# **FCC RF Test Report**

APPLICANT: Xiaomi Communications Co., Ltd.

**EQUIPMENT**: Mobile Phone

BRAND NAME : Xiaomi MODEL NAME : 2203129G

FCC ID : 2AFZZ3129G

STANDARD : FCC Part 15 Subpart C §15.225

**CLASSIFICATION**: (DXX) Low Power Communication Device Transmitter

TEST DATE(S) : Jan. 31, 2022 ~ Feb. 09, 2022

We, Sporton International Inc. (Kunshan), 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 Inc. (Kunshan), the test report shall not be reproduced except in full.

Reviewed by: Jason Jia / Supervisor

JasonJia

Approved by: Alex Wang / Manager

Sporton International Inc. (Kunshan)

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

Report Template No.: BU5-FR15CNFC Version 2.0

Report Issued Date: Mar. 17, 2022

Page Number

Report Version

: 1 of 20

: Rev. 01

# **TABLE OF CONTENTS**

<b>TABLE</b>	OF CONTENTS	2
	ION HISTORY	
	ARY OF THE TEST RESULT	
	IERAL DESCRIPTION	
1.1	Applicant	5
1.2	Manufacturer	
1.3	Product Feature of Equipment Under Test	5
1.4	Product Specification of Equipment Under Test	
1.5	Modification of EUT	
1.6	Testing Location	6
1.7	Test Software	6
1.8	Applicable Standards	6
2. TES	T CONFIGURATION OF EQUIPMENT UNDER TEST	
2.1	Descriptions of Test Mode	7
2.2	Connection Diagram of Test System	7
2.3	Table for Supporting Units	8
2.4	EUT Operation Test Setup	
3. TES	T RESULTS	9
3.1	AC Power Line Conducted Emissions Measurement	9
3.2	20dB and 99% OBW Spectrum Bandwidth Measurement	11
3.3	Frequency Stability Measurement	12
3.4	Field Strength of Fundamental Emissions and Mask Measurement	13
3.5	Radiated Emissions Measurement	
3.6	Antenna Requirements	18
4. LIST	FOF MEASURING EQUIPMENT	19
5. UNC	CERTAINTY OF EVALUATION	20
APPEN	NDIX A. TEST RESULTS OF CONDUCTED EMISSION TEST	

## APPENDIX B. TEST RESULTS OF CONDUCTED TEST ITEMS

- B1. Test Result of 20dB Spectrum Bandwidth
- B2. Test Result of Frequency Stability

#### APPENDIX C. TEST RESULTS OF RADIATED TEST ITEMS

- C1. Test Result of Field Strength of Fundamental Emissions
- C2. Results of Radiated Emissions (9 kHz~30MHz)
- 0. Results of Radiated Emissions (30MHz~1GHz)

#### APPEDNIX D. SETUP PHOTOGRAPHS

# **REVISION HISTORY**

Report No. : FR211306D

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR211306D	Rev. 01	Initial issue of report	Mar. 17, 2022

 Sporton International Inc. (Kunshan)
 Page Number
 : 3 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# **SUMMARY OF THE TEST RESULT**

Report No.: FR211306D

Report Section	FCC Rule	Description of Test	Result	Remark
3.1	15.207	AC Power Line Conducted Emissions	Complies	Under limit 9.04 dB at 13.560MHz
	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 57.26 dBµV/m at 13.560 MHz
3.5	15.225(d) & 15.209	Radiated Spurious Emissions	Complies	Under limit 9.82 dB at 47.460MHz
3.6	15.203	Antenna Requirements	Complies	-

#### **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.

 Sporton International Inc. (Kunshan)
 Page Number
 : 4 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# 1. General Description

# 1.1 Applicant

Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

Report No.: FR211306D

# 1.2 Manufacturer

Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

# 1.3 Product Feature of Equipment Under Test

Product Feature				
<b>Equipment</b> Mobile Phone				
Brand Name	Xiaomi			
Model Name	2203129G			
FCC ID 2AFZZ3129G				
IMEI Code	Conducted: 868214060105440/868214060105457 Conduction: 868214060101563/868214060101571 Radiation: 868214060101985/868214060101993			
HW Version	P2.1			
SW Version MIUI 13				
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.

