FCC RF Test Report

APPLICANT : HMD Global Oy

EQUIPMENT: Mobile Phone

BRAND NAME : Nokia MODEL NAME : TA-1187

FCC ID : 2AJOTTA-1187

STANDARD : FCC Part 15 Subpart C §15.225

CLASSIFICATION: (DXX) Low Power Communication Device Transmitter

The product was received on May 27, 2019 and testing was completed on Jun. 24, 2019. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures 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

James Huang

Jason Jia

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

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Report Version : Rev. 01

Report No.: FR952702D

Report Template No.: BU5-FR15CNFC Version 2.0

Cert #5145.02

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REVISION HISTORY

Report No.: FR952702D

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR952702D	Rev. 01	Initial issue of report	Aug. 05, 2019

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SUMMARY OF THE TEST RESULT

Report Section	FCC Rule	Description of Test	Result	Remark
3.1	15.207	AC Power Line Conducted Emissions	Complies	Under limit 5.08 dB at 0.163MHz
	15.215(c)	20dB Spectrum Bandwidth	Complies	-
3.2	-	99% OBW Spectrum Bandwidth	Complies	-
3.3	15.225(e)	Frequency Stability	Complies	-
3.4	15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Complies	Max level 54.58 dBµV/m at 13.560 MHz
3.5	15.225(d) & 15.209	Radiated Spurious Emissions	Complies	Under limit 3.50 dB at 30.000MHz
3.6	15.203	Antenna Requirements	Complies	-

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1. General Description

1.1 Applicant

HMD Global Oy

Bertel Jungin aukio 9,02600 ESPOO. FINLAND

1.2 Product Feature of Equipment Under Test

Product Feature			
Equipment	Mobile Phone		
Brand Name	Nokia		
Model Name	TA-1187		
FCC ID	2AJOTTA-1187		
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(16QAM uplink is not supported)/LTE WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE GNSS/FM Receiver/NFC		
IMEI Code	Conducted: N/A Conduction/Radiation: 354209100006112		
HW Version	LLDM490B		
SW Version	LLDB7016		
EUT Stage	Identical Prototype		

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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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1.3 Product Specification of Equipment Under Test

Standards-related Product Specification			
Tx/Rx Frequency Range	13.553 ~ 13.567MHz		
Channel Number	1		
20dBW	2.489 kHz		
99%OBW	2.113 kHz		
Antenna Type	Loop Antenna		
Type of Modulation	ASK		

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

1.4 Modification of EUT

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

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1.5 Testing Location

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

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Test Site	Sporton Inte	Sporton International (Kunshan) Inc.			
	No. 1098, Pengxi North Road, Kunshan Economic Development Zone				
Test Site Location	Jiangsu Prov	vince 215300 F	People's Repub	lic of China	
rest Site Location	TEL: +86-5 ²	12-57900158			
	FAX: +86-512-57900958				
	Sporton Site No.			FCC	FCC Test Firm
Test Site No.	Designa			Designation No.	Registration No.
	TH01-KS	03CH06-KS	CO01-KS		
Test Engineer	Aaron shen	Carl Ni	Amos Zhang	CN1257	314309
Temperature	22~24℃	C 21~22°C 25.3~26.2°C		GN1237	314309
Relative Humidity	53~55%	41~42%	38~40%		

1.6 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 C §15.225
- ANSI C63.10-2013

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2. Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

Investigation has been done on all the possible configurations.

The following table is a list of the test modes shown in this test report.

Test Items		
AC Power Line Conducted Emissions	Field Strength of Fundamental Emissions	
20dB Spectrum Bandwidth	Frequency Stability	
Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz	

The EUT pre-scanned in four NFC type, A, B, F, V. The worst type (type F) was recorded in this report. Pre-scanned tests, X, Y, Z in three orthogonal panels to determine the final configuration (Z plane as worst plane) from all possible combinations.

