

Technical Manager
Jeong-Hyun Choi (signature)

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	March 16, 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 denial the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

This Test Report is not related to the accredited test result by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation), which signed the ILAC-MRA.

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

CONTENTS

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

1. GENERAL INFORMATION

1.1 Description of EUT

FCC ID	ZNFK300UM
IC	2703C-K300WM
Model Name	LM-K300UM
Series Model Name	LMK300UM, K300UM, LM-K300WM, LMK300WM, K300WM, LM-K300QM6, LMK300QM6, K300QM6
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 2 690 MHz (LTE B7) 729 MHz to 746 MHz (LTE B12) 746 MHz to 756 MHz (LTE B13) 734 MHz to 746 MHz (LTE B17) 1 925 MHz to 1 990 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)

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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-K300UM	-	LG
Notebook PC	ProBook6560b	5CB2053MXF	HP
Notebook PC Adaptor	Series PPP009L-E	-	LITE-ON Technology (CHANGZHOU)
Gateway	DIR-806M	-	D-Link
Gateway Adaptor	AMS1-0501200FK	-	D-Link
Serial Mouse	Serial 2 Button mouse	02031069	Radio Shack
RJ45 cable	-	-	-
DATA Cable	EAD62377927	-	NINGBO BROAD
DATA Cable	EAD62377922	-	KSD
Earphone	EAB64468444	-	CRESYN
Micro SD Card	Extreme MicroSDHC UHS-I CLASS 10 (32 GB)	-	SANDISK

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

1.3 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	Micro USB	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	Micro USB	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 PC End

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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)	1.8 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

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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.

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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

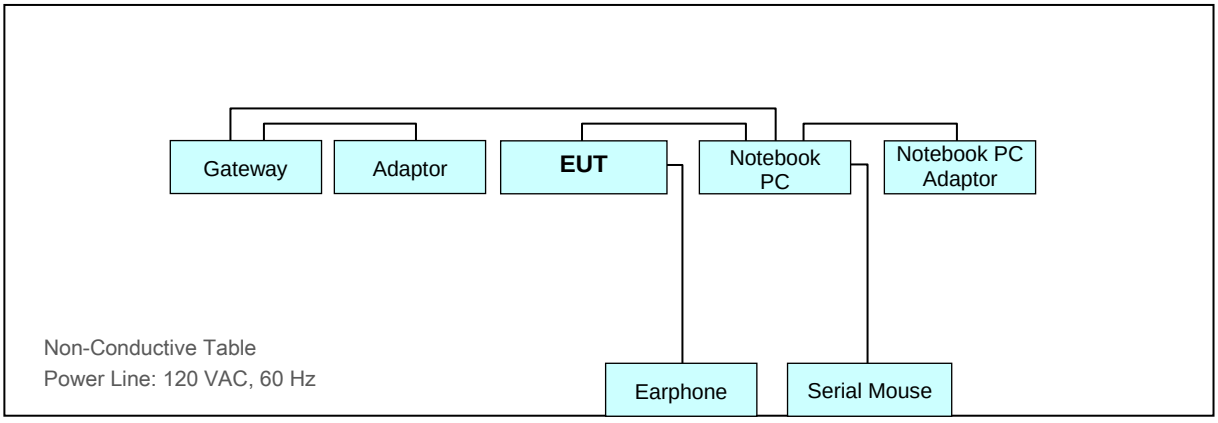
This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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



This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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	06.18.2019
☒	LISN	Rohde & Schwarz	ENV216	102245	1 year	09.11.2019
☒	LISN	Rohde & Schwarz	ENV216	100073	1 year	04.30.2019
☒	Software	Rohde & Schwarz	EMC32	-	-	-