# 1.4 Product Specification of Equipment Under Test

Standards-related Product Specification				
Tx/Rx Frequency Range	13.553 ~ 13.567MHz			
Channel Number	1			
20dBW	2.49 KHz			
99%OBW	2.10 KHz			
Antenna Type	FPC Antenna			
Type of Modulation	ASK			

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

 Sporton International Inc. (Kunshan)
 Page Number
 : 5 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# 1.5 Modification of EUT

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

# 1.6 Testing Location

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

Report No.: FR211306D

Test Site	Sporton Inter	Sporton International Inc. (Kunshan)					
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL: +86-512-57900158 FAX: +86-512-57900958						
Test Site No.	Sporton Site No.		FCC Designation No.	FCC Test Firm Registration No.			
	TH01-KS	03CH02-KS	CO01-KS				
Test Engineer	Alan He Yoke SI		Amos Zhang	ON4057	24.4200		
Temperature	22-24°C 21-22°C 25.3~26.2		CN1257	314309			
Relative Humidity	53-55%	41-42%	38~40				

## 1.7 Test Software

Item	Site	Manufacturer	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 C §15.225
- ANSI C63.10-2013

 Sporton International Inc. (Kunshan)
 Page Number
 : 6 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# 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.

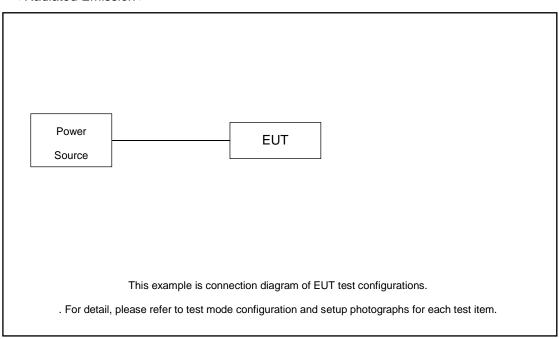
Test Items				
AC Power Line Conducted Emissions	Field Strength of Fundamental Emissions			
20dB Spectrum Bandwidth	Frequency Stability			
Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz			

The EUT pre-scanned in four NFC type, A, B, F, V. The worst type (type B) 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 Conducted Emission	Mode 1: GSM 850 Idle + Bluetooth Link + WLAN Link (2.4G) + USB Cable1 (Charging from Adapter)+NFC Tx						
Remark:							
1. For Radiate	For Radiated Test Cases, The tests were performance with Adapter 1, USB Cable 1						

# 2.2 Connection Diagram of Test System

< Radiated Emission >



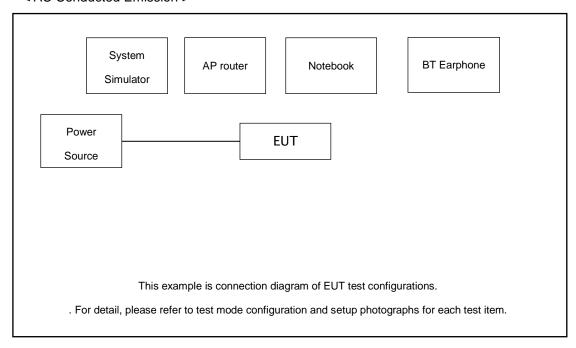
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TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : 7 of 20
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

Report No.: FR211306D

Report Template No.: BU5-FR15CNFC Version 2.0

#### < AC Conducted Emission >



# 2.3 Table for Supporting Units

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	Bluetooth Earphone	Xiaomi	LYEJ02LM	N/A	N/A	N/A
3.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
4.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
5.	SD Card	Kingston	8GB	N/A	N/A	N/A
6.	Adapter	N/A	N/A	N/A	N/A	N/A
7.	NFC Card	N/A	N/A	N/A	N/A	N/A

# 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.

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : 8 of 20
Report Issued Date : Mar. 17, 2022

Report Version : Rev. 01

Report Template No.: BU5-FR15CNFC Version 2.0

# 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.

Report No.: FR211306D

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		

<sup>\*</sup>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.