	Test Cases						
AC	Mode 1: GSM 850 Idle + Bluetooth Link + WLAN Link(2.4G) + NFC TX + USB Cable						
Conducted	` ′						
Emission	1(Charging from Adapter 1) + Earphone 1						
Remark: For Radiated Test Cases, The tests were performed with Adapter 1, Earphone 1 and USB							
Cable 1	Cable 1						

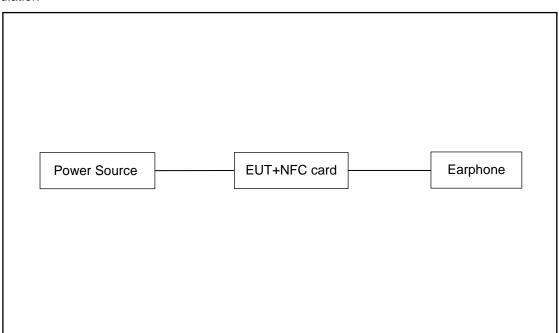
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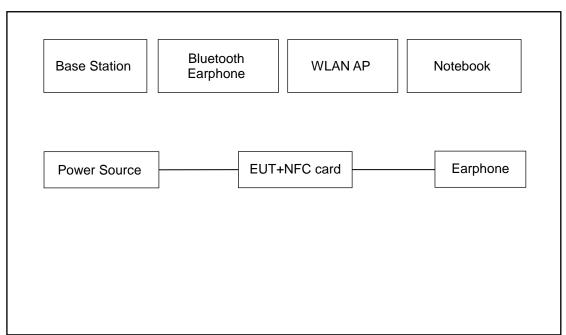
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2.2 Connection Diagram of Test System

For Radiation



For Conducted Emission



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2.3 Table for Supporting Units

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8m
2.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8m
3.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
5.	NFC Card	N/A	N/A	N/A	N/A	N/A

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2.4 EUT Operation Test Setup

The EUT was programmed to be in continuously transmitting mode.

The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmit at 13.56MHz and is placed around 3 cm gap to the EUT.

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3. Test Results

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit 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.

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Frequency of Emission	Conducted Limit (dBμV)		
(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

See list of measuring instruments of this test report.

3.1.3 Test Procedures

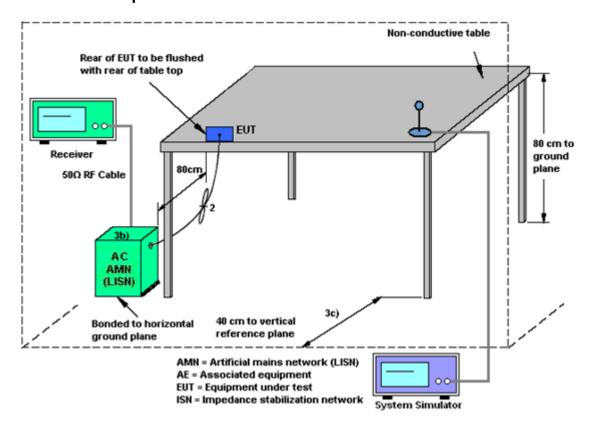
- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to 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.

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3.1.4 Test setup



3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

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3.2 20dB and 99% OBW Spectrum Bandwidth Measurement

3.2.1 Limit

Intentional radiators must be designed to ensure that the 20dB and 99% emission bandwidth in the specific band 13.553~13.567MHz.

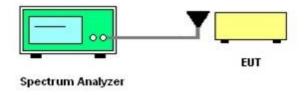
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

- The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
- 2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
- 3. Measured the spectrum width with power higher than 20dB below carrier.
- 4. Measured the 99% OBW.

3.2.4 Test Setup



3.2.5 Test Result of Conducted Test Items

Please refer to Appendix B.

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3.3 Frequency Stability Measurement

3.3.1 Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

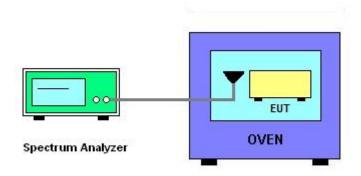
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

- 1. The spectrum analyzer connected via a receive antenna placed near the EUT.
- 2. EUT have transmitted signal and fixed channelize.
- 3. Set the spectrum analyzer span to view the entire emissions bandwidth.
- 4. Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.
- 5. The fc is declaring of channel frequency. Then the frequency error formula is $(fc-f)/fc \times 10^6$ ppm and the limit is less than ± 100 ppm.
- 6. Extreme temperature rule is -20°C~50°C.

3.3.4 Test Setup



3.3.5 Test Result of Conducted Test Items

Please refer to Appendix B.