4.1.2 Operating Condition

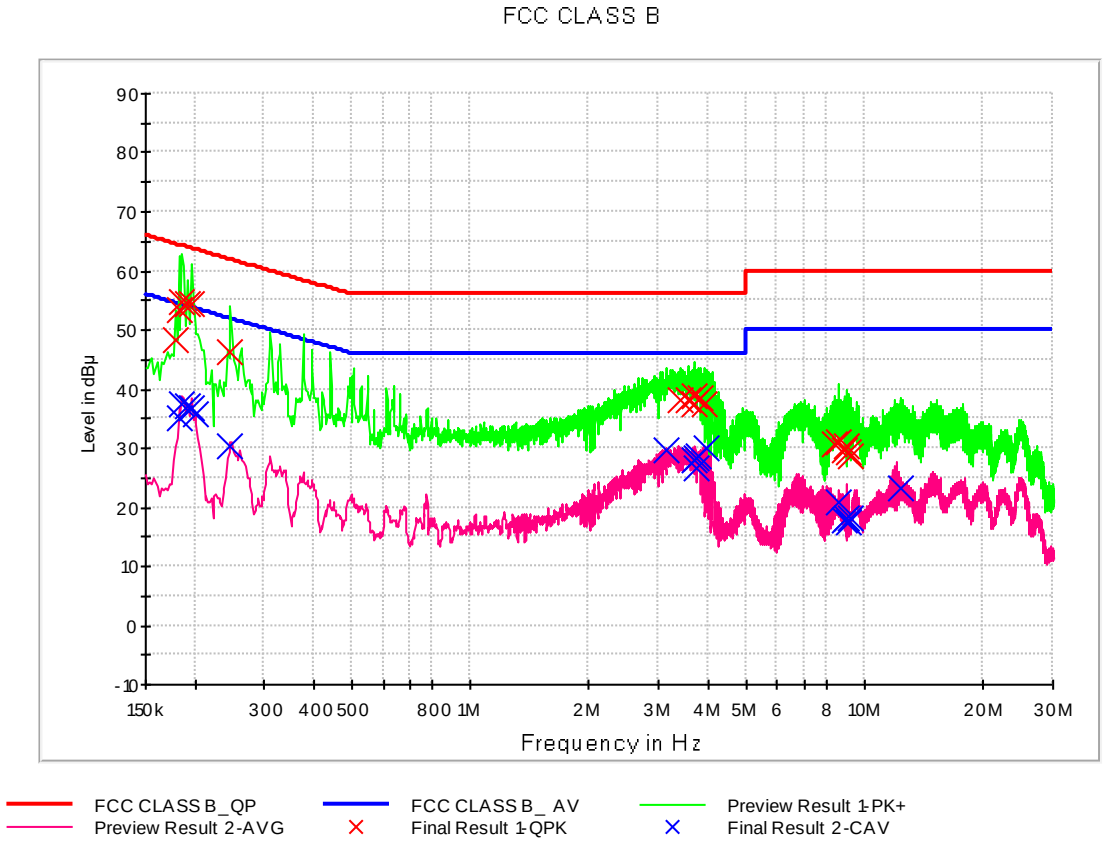
The test results of conducted emission at mains ports provide the following information:

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)
Operating Mode	Data Communication mode
Worst Case of Data Cable	NINGBO BROAD (EAD62377927)
Kind of Test Site	EMI Shielded Room
Temperature	24.1 °C
Relative Humidity	42.3 %
Test Date	March 03, 2020

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

4.1.3 Measuring Data

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



This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.178000	48.2	9.000	L1	9.7	16.4	64.6
0.182000	53.3	9.000	L1	9.7	11.1	64.4
0.186000	54.7	9.000	L1	9.7	9.5	64.2
0.192000	54.4	9.000	L1	9.7	9.6	63.9
0.196000	54.4	9.000	L1	9.7	9.4	63.8
0.246000	46.2	9.000	L1	9.7	15.7	61.9
3.420000	38.1	9.000	L1	9.8	17.9	56.0
3.556000	38.1	9.000	L1	9.8	17.9	56.0
3.690000	38.8	9.000	L1	9.8	17.2	56.0
3.700000	37.6	9.000	L1	9.8	18.4	56.0
3.828000	38.4	9.000	L1	9.8	17.6	56.0
3.926000	37.6	9.000	L1	9.8	18.4	56.0
8.406000	30.6	9.000	L1	9.9	29.4	60.0
8.592000	31.0	9.000	L1	9.9	29.0	60.0
8.940000	29.6	9.000	L1	9.9	30.4	60.0
8.966000	30.2	9.000	L1	9.9	29.8	60.0
9.060000	29.3	9.000	L1	9.9	30.7	60.0
9.180000	28.5	9.000	L1	9.9	31.5	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

