FCC Test Report

APPLICANT : KonnectONE

EQUIPMENT : LTE MiFi
BRAND NAME : moxee

MODEL NAME : K779HSDL

FCC ID : 2APQU-K779HSDL

STANDARD : 47 CFR Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Nov. 06, 2019 and testing was completed on Nov. 25, 2019.

We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Reviewed by: Jason Jia / Supervisor

JasonJia

Approved by: James Huang / Manager

Sporton International (Kunshan) Inc.

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

Sporton International (Kunshan) Inc.

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Cert #5145.02

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC9N0608	Rev. 01	Initial issue of report	Jan. 10, 2020

Sporton International (Kunshan) Inc.

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	3.45 dB at
					0.194 MHz
					Under limit
3.2	15.109	15.109 Radiated Emission	< 15.109 limits	PASS	3.43 dB at
					45.520 MHz

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

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1. General Description

1.1. Applicant

KonnectONE

40 Lake Bellevue Drive, Suite 350, Bellevue, WA 98005

1.2. Manufacturer

MeiG Smart Technology Co., Ltd

No. 1 building, 9th floor, No.20, the 4th road of Zhangba Road, high-tech district, Xi'an, China.

1.3. Product Feature of Equipment Under Test

	Product Feature	
Equipment	LTE MIFI	
Brand Name	moxee	
Model Name	K779HSDL	
FCC ID	2APQU-K779HSDL	
	LTE	
EUT supports Radios application	WLAN 2.4GHz 802.11b/g/n HT20/HT40	
EOT Supports Radios application	WLAN 5GHz 802.11a/n HT20/HT40	
	WLAN 5GHz 802.11ac VHT20/VHT40/VHT80	
IMEI Code	Conduction: 351995110011554	
I IVIET Code	Radiation: 351995110012842	
HW Version	K779HSDL_V1.02_PCB	
SW Version	K779HSDL_2.00.10_EQ100	
EUT Stage	Identical Prototype	

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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1.4. Product Specification of Equipment Under Test

Standards-related Product Specification				
Tx Frequency	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5825 MHz			
Rx Frequency	LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 5: 869.7 MHz ~ 893.3 MHz LTE Band 12: 729.7 MHz ~ 745.3 MHz LTE Band 13: 748.5 MHz ~ 753.5 MHz LTE Band 25: 1930.7 MHz ~ 1994.3 MHz LTE Band 26: 859.7 MHz ~ 893.3 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 2110.7 MHz~ 2179.3 MHz LTE Band 71: 619.5 MHz ~ 649.5MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5825 MHz			
Antenna Type	WWAN/WLAN: IFA Antenna			
Type of Modulation	LTE: QPSK / 16QAM / 64QAM (downlink only) 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n/ac : OFDM (BPSK / QPSK / 16QAM / 64QAM /256QAM)			

1.5. Modification of EUT

No modifications are made to the EUT during all test items.

Sporton International (Kunshan) Inc.

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1.6. Test Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.					
	No. 1098, Pengxi North F	Road, Kunshan Economic	Development Zone			
Test Site Location	Jiangsu Province 215300 People's Republic of China					
Test Site Location	TEL: +86-512-57900158					
	FAX: +86-512-57900958					
	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.			
Test Site No.	CO01-KS 03CH02-KS	CN1257	314309			

1.7. Test Software

Item Site		Site Manufacture Name		Version
1.	03CH02-KS	AUDIX	E3	6.2009-8-24a
2.	CO01-KS	AUDIX	E3	6.2009-8-24

1.8. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 15 Subpart B
- ANSI C63.4-2014