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3.4 Field Strength of Fundamental Emissions and Mask Measurement

3.4.1 Limit

Rules and specifications	FCC CFR 47 Part 15 section 15.225			
Description	Compliance with the spectrum mask is tested with RBW set to 9kHz.			o 9kHz.
From of Francisco (MIII-)	Field Strength	Field Strength	Field Strength	Field Strength
Freq. of Emission (MHz)	(µV/m) at 30m	(dBµV/m) at 30m	(dBµV/m) at 10m	(dBµV/m) at 3m
1.705~13.110	30	29.5	48.58	69.5
13.110~13.410	106	40.5	59.58	80.5
13.410~13.553	334	50.5	69.58	90.5
13.553~13.567	15848	84.0	103.08	124.0
13.567~13.710	334	50.5	69.58	90.5
13.710~14.010	106	40.5	59.58	80.5
14.010~30.000	30	29.5	48.58	69.5

3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

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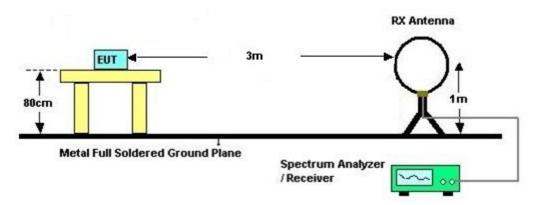
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3.4.3 Test Procedures

- Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- The height of the receiving antenna was fixed at one meter above ground to find the maximum emissions field strength.
- 4. For Fundamental emissions, use the receiver to measure QP reading.
- 5. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
- 6. Compliance with the spectrum mask is tested with RBW set to 9kHz. Note: Emission level ($dB\mu V/m$) = 20 log Emission level ($\mu V/m$).

3.4.4 Test Setup

For radiated emissions below 30MHz



3.4.5 Test Result of Field Strength of Fundamental Emissions and Mask

Please refer to Appendix C.

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3.5 Radiated Emissions Measurement

3.5.1 Limit

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

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Frequencies	Field Strength	Measurement Distance
(MHz)	(μV/m)	(meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Measuring Instrument Setting

The following table is the setting of receiver.

Receiver Parameter	Setting
Attenuation	Auto
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

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3.5.4 Test Procedures

- Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
- In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. Antenna Requirements

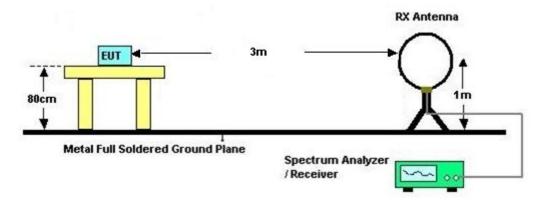
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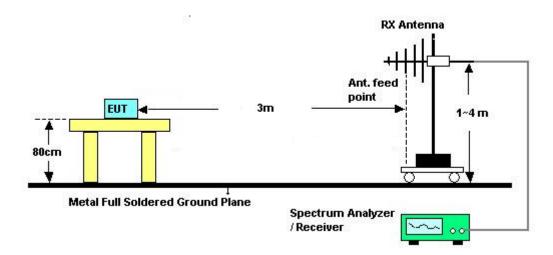
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3.5.5 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



3.5.6 Test Result of Radiated Emissions Measurement

Please refer to Appendix C.

Remark: There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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3.6 Antenna Requirements

3.6.1 Standard Applicable

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 07, 2018	Jun. 24, 2019	Aug. 06, 2019	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-9605 02	-40~+150°C	Nov. 19, 2018	Jun. 24, 2019	Nov. 18, 2019	Conducted (TH01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2018	Jun. 24, 2019	Oct. 11, 2019	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY564000 23	3Hz~8.5GHz;M ax 30dBm	Oct. 12, 2018	Jun. 20, 2019	Oct. 11, 2019	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 19, 2018	Jun. 20, 2019	Oct. 18, 2019	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 28, 2018	Jun. 20, 2019	Dec. 27, 2019	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	187289	9KHz ~1GHZ	Aug. 06, 2018	Jun. 20, 2019	Aug. 05, 2019	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F1040900 04	N/A	NCR	Jun. 20, 2019	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jun. 20, 2019	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jun. 20, 2019	NCR	Radiation (03CH06-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 16, 2019	Jun. 19, 2019	Apr. 15, 2020	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 12, 2018	Jun. 19, 2019	Oct. 11, 2019	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Nov. 19, 2018	Jun. 19, 2019	Nov. 18, 2019	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2018	Jun. 19, 2019	Oct. 11, 2019	Conduction (CO01-KS)

NCR: No Calibration Required

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5. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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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 UB

Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

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

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

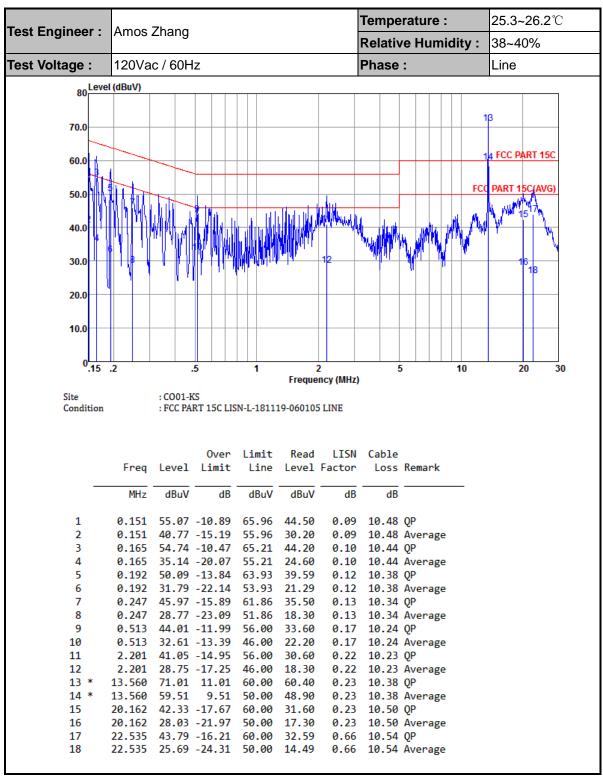
	-
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0 dB
0.95% (0 = 200(y))	

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Appendix A. Test Results of Conducted Emission Test

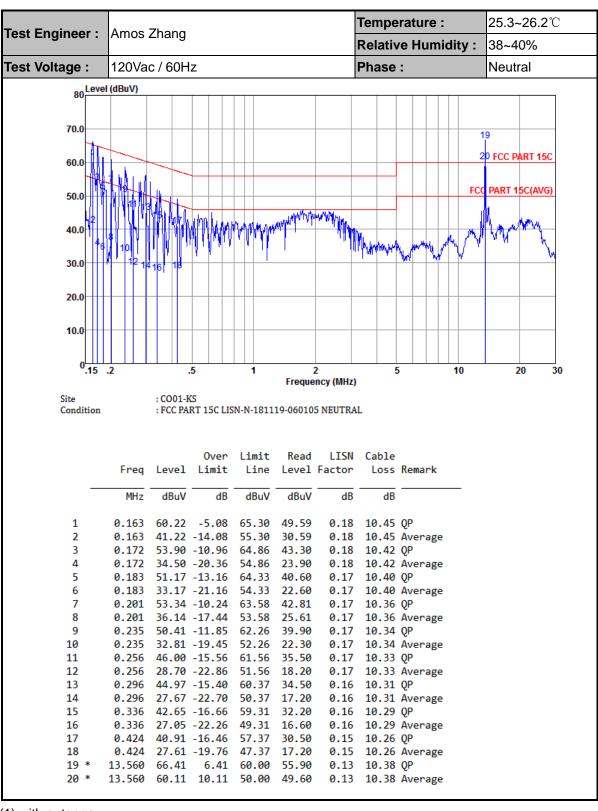


(1) with antenna

Remark: 13.560MHz is the NFC RF fundamental signal.

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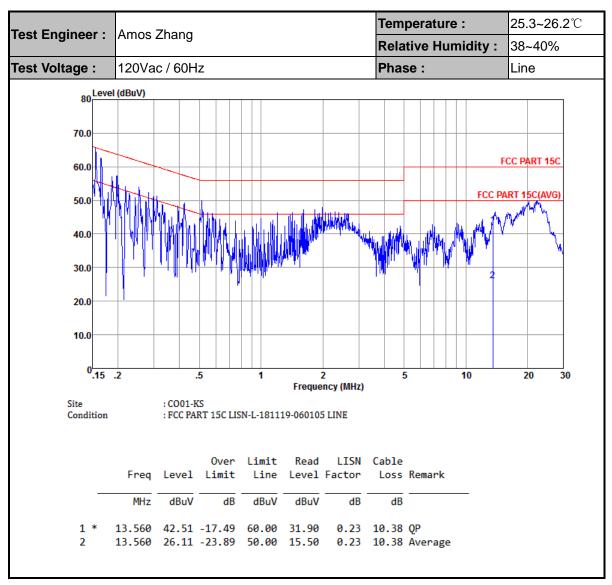




(1) with antenna

Remark: 13.560MHz is the NFC RF fundamental signal.