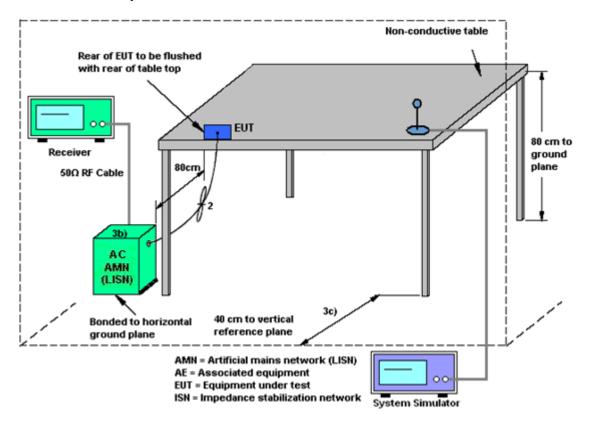
 Sporton International Inc. (Kunshan)
 Page Number
 : 9 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

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## 3.1.4 Test setup



## 3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : 10 of 20
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

Report No.: FR211306D

Report Template No.: BU5-FR15CNFC Version 2.0

# 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.

Report No.: FR211306D

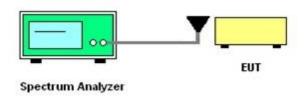
## 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.2.3 Test Procedures

- 1. 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.

# 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.

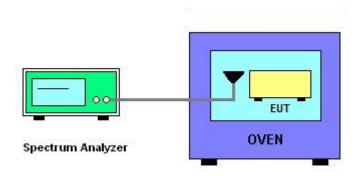
## 3.3.2 Measuring Instruments

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  $\pm 100$ 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.

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : 12 of 20
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

Report No.: FR211306D

Report Template No.: BU5-FR15CNFC Version 2.0

# 3.4 Field Strength of Fundamental Emissions and Mask Measurement

Report No.: FR211306D

# 3.4.1 Limit

Rules and specifications		FCC CFR 47 Part	15 section 15.225			
Description	Compliance with th	Compliance with the spectrum mask is tested with RBW set to 9kHz.				
From of Emission (MUT)	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.

 Sporton International Inc. (Kunshan)
 Page Number
 : 13 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

#### 3.4.3 Test Procedures

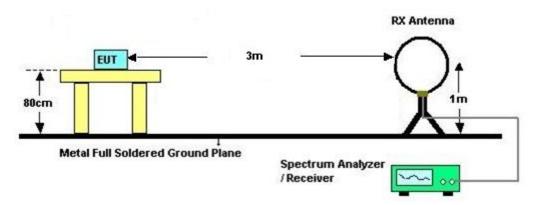
 Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.

Report No.: FR211306D

- 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.
- 3. 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.

 Sporton International Inc. (Kunshan)
 Page Number
 : 14 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# 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.

Report No.: FR211306D

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.

 Sporton International Inc. (Kunshan)
 Page Number
 : 15 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

#### 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.

Report No.: FR211306D

- 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.
- 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

 Sporton International Inc. (Kunshan)
 Page Number
 : 16 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

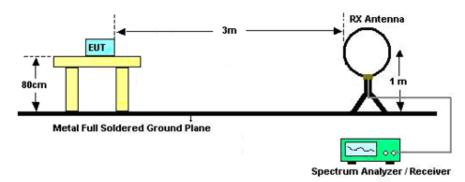
 FAX: +86-512-57900958
 Report Version
 : Rev. 01

FCC ID: 2AFZZ3129G Report Template No.: BU5-FR15CNFC Version 2.0

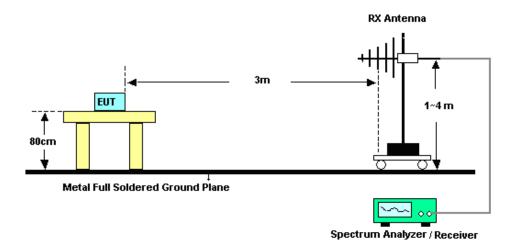
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## 3.5.5 Test Setup

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:

- 1. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.
- 2. According to C63.10 radiated Test, the EUT pre-scanned horizontal, vertical, and ground-parallel three polarization's, the worst case is horizontal & vertical polarization, test data of two mode was reported.

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : 17 of 20
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

Report No.: FR211306D

Report Template No.: BU5-FR15CNFC Version 2.0

# 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.

Report No.: FR211306D

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.