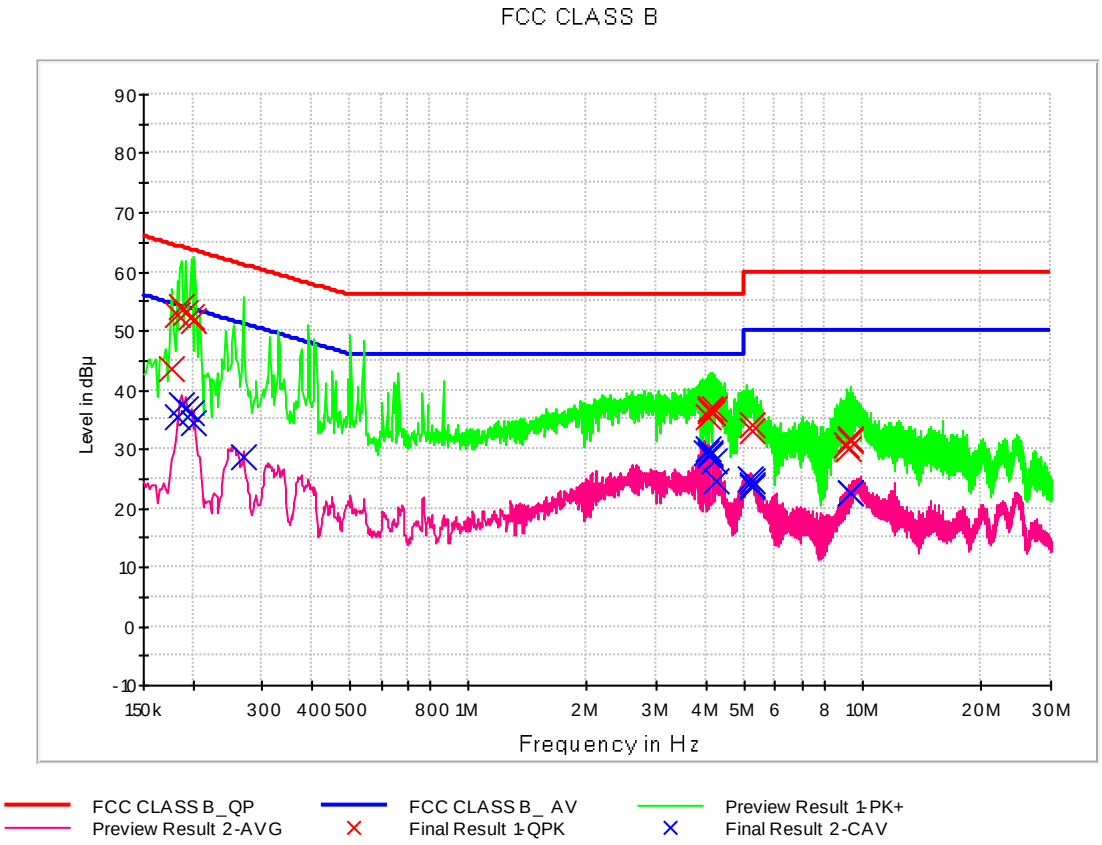
This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	35.1	9.000	L1	9.7	19.3	54.4
0.186000	37.3	9.000	L1	9.7	16.9	54.2
0.192000	37.2	9.000	L1	9.7	16.7	53.9
0.196000	36.8	9.000	L1	9.7	17.0	53.8
0.200000	35.7	9.000	L1	9.7	17.9	53.6
0.246000	30.3	9.000	L1	9.7	21.6	51.9
3.144000	29.6	9.000	L1	9.8	16.4	46.0
3.690000	28.0	9.000	L1	9.8	18.0	46.0
3.744000	26.7	9.000	L1	9.8	19.3	46.0
3.762000	28.3	9.000	L1	9.8	17.7	46.0
3.796000	28.6	9.000	L1	9.8	17.4	46.0
3.960000	30.0	9.000	L1	9.8	16.0	46.0
8.592000	20.8	9.000	L1	9.9	29.2	50.0
8.940000	17.7	9.000	L1	9.9	32.3	50.0
8.966000	18.3	9.000	L1	9.9	31.7	50.0
9.060000	17.6	9.000	L1	9.9	32.4	50.0
9.180000	18.1	9.000	L1	9.9	31.9	50.0
12.288000	23.2	9.000	L1	10.0	26.8	50.0

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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