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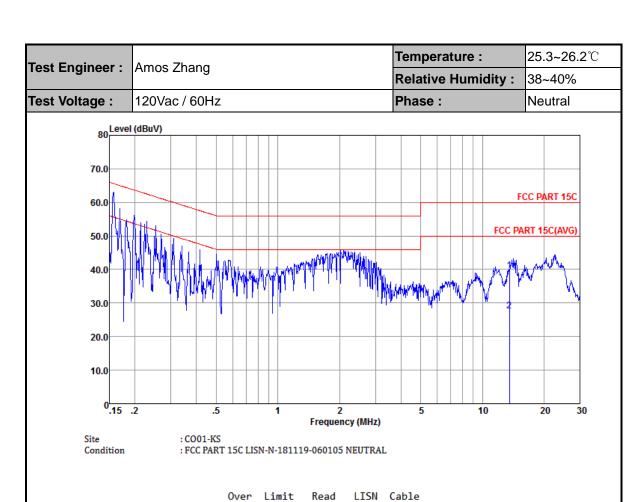


(2) With dummy load

Remark: Only the fundamental NFC signal needs to be retested per KDB 174176.

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Level Factor

dB

dBuV

Loss Remark

dB

0.13 10.38 Average

0.13 10.38 QP

(2) With dummy load

1

MHz

dBuV

Remark: Only the fundamental NFC signal needs to be retested per KDB 174176.

dB

13.560 39.71 -20.29 60.00 29.20

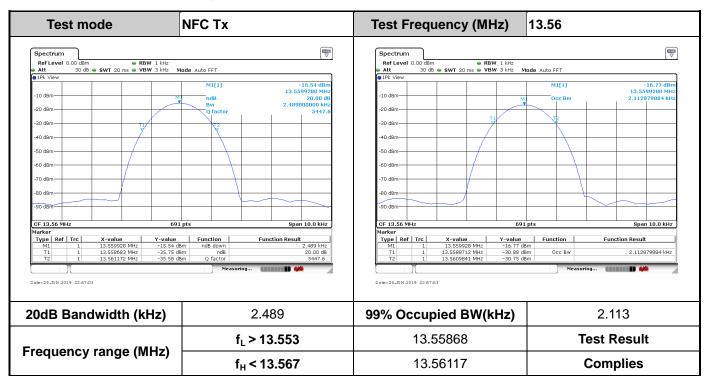
13.560 27.61 -22.39 50.00 17.10

dBuV

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Appendix B. Test Results of Conducted Test Items

B1. Test Result of 20dB Spectrum Bandwidth



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B2. Test Result of Frequency Stability

B3. Voltage vs. Fre	quency Stability	Temperatu	re vs. Frequency Stability
Voltage (Vac)	Measurement Frequency (MHz)	Temperature (℃)	Measurement Frequency (MHz)
120	13.559928	-20	13.559928
102	13.559928	-10	13.559928
138	13.559928	0	13.559928
-	-	- 10	13.559928
-	-	20	13.559928
-	-	30	13.559928
-	-	40	13.559928
-	-	50	13.559928
Max.Deviation (MHz)	-0.000072	Max.Deviation (MHz)	-0.000072
Max.Deviation (ppm)	-5.3466	Max.Deviation (ppm)	-5.3466
Limit	FS < ±100 ppm	Limit	FS < ±100 ppm
Test Result	PASS	Test Result	PASS

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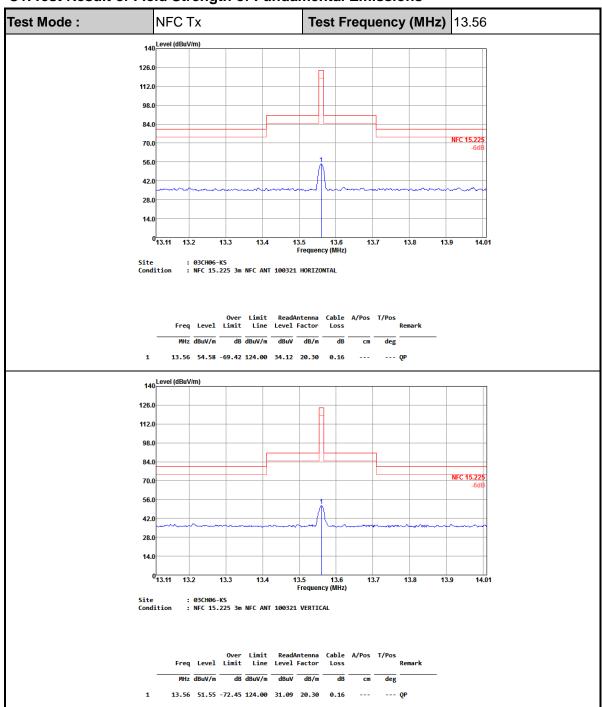
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Appendix C. Test Results of Radiated Test Items