 Sporton International Inc. (Kunshan)
 Page Number
 : 18 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# 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	Oct. 14, 2021	Feb. 09, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Temperature &hu midity chamber	Hongzhan	LP-150U	H2014011 440	-40~+150°C 20%~95%RH	Jul. 12, 2021	Feb. 09, 2022	Jul. 11, 2022	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Oct. 16, 2021	Feb. 06, 2022	Oct. 15, 2022	Radiation (03CH02-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Feb. 06, 2022	Oct. 29, 2022	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Jan. 26, 2022	Feb. 06, 2022	Jan. 25, 2023	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002 473	N/A	NCR	Feb. 06, 2022	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Feb. 06, 2022	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Feb. 06, 2022	NCR	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Apr. 12, 2021	Feb. 06, 2022	Apr. 11, 2022	Radiation (03CH02-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 21, 2021	Jan. 31, 2022	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 14, 2021	Jan. 31, 2022	Oct. 13, 2022	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 14, 2021	Jan. 31, 2022	Oct. 13, 2022	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	AC 0V~300V, 45Hz~1000Hz	Oct. 14, 2021	Jan. 31, 2022	Oct. 13, 2022	Conduction (CO01-KS)

Report No.: FR211306D

NCR: No Calibration Required

 Sporton International Inc. (Kunshan)
 Page Number
 : 19 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# 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.

Report No.: FR211306D

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

Measuring Uncertainty for a Level of Confidence	2.94dB
of 95% (U = 2Uc(y))	2.9406

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

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

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

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

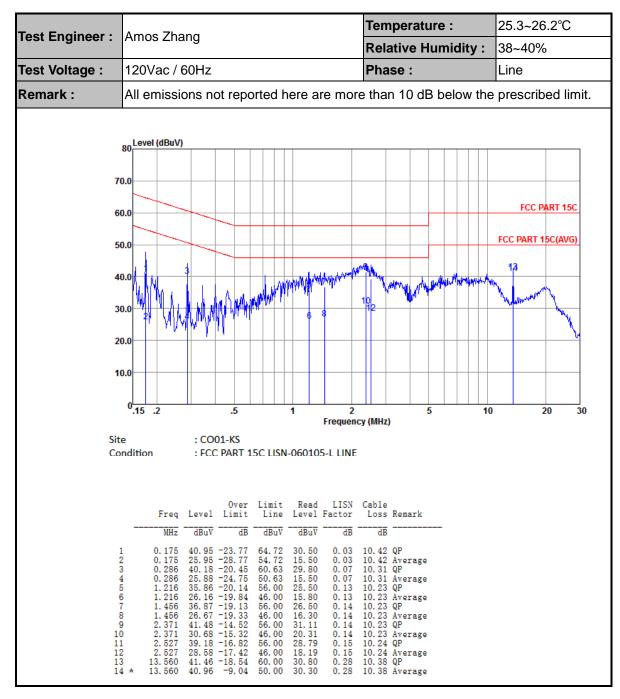
----- THE END -----

 Sporton International Inc. (Kunshan)
 Page Number
 : 20 of 20

 TEL: +86-512-57900158
 Report Issued Date
 : Mar. 17, 2022

 FAX: +86-512-57900958
 Report Version
 : Rev. 01

# **Appendix A. Test Results of Conducted Emission Test**

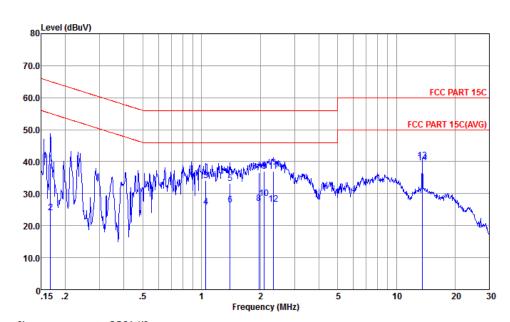


TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : A1 of A2
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

Test Voltage:

et Engineer i	Amos Zhang	Temperature :	25.3~26.2°C
st Engineer.	Allios Zhang	Relative Humidity :	38~40%

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



Phase:

: CO01-KS Site

120Vac / 60Hz

Condition : FCC PART 15C LISN-060105-N NEUTRAL

	Freq	Level	Over Limit	Limit Line		LISN Factor	Cable Loss	Remark
_	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 *	0. 168 0. 168 1. 054 1. 054 1. 403 1. 403 1. 970 1. 970 2. 099 2. 334 2. 334 13. 560	24. 04 34. 15 25. 85 33. 16 26. 56 36. 57 27. 00 36. 97 28. 47 36. 98 26. 68 40. 27	-25. 74 -31. 04 -21. 85 -20. 15 -22. 84 -19. 43 -19. 00 -19. 03 -17. 53 -19. 02 -19. 32 -19. 32 -19. 32 -19. 32	65. 08 55. 08 56. 00 46. 00 56. 00 46. 00 56. 00 46. 00 56. 00 46. 00 56. 00 56. 00	28. 80 13. 50 23. 80 15. 50 22. 80 16. 20 26. 20 16. 63 26. 60 18. 10 26. 61 16. 31 29. 60 28. 90	0. 11 0. 12 0. 12 0. 13 0. 13 0. 14 0. 14 0. 14 0. 14 0. 14 0. 14	10. 23 10. 23	Average QP Average QP Average QP Average QP Average QP Average

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G

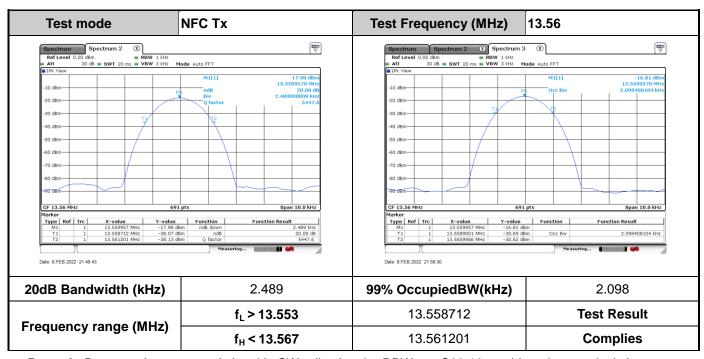
Page Number : A2 of A2 Report Issued Date: Mar. 17, 2022 Report Version : Rev. 01

Report No.: FR211306D

Neutral

# **Appendix B. Test Results of Conducted Test Items**

## **B1.Test Result of 20dB Spectrum Bandwidth**



**Remark:** Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : B1 of B2
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

# **B2.Test Result of Frequency Stability**

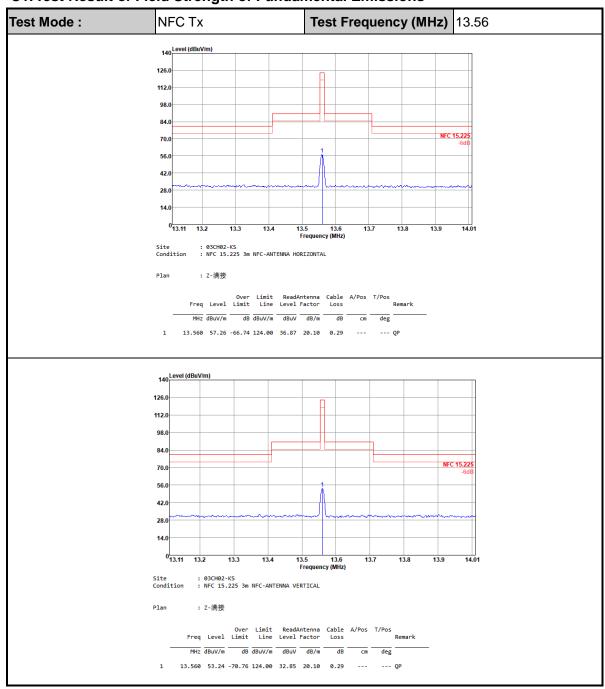
Voltage vs. Frequ	ency Stability	Temperature vs.	Frequency Stability
Voltage (Vac)	Measurement Frequency (MHz)	Temperature (℃)	Measurement Frequency (MHz)
120	13.559943	-20	13.559950
102	13.559943	-10	13.559950
138	13.559943	0	13.559950
		10	13.559950
		20	13.559950
		30	13.559950
		40	13.559943
		50	13.559943
Max.Deviation (MHz)	-0.000058	Max.Deviation (MHz)	-0.000058
Max.Deviation (ppm)	-4.2404	Max.Deviation (ppm)	-4.2404
Limit	FS < ±100 ppm	Limit	FS < ±100 ppm
Test Result	PASS	Test Result	PASS