This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.176000	43.4	9.000	N	9.7	21.2	64.7
0.182000	52.9	9.000	N	9.7	11.5	64.4
0.188000	54.1	9.000	N	9.7	10.1	64.1
0.192000	53.2	9.000	N	9.7	10.7	63.9
0.198000	52.4	9.000	N	9.7	11.3	63.7
0.202000	51.8	9.000	N	9.7	11.7	63.5
4.054000	35.6	9.000	N	9.8	20.4	56.0
4.086000	36.4	9.000	N	9.8	19.6	56.0
4.096000	36.9	9.000	N	9.8	19.1	56.0
4.158000	36.0	9.000	N	9.8	20.0	56.0
4.162000	36.1	9.000	N	9.8	19.9	56.0
4.226000	36.6	9.000	N	9.8	19.4	56.0
5.240000	33.9	9.000	N	9.8	26.1	60.0
5.268000	33.0	9.000	N	9.8	27.0	60.0
9.152000	30.5	9.000	N	9.9	29.5	60.0
9.156000	30.1	9.000	N	9.9	29.9	60.0
9.294000	31.4	9.000	N	9.9	28.6	60.0
9.346000	31.5	9.000	N	9.9	28.5	60.0

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	35.4	9.000	N	9.7	19.0	54.4
0.188000	37.4	9.000	N	9.7	16.7	54.1
0.192000	36.9	9.000	N	9.7	17.0	53.9
0.198000	36.1	9.000	N	9.7	17.6	53.7
0.202000	34.6	9.000	N	9.7	19.0	53.5
0.268000	28.8	9.000	N	9.7	22.4	51.2
4.028000	29.3	9.000	N	9.8	16.7	46.0
4.046000	30.1	9.000	N	9.8	15.9	46.0
4.086000	29.2	9.000	N	9.8	16.8	46.0
4.106000	28.8	9.000	N	9.8	17.2	46.0
4.228000	28.0	9.000	N	9.8	18.0	46.0
4.248000	24.5	9.000	N	9.8	21.5	46.0
5.176000	25.1	9.000	N	9.8	24.9	50.0
5.240000	24.5	9.000	N	9.8	25.5	50.0
5.248000	23.8	9.000	N	9.8	26.2	50.0
5.268000	23.7	9.000	N	9.8	26.3	50.0
9.294000	22.5	9.000	N	9.9	27.5	50.0
9.346000	22.6	9.000	N	9.9	27.4	50.0

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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	05.17.2019
☒	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	CO 3000	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	-
☒	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)
Operating Mode	Data Communication mode
Worst Case of Data Cable	NINGBO BROAD (EAD62377927)
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.1 °C
Relative Humidity	42.5 %
Test Date	March 03, 2020

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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)
30.154896	28.8	100.0	V	326.0	18.3	11.2	40.0
62.539400	25.6	100.0	V	326.0	19.1	14.4	40.0
85.833000	25.6	374.8	H	284.0	14.9	14.4	40.0
99.935400	25.6	100.0	V	168.0	15.2	17.9	43.5
133.275800	31.2	225.1	H	293.0	18.5	12.3	43.5
265.598600	33.5	100.0	H	150.0	19.3	12.5	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

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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	05.17.2019
☒	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	-
☒	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	07.19.2019
☐	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170#786	1 year	12.03.2019
☒	Software	Rohde & Schwarz	EMC32	-	-	-

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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
Operation Mode	Data Communication mode
Worst Case of Data Cable	NINGBO BROAD (EAD62377927)
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.4 °C
Relative Humidity	42.2 %
Test Date	March 09, 2020

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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)
1332.410000	43.1	305.4	V	97.0	-28.5	30.9	74.0
1498.275000	37.7	299.4	V	50.0	-27.9	36.3	74.0
1999.400000	51.7	100.0	V	46.0	-26.6	22.3	74.0
2588.980000	50.5	291.6	V	65.0	-24.0	23.5	74.0
4498.890000	41.9	189.4	V	3.0	-19.3	32.1	74.0
5998.415000	43.5	298.4	V	93.0	-16.4	30.5	74.0

Frequency (MHz)	CAverage (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1332.410000	25.8	305.4	V	97.0	-28.5	28.2	54.0
1498.275000	26.3	299.4	V	50.0	-27.9	27.7	54.0
1999.400000	35.7	100.0	V	46.0	-26.6	18.3	54.0
2588.980000	31.3	291.6	V	65.0	-24.0	22.7	54.0
4498.890000	26.0	189.4	V	3.0	-19.3	28.0	54.0
5998.415000	27.4	298.4	V	93.0	-16.4	26.6	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

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

5. CONCLUSION

The data collected shows that the **Product Name: SMART PHONE and Model: LM-K300UM** complies with §15.107 and §15.109 of the FCC rules and ICES-003 Issue 6 of the IC rules.

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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-2003-FI005-P	March 16, 2020	Initial Release

End of report

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.