C1. Test Result of Field Strength of Fundamental Emissions



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C2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

Test Mode :	t Mode: NFC Tx			Polarization :		Но	orizontal		
Frequency	Level	Over	Limit	Read	Antenna	Cable		Table	Remark
(MHz)	(dBµV/m	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB)	Loss (dB)	Pos (cm)	Pos (deg)	
0.01915	53.96	-68.00	121.96	33.35	20.60	0.01	-	-	Average
0.06173	53.66	-58.12	111.78	34.25	19.40	0.01	-	-	Average
0.15555	50.09	-53.66	103.75	30.91	19.17	0.01	-	-	Average
4.886	36.16	-33.38	69.54	15.10	21.00	0.06	-	-	QP
19.101	36.47	-33.07	69.54	15.65	20.60	0.22	-	-	QP
29.045	35.91	-33.63	69.54	15.95	19.63	0.33	-	-	QP

Test Mode	Mode: NFC Tx			Polariz	Ver	Vertical			
Frequency	Level	Over	Limit	Read	Antenna	Cable	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Pos	Pos	
(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB)	(dB)	(cm)	(deg)	
0.01746	50.04	-72.72	122.76	29.43	20.60	0.01	-	-	Average
0.03142	49.46	-68.19	117.65	29.65	19.80	0.01	-	-	Average
0.15185	47.62	-56.34	103.96	28.44	19.17	0.01	-	-	Average
6.050	36.22	-33.32	69.54	15.14	21.00	0.08	-	-	QP
24.915	36.64	-32.90	69.54	16.15	20.21	0.28	-	-	QP
27.785	36.49	-33.05	69.54	16.36	19.81	0.32	-	-	QP

Note:

- 1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
- 2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
- 3. Limit line = specific limits $(dB\mu V)$ + distance extrapolation factor.

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C3. Results of Radiated Spurious Emissions (30MHz~1GHz)

Test Mode : NFC Tx			Ро	larization	Horizontal					
Frequency	Leve	l Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBµV/	m) (dB)	(dBµV/m)	(dBµV)	(dB)	(dB)	(dB)	(cm)	(deg)	
30.00	23.14	-16.86	40	29.28	25.20	0.64	31.98	-	-	Peak
91.11	23.03	3 -20.47	43.5	38.80	15.04	1.11	31.92	-	-	Peak
161.92	28.84	1 -14.66	43.5	42.85	16.42	1.50	31.93	100	0	Peak
171.62	28.8	1 -14.69	43.5	43.62	15.59	1.52	31.92	-	-	Peak
229.82	27.82	2 -18.18	46	41.69	16.30	1.77	31.94	-	-	Peak
927.25	27.83	3 -18.17	46	25.90	29.63	3.51	31.21	-	-	Peak

Test Mode : NFC Tx				Po	Polarization :			Vertical			
Frequency	Leve	l Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dB _µ V/	m) (dB)	(dBµV/m)	(dBµV)	(dB)	(dB)	(dB)	(cm)	(deg)		
30.00	36.50	3.50	40	42.64	25.20	0.64	31.98	100	0	Peak	
37.76	35.3°	1 -4.69	40	45.64	20.92	0.71	31.96	-	-	Peak	
92.08	22.7	5 -20.75	43.5	38.38	15.18	1.11	31.92	-	-	Peak	
160.95	23.70	6 -19.74	43.5	37.68	16.51	1.50	31.93	-	-	Peak	
752.65	27.53	3 -18.47	46	28.13	28.49	3.15	32.24	-	-	Peak	
922.40	28.3	7 -17.63	46	26.55	29.57	3.50	31.25	-	-	Peak	

Note:

- 1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
- 2. Emission level (dB μ V/m) = 20 log Emission level (μ V/m).
- 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor= Level.

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