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : B2 of B2
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

# **Appendix C. Test Results of Radiated Test Items**

## C1. Test Result of Field Strength of Fundamental Emissions



#### Note:

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

Sporton International Inc. (Kunshan)

TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : C1 of C3
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

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

Test Mode : NFC		Tx		Polariz	Polarization :		Iorizontal			
Frequency	Lev	el	Over	Limit	Read	Antenna	Cabl		Table	Remark
			Limit	Line	Level	Factor	Los	s Pos	Pos	
(MHz)	(dBµ\	//m )	( dB )	( dBµV/m )	(dBµV)	( dB )	( dB	) (cm)	( deg )	
0.04989	52.3	38	-61.26	113.64	31.29	21	0.09	-	-	Average
0.08429	44.9	92	-64.16	109.08	24.63	20.2	0.09	-	-	Average
0.35535	53.4	11	-43.16	96.57	32.62	20.7	0.09	-	-	Average
2.348	41.6	66	-27.88	69.54	20.74	20.81	0.11	ı -	-	QP
12.709	34.8	31	-34.73	69.54	14.38	20.15	0.28	3 -	-	QP
28.385	32.6	89	-36.85	69.54	12.66	19.51	0.52	2 -	-	QP

Test Mode :	Test Mode : NFC Tx		Polarization :			Ver	tical		
Frequency	Level		Limit	Read	Antenna	Cable	Ant	Table	Remark
( MU= )	/ 4DV//	Limit	Line	Level	Factor	Loss	Pos	Pos	
(MHz)	( dBµV/	m) (dB)	( dBµV/m )	(dBµV)	( dB )	( dB )	( cm )	( deg )	
0.04961	45.44	-68.24	113.68	24.35	21	0.09	-	-	Average
0.07442	41.62	-68.54	110.16	20.93	20.6	0.09	-	-	Average
0.2314	52.79	-47.51	100.3	32.21	20.49	0.09	-	-	Average
3.746	37.90	-31.64	69.54	17.3	20.46	0.14	-	-	QP
9.853	34.07	-35.47	69.54	13.55	20.29	0.23	-	-	QP
29.78	32.71	-36.83	69.54	12.5	19.67	0.54	-	-	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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TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : C2 of C3
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01

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

Test Mode : NFC Tx			Polarizati	ion :	Horizor	Horizontal				
Frequency	Level	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	21.8	-18.2	40	28.14	25.1	0.76	32.2	-	-	Peak
96.93	23.15	-20.35	43.5	38.23	15.71	1.41	32.2	-	-	Peak
144.46	25.02	-18.48	43.5	38.04	17.32	1.77	32.11	-	-	Peak
164.83	26.12	-17.38	43.5	40.25	16.1	1.87	32.1	-	-	Peak
192.96	30.27	-13.23	43.5	45.44	14.89	2.04	32.1	-	-	Peak
417.03	30.18	-15.82	46	37.09	22.32	3.04	32.27	-	-	Peak

Test Mode : NFC Tx					Polarization :		Vertical			
Frequency	Level	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)	
47.46	30.18	-9.82	40	45.54	15.87	0.97	32.2	-	-	Peak
59.1	27.76	-12.24	40	46.67	12.15	1.06	32.12	-	-	Peak
94.02	24.39	-19.11	43.5	39.93	15.32	1.36	32.22	-	-	Peak
192.96	26.68	-16.82	43.5	41.85	14.89	2.04	32.1	-	-	Peak
313.24	26.85	-19.15	46	36.84	19.53	2.61	32.13	-	-	Peak
353.01	28.03	-17.97	46	36.88	20.59	2.77	32.21	-	-	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  $(dB\mu V/m) = 20 \log Emission level (\mu V/m)$ .
- 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor= Level.

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TEL: +86-512-57900158 FAX: +86-512-57900958 FCC ID: 2AFZZ3129G Page Number : C3 of C3
Report Issued Date : Mar. 17, 2022
Report Version : Rev. 01