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
	Mode 1: LTE Band 5 Rx(Middle) + WLAN (2.4G) Idle + USB Cable(Charging from Adapter)
	Mode 2: LTE Band 2 Rx + WLAN (5G) Idle + USB Cable(Charging from Adapter)
	Mode 3: LTE Band 12 Rx(Low) + WLAN (2.4G) Idle + USB Cable(Charging from Adapter)
AC Conducted Emission	Mode 4: LTE Band 13 Rx(High) + WLAN (5G) Idle + USB Cable(Charging from Adapter)
Emission	Mode 5: LTE Band 26 Rx(High) + WLAN (2.4G) Idle + USB Cable(Charging from Adapter)
	Mode 6: LTE Band 71 Rx(Middle) + WLAN (5G) Idle + USB Cable(Charging from Adapter)
	Mode 7: LTE Band 5 Rx(Middle) + WLAN (2.4G) Idle + USB Cable(Data Link with Notebook)
	Mode 1: LTE Band 5 Rx(Middle) + WLAN (2.4G) Idle + USB Cable(Charging from Adapter)
	Mode 2: LTE Band 2 Rx + WLAN (5G) Idle + USB Cable(Charging from Adapter)
	Mode 3: LTE Band 12 Rx(Low) + WLAN (2.4G) Idle + USB Cable(Charging from Adapter)
Radiated Emissions	Mode 4: LTE Band 13 Rx(High) + WLAN (5G) Idle + USB Cable(Charging from Adapter)
Emissions	Mode 5: LTE Band 26 Rx(High) + WLAN (2.4G) Idle + USB Cable(Charging from Adapter)
	Mode 6: LTE Band 71 Rx(Middle) + WLAN (5G) Idle + USB Cable(Charging from Adapter)
	Mode 7: LTE Band 5 Rx(Middle) + WLAN (2.4G) Idle + USB Cable(Data Link with Notebook)

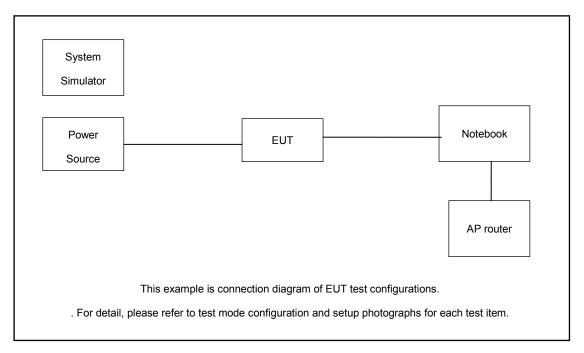
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Remark:

- 1. The worst case of AC is mode 1; only the test data of this mode is reported.
- 2. The worst case of RE is mode 1; only the test data of this mode is reported.
- 3. Data Link with Notebook / PC means data application transferred mode between EUT and Notebook / PC.
- 4. Pre-scanned Low/Middle/High channel for LTE Band 2/5/12/13/26/71, the worst channel was recorded in this report.

2.2. Connection Diagram of Test System



The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application

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2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded,1.8m
2.	Notebook	DELL	Latitude3440	N/A	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
3.	Hard disk	KINGSHARE	S64G8A18X003	N/A	N/A	N/A
4.	LTE Base Station	Anritus	MT8820C	N/A	N/A	Unshielded,1.8m
5.	LTE Base Station	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
6.	LTE Base Station	Anritus	MT8820C	N/A	N/A	Unshielded,1.8m
7.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
8.	Router	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
9.	iPod	Apple	A1199	Fcc DoC	Shielded, 1.2m	N/A

2.4. EUT Operation Test Setup

The EUT was LTE idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Data application is transferred between notebook and EUT via USB cable.

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3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

<Class B Limit>

Frequency of emission	Conducted	limit (dBuV)
(MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

^{*}Decreases with the logarithm of the frequency.

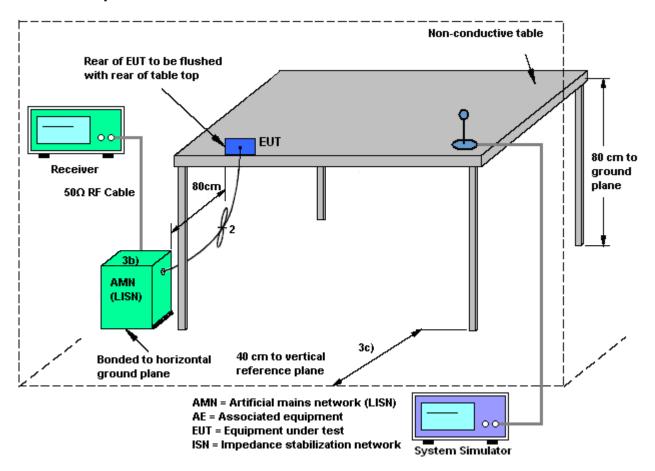
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedure

- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other LISN.
- 4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

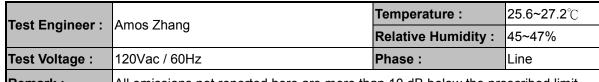
3.1.4 Test Setup



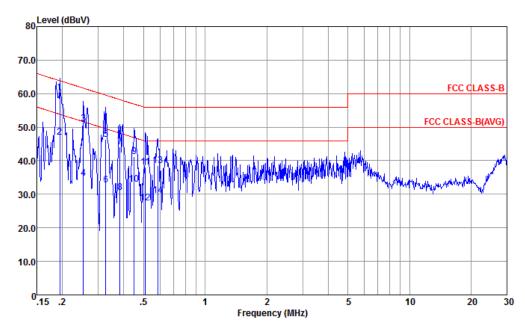
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3.1.5 Test Result of AC Conducted Emission



Remark : All emissions not reported here are more than 10 dB below the prescribed limit.



Site : CO01-KS

Condition : FCC CLASS-B LISN-L-191028-060105 LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
2 0 3 4 0 5 0 6 6 0 7 8 0 10 0 11 0 11 1 12 13	0. 194 0. 194 0. 253 0. 253 0. 327 0. 327 0. 383 0. 383 0. 449 0. 510 0. 510 0. 585 0. 585	51. 06 34. 66 46. 24 32. 74 44. 03 30. 53 41. 21 32. 91 38. 01 27. 51 38. 52	-3. 45 -6. 85 -10. 58 -16. 98 -13. 29 -16. 79 -14. 18 -17. 68 -15. 68 -13. 98 -17. 99 -18. 49 -17. 48 -16. 28	63. 84 53. 84 61. 64 51. 64 59. 53 49. 53 58. 21 48. 21 56. 89 46. 89 56. 00 46. 00 46. 00	49. 90 36. 50 40. 60 24. 20 35. 80 22. 30 33. 60 20. 10 30. 80 22. 50 27. 60 27. 10 28. 10 19. 30	0. 12 0. 12 0. 13 0. 13 0. 15 0. 15 0. 16 0. 16 0. 16 0. 17 0. 17 0. 18 0. 18	10. 33 10. 29 10. 29 10. 27 10. 27 10. 25 10. 25 10. 24 10. 24 10. 24	Average QP Average QP Average QP Average QP Average QP Average

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Temperature: 25.6~27.2°C Test Engineer: Amos Zhang **Relative Humidity:** 45~47% Test Voltage: 120Vac / 60Hz Phase: Neutral Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 80 Level (dBuV) 70.0 FCC CLASS-B 60.0 FCC CLASS-B(AVG) 50.0 40.0 30.0 20.0 10.0 30 Frequency (MHz) Site : CO01-KS Condition : FCC CLASS-B LISN-N-191028-060105 NEUTRAL LISN Cable 0ver Limit Read Level Factor Level Limit Line Loss Remark MHz dBuV dΒ dBuV dBuV dB -4. 88 -17. 08 -6. 72 -16. 42 -12. 47 60. 42 38. 22 57. 78 65. 30 55. 30 64. 50 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 27. 59 47. 19 27. 49 39. 80 17. 20 38. 50 17. 20 0.163 0.180 0. 18 0. 18 0. 18 0. 17 0. 17 0. 17 0. 16 0. 16 0. 16 0. 16 0. 16 0. 15 0. 15 0. 15 0. 15 0. 15 0. 15 10.45 Average 10.41 QP 38. 08 50. 32 27. 72 54. 50 62. 79 52. 79 0. 180 0. 221 10.41 Average 10.35 QP 50. 32 -12. 47 27. 72 -25. 07 49. 01 -13. 12 27. 71 -24. 42 45. 08 -15. 77 22. 98 -27. 87 40. 95 -18. 45 20. 75 -28. 65 40. 64 -18. 01 22. 04 -26. 61 38. 92 -19. 11 23. 32 -24. 71 36. 30 -20. 68 22. 60 -24. 38 36. 29 -19. 85 20. 69 -25. 45 Average 0. 239 0. 239 62. 13 52. 13 10. 34 QP 10. 34 Ave 10. 32 QP 10. 32 Ave Average 52. 13 60. 85 50. 85 59. 40 49. 40 58. 65 0. 279 0. 279 0. 332 34. 60 12. 50 30. 50 Average 0.332 10.30 30.20 10.29 10.28 10.28 QP 10.28 Average 10.27 QP 10.27 Average 10.25 QP 10.25 Average 10.24 QP 10.24 Average 48. 65 58. 03 48. 03 56. 98 46. 98 11. 60 28. 50 12. 90 0.363 25. 90 12. 20 25. 90 10. 30 0. 444 0. 444 491 46, 14

Note:

- 1. Level($dB\mu V$) = Read Level($dB\mu V$) + LISN Factor(dB) + Cable Loss(dB)
- 2. Over Limit(dB) = Level(dB μ V) Limit Line(dB μ V)

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3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(meters)		
30 – 88	100	3		
88 – 216	150	3		
216 - 960	200	3		
Above 960	500	3		

3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

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3.2.3. Test Procedures

- 1. The EUT was placed on a turntable with 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- 5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- 6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
- 7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
- 8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

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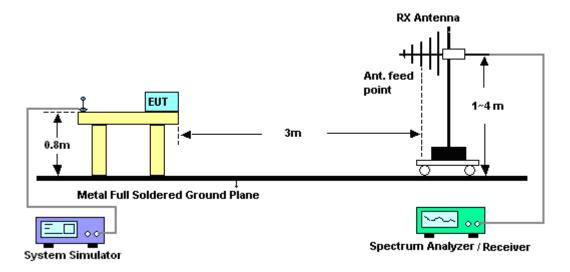
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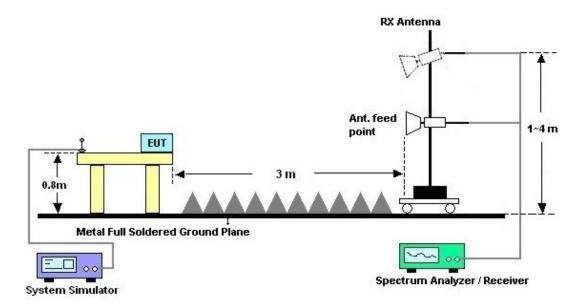
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



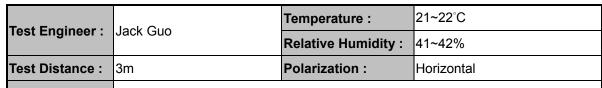
For radiated emissions above 1GHz



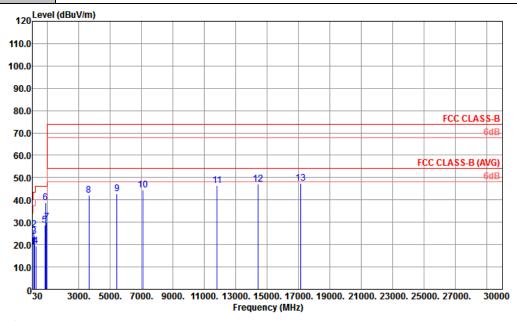
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3.2.5. Test Result of Radiated Emission



Remark: #6 is system simulator signal which can be ignored.



Site : 03CH02-KS

Condition : FCC CLASS-B 3m LF 49922-3M HORIZONTAL

				Limit	Read	Antenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	37.760	18.90	-21.10	40.00	29.49	20.66	0.71	31.96			Peak
2	134.760	26.59	-16.91	43.50	40.36	16.89	1.28	31.94			Peak
3	164.830	23.79	-19.71	43.50	37.63	16.58	1.51	31.93			Peak
4	246.310	19.50	-26.50	46.00	31.19	18.42	1.85	31.96			Peak
5	839.950	28.76	-17.24	46.00	28.20	29.08	3.33	31.85			Peak
6	881.660	38.90			37.83	29.24	3.41	31.58			Peak
7	948.590	30.06	-15.94	46.00	26.64	30.87	3.55	31.00	100	0	Peak
8	3648.000	42.28	-31.72	74.00	32.69	34.33	7.11	31.85			Peak
9	5424.000	42.83	-31.17	74.00	30.13	35.06	8.71	31.07			Peak
10	7072.000	44.48	-29.52	74.00	29.57	36.23	10.01	31.33			Peak
11	11808.000	46.40	-27.60	74.00	25.58	39.16	13.72	32.06			Peak
12	14400.000	47.02	-26.98	74.00	23.60	39.38	15.59	31.55			Peak
13	17154.000	47.38	-26.62	74.00	21.86	40.68	16.51	31.67			Peak

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4 F	. last					Temperature : Relative Humidity : Polarization :			21~	21~22°C			
est Engineer	: Jack								: 41~	41~42% Vertical			
est Distance	: 3m								Ver				
emark :	#7 is	#7 is system simulator signa					ıl which can be ignored.						
120 Le	evel (dBuV	/m)											
110.0													
100.0													
90.0													
80.0													
70.0											FC	C CLASS-	
60.0											FCC CLA	SS-B (AVC	
50.0		9 10	11	12				13				- 6d	
40.0	7 8	1 1											
30.0	6												
•													
20.0													
10.0													
10.0	300	0 5000	7000	0000 1	1000 13	2000 150	100 170	00. 10000	21000	23000	25000 27	7000 30	
	0 300	0. 5000.	7000.	9000. 1	1000. 13	3000. 150 Frequen		00. 19000	. 21000.	23000.	25000. 27	7000. 30	
10.0 - 0 ₃₀ Site		03CH02-	·KS			Frequen	cy (MHz		. 21000.	23000.	25000. 27	7000. 30	
10.0 0 ₃₀			·KS			Frequen	cy (MHz		. 21000.	23000.	25000. 27	7000. 30	
10.0 - 0 ₃₀ Site		03CH02-	·KS			Frequen	cy (MHz		. 21000.	23000.	25000. 27	7000. 30	
10.0 - 0 ₃₀ Site		03CH02-	-KS ASS-B 31	n LF 499	22-3M \	Frequen /ERTICAL	cy (MHz)			25000. 27	7000. 30	
10.0 - 0 ₃₀ Site	: ion :	03CH02- FCC CLA	-KS ASS-B 31 Over	n LF 499 Limit	22-3M \ ReadA	Frequen /ERTICAL	cy (MHz)) Preamp				7000. 30	
10.0 - 0 ₃₀ Site	: ion : Freq	03CH02- FCC CLA	Over	n LF 499 Limit Line	Read/ Level	Frequen /ERTICAL Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	7000. 30	
10.0 - 0 ₃₀ Site	: ion : Freq	03CH02- FCC CLA	Over	n LF 499 Limit	22-3M \ ReadA	Frequen /ERTICAL	cy (MHz)	Preamp Factor			Remark	7000. 30	
10.0 0 ₃₀ Site Condit	Freq MHz	03CH02- FCC CLA Level dBuV/m	Over Limit dB	Limit Line dBuV/m	Read/ Level dBuV	Frequen /ERTICAL Antenna Factor dB/m 16.63	Cable Loss dB 0.78	Preamp Factor dB 31.94	A/Pos Cm	T/Pos deg	Remark Peak	7000. 30	
10.0 0 ₃₀ Site Condit	Freq MHz 45.520 70.740	03CH02- FCC CLA Level dBuV/m 36.57 21.41	Over Limit dB -3.43 -18.59	Limit Line dBuV/m 40.00 40.00	Read/ Level dBuV 51.10 39.64	Antenna Factor dB/m 16.63 12.72	Cable Loss dB 0.78 0.97	Preamp Factor dB 31.94 31.92	A/Pos	T/Pos deg 0	Remark ————————————————————————————————————	7000. 30	
10.0 0 ₃₀ Site Condit	Freq MHz	03CH02- FCC CLA Level dBuV/m 36.57 21.41 25.79	Over Limit dB -3.43 -18.59 -17.71	Limit Line dBuV/m 40.00 43.50	Read/ Level dBuV 51.10 39.64 39.53	Antenna Factor 16.63 12.72 16.91	Cable Loss dB 0.78 0.97 1.29	Preamp Factor dB 31.94	A/Pos Cm 100	T/Pos deg	Remark Peak	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830	03CH02- FCC CLA Level dBuV/m 36.57 21.41 25.79 23.73 23.89	Over Limit -3.43 -18.59 -17.71 -19.77 -22.11	Limit Line dBuV/m 40.00 43.50 43.50 46.00	Read/ Level dBuV 51.10 39.64 39.53 37.45 35.15	/ERTICAL /Intenna Factor 16.63 12.72 16.91 16.71 18.84	Cable Loss dB 0.78 0.97 1.29 1.50	Preamp Factor dB 31.94 31.92 31.94 31.93 31.99	A/Pos	deg 0 	Remark	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830 719.670	03CH02- FCC CLA Level dBuV/m 36.57 21.41 25.79 23.73 23.89 28.79	Over Limit -3.43 -18.59 -17.71 -19.77 -22.11	Limit Line dBuV/m 40.00 43.50 43.50 46.00	Read/ Level dBuV 51.10 39.64 39.53 37.45 35.15 30.62	/ERTICAL Antenna Factor dB/m 16.63 12.72 16.91 16.71 18.84 27.41	Cable Loss dB 0.78 0.97 1.29 1.59 1.89 3.07	Preamp Factor dB 31.94 31.92 31.94 31.99 31.99 32.31	A/Pos	deg 0 	Remark Peak Peak Peak Peak Peak Peak	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830 719.670 881.660	03CH02- FCC CLA Level 36.57 21.41 25.79 23.73 23.89 28.79 39.41	Over Limit dB -3.43 -18.59 -17.71 -19.77 -22.11 -17.21	Limit Line dBuV/m 40.00 43.50 43.50 46.00	Read/ Level dBuV 51.10 39.64 39.53 37.45 35.15 30.62 38.34	### Antenna Factor	Cable Loss dB 0.78 0.97 1.29 1.50 1.89 3.07 3.41	Preamp Factor dB 31.94 31.92 31.94 31.93 31.93 31.93 31.93 31.58	A/Pos	deg 0 	Remark Peak Peak Peak Peak Peak Peak	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830 719.670 881.660	03CH02- FCC CLA dBuV/m 36.57 21.41 25.79 23.73 23.89 28.79 39.41 38.34	Over Limit dB -3.43 -18.59 -17.71 -19.77 -22.11 -17.21	Limit Line dBuV/m 40.00 43.50 43.50 46.00 74.00	Read/ Level dBuV 51.10 39.64 39.53 37.45 35.15 30.62 38.34 37.67	Antenna Factor dB/m 16.63 12.72 16.91 16.71 18.84 27.41 29.24 29.01	Cable Loss dB 0.78 0.97 1.29 1.50 1.89 3.07 3.41 5.00	Preamp Factor dB 31.94 31.92 31.94 31.93 31.99 32.31 31.58 33.34	A/Pos cm 100	deg 0 	Remark Peak Peak Peak Peak Peak Peak Peak Pea	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830 719.670 881.660 1936.600 3640.000	03CH02- FCC CLA dBuV/m 36.57 21.41 25.79 23.73 23.89 28.79 39.41 38.34 41.98	Over Limit -3.43 -18.59 -17.71 -19.77 -22.11 -17.21 -35.66 -32.02	Limit Line dBuV/m 40.00 43.50 43.50 46.00 74.00 74.00	Read/ Level dBuV 51.10 39.64 39.53 37.45 35.15 30.62 38.34 37.67 32.41	Mntenna Factor dB/m 16.63 12.72 16.91 16.71 18.84 27.41 29.24 29.01 34.29	Cable Loss dB 0.78 0.97 1.29 1.50 1.89 3.07 3.41 5.40 7.10	Preamp Factor dB 31.94 31.92 31.94 31.93 31.93 31.93 31.93 31.58	A/Pos	deg 0 	Remark Peak Peak Peak Peak Peak Peak Peak Pea	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830 719.670 881.660	03CH02- FCC CLA dBuV/m 36.57 21.41 25.79 23.73 23.89 28.79 39.41 38.34 41.98 42.69	Over Limit -3.43 -18.59 -17.71 -19.77 -22.11 -17.21 -35.66 -32.02 -31.31	Limit Line dBuV/m 40.00 43.50 43.50 46.00 74.00 74.00 74.00	Read/Level dBuV 51.10 39.64 39.53 37.45 35.15 30.62 38.34 37.67 32.41 30.63	Mintenna Factor dB/m 16.63 12.72 16.91 16.71 18.84 27.41 29.24 29.01 34.29 34.83	Cable Loss dB 0.78 0.97 1.29 1.50 1.89 3.07 3.41 5.00 7.10	Preamp Factor dB 31.94 31.92 31.99 32.31 31.58 33.58 31.82 31.21	A/Pos cm 100	deg 0 	Remark Peak Peak Peak Peak Peak Peak Peak Pea	7000. 30	
10.0 030 Site Condit	Freq MHz 45.520 70.740 135.730 161.920 261.830 719.670 881.660 1936.600 3640.000 5056.000	03CH02- FCC CLA dBuV/m 36.57 21.41 25.79 23.73 23.89 28.79 39.41 38.34 41.98 42.69 43.42 44.42	Over Limit -3.43 -18.59 -17.71 -19.77 -22.11 -17.21 -35.66 -32.02 -31.31 -30.58 -29.58	Limit Line dBuV/m 40.00 43.50 43.50 46.00 74.00 74.00 74.00 74.00 74.00	Read/ Level dBuV 51.10 39.64 39.53 37.45 35.15 30.62 38.34 37.67 32.41 30.63 28.53 29.17	### Antenna Factor 16.63 12.72 16.91 18.84 27.41 29.24 29.01 34.29 34.83 36.23 36.20	Cable Loss 0.78 0.97 1.29 1.50 1.897 3.41 5.00 7.10 8.44 10.022 11.06	Preamp Factor 31.94 31.92 31.94 31.93 31.93 31.58 33.34 31.82 31.21 31.36 32.01	A/Pos cm 100	deg 0 	Remark Peak Peak Peak Peak Peak Peak Peak Pea	7000. 30	

Note:

- 1. Level($dB\mu V/m$) = Read Level($dB\mu V$) + Antenna Factor(dB/m) + Cable Loss(dB) Preamp Factor(dB)
- 2. Over Limit(dB) = Level(dB μ V/m) Limit Line(dB μ V/m)

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4. List of Measuring Equipment

5. Instrume nt	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 16, 2019	Nov. 25, 2019	Apr. 15, 2020	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 18, 2019	Nov. 25, 2019	Oct. 17, 2020	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Oct. 28, 2019	Nov. 25, 2019	Oct. 27, 2020	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 18, 2019	Nov. 25, 2019	Oct. 17, 2020	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Oct, 18, 2019	Nov. 24, 2019	Oct, 17,2020	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44G,MAX 30dB	Apr.15, 2019	Nov. 24, 2019	Apr. 16, 2020	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May. 30, 2019	Nov. 24, 2019	May. 29, 2020	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 27, 2019	Nov. 24, 2019	Jan. 26, 2020	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2019	Nov. 24, 2019	Jan.04, 2020	Radiation (03CH02-KS)
Amplifier	MITEQ	TTA1840-35-H G	1887435	18~40GHz	Feb. 08, 2019	Nov. 24, 2019	Feb. 07, 2020	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug. 06, 2019	Nov. 24, 2019	Aug. 05, 2020	Radiation (03CH02-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5G Hz	Apr. 15, 2019	Nov. 24, 2019	Apr. 14, 2020	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	61601000247 3	N/A	NCR	Nov. 24, 2019	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Nov. 24, 2019	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Nov. 24, 2019	NCR	Radiation (03CH02-KS)

NCR: No Calibration Required

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6. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence	2.9 dB
of 95% (U = 2Uc(y))	2.9 UD

<u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	4.9 dB
of 95% (U = 2Uc(y))	4.9 db

<u>Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	5.0 dB
of 95% (U = 2Uc(y))	3.0 UB

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