FCC Test Report

APPLICANT : Xiaomi Communications Co., Ltd.

EQUIPMENT: Mobile Phone

BRAND NAME : MI

FCC ID : 2AFZZ-RMSG6

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : Certification

The product was received on Jun. 23, 2017 and testing was completed on Jul. 04, 2017. 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.

Prepared by: James Huang / Manager

Approved by: Jones Tsai / Manager

Sporton International (KunShan) INC.

No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 1 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

Testing Laboratory 2627

TABLE OF CONTENTS

RE	VISION	N HISTORY	3
50	WWAK	Y OF TEST RESULT	4
1.	GENE	RAL DESCRIPTION	5
	1.1.	Applicant	
	1.2.	Manufacturer	
	1.3.	Product Feature of Equipment Under Test	
	1.4.	Product Specification of Equipment Under Test	
	1.5.	Modification of EUT	
	1.6.	Test Location	
	1.7.	Applicable Standards	7
2.	TEST	CONFIGURATION OF EQUIPMENT UNDER TEST	8
	2.1.	Test Mode	8
	2.2.	Connection Diagram of Test System	9
	2.3.	Support Unit used in test configuration and system	
	2.4.	EUT Operation Test Setup	11
3.	TEST	RESULT	12
	3.1.	Test of AC Conducted Emission Measurement	12
	3.2.	Test of Radiated Emission Measurement	18
4.	LIST	OF MEASURING EQUIPMENT	24
5.	UNCE	RTAINTY OF EVALUATION	25
AΡ	PENDI	X A. SETUP PHOTOGRAPHS	

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 2 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC762302	Rev. 01	Initial issue of report	Jul. 12, 2017

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 3 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

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	10.55 dB at
					0.481 MHz
					Under limit
2.2	45.400	D 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45 400 limita	PASS	6.06 dB at
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	31.890 MHz
					for Quasi-Peak

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 4 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

1. General Description

1.1. Applicant

Xiaomi Communications Co., Ltd.

The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China

Report No. : FC762302

1.2. Manufacturer

Xiaomi Communications Co., Ltd.

The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China

1.3. Product Feature of Equipment Under Test

	Product Feature
Equipment	Mobile Phone
Brand Name	MI
FCC ID	2AFZZ-RMSG6
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/HT40 Bluetooth v3.0 + EDR/ Bluetooth v4.0 LE/ Bluetooth v4.2 LE
IMEI Code	Conduction: 865395030022923/865395030022931 Radiation: 865395030024580/865395030024598
HW Version	A
SW Version	MIUI 8
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.

 Sporton International (KunShan) INC.
 Page Number
 : 5 of 25

 TEL: 86-0512-5790-0158
 Report Issued Date
 : Jul. 12, 2017

 FAX: 86-0512-5790-0958
 Report Version
 : Rev. 01

FCC ID: 2AFZZ-RMSG6 Report Template No.: BU5-FD15B Version 1.3

1.4. Product Specification of Equipment Under Test

Standards-	related Product Specification
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 5: 869.7 MHz ~ 893.3 MHz LTE Band 7: 2622.5 MHz ~ 2687.5 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS: 1559 MHz ~ 1610 MHz FM: 88 MHz ~ 108 MHz
Antenna Type	WWAN: LDS Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GNSS: PIFA Antenna FM: External headset Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: BPSK (Uplink) HSPA: QPSK (Uplink) HSPA+: 16QAM (16QAM uplink is not supported) DC-HSDPA: 64QAM LTE: QPSK / 16QAM 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE: GFSK Bluetooth (1Mbps): GFSK Bluetooth (2Mbps): \pi /4-DQPSK Bluetooth (3Mbps): 8-DPSK GPS: BPSK FM: FM

1.5. Modification of EUT

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

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TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 6 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report No. : FC762302

Report Template No.: BU5-FD15B Version 1.3

1.6. Test Location

Test Site	Sporton International (KunShan) INC.						
	No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China						
Test Site Location	TEL: +86-0512-5790-0158						
	FAX: +86-0512-5790-0958						
Toot Site No	Sportor	FCC Registration No.					
Test Site No.	CO01-KS	306251					

Note: The test site complies with ANSI C63.4 2014 requirement.

1.7. Applicable Standards

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

- FCC 47 CFR FCC 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.

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 7 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

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

Test Items	Function Type
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter) + Earphone + Camera(Rear) < Fig.1>
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter) + Earphone + Camera(Front) < Fig.1>
AC Conducted	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter) + Earphone + MPEG4 <fig.1></fig.1>
Emission	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + GNSS RX < Fig.2>
	Mode 5: FM Rx(88Mhz) + USB Cable (Charging from Adapter) + Earphone <fig.3></fig.3>
	Mode 6: FM Rx(98Mhz) + USB Cable (Charging from Adapter) + Earphone <fig.3></fig.3>
	Mode 7: FM Rx(108Mhz) + USB Cable (Charging from Adapter) + Earphone <fig.3></fig.3>
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter) + Earphone + Camera(Rear) < Fig.1>
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter) + Earphone + Camera(Front) < Fig.1>
Radiated	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Charging from Adapter) + Earphone + MPEG4 <fig.1></fig.1>
Emissions	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Notebook) + Earphone + GNSS RX < Fig.2>
	Mode 5: FM Rx(88Mhz) + USB Cable (Charging from Adapter) + Earphone <fig.3></fig.3>
	Mode 6: FM Rx(98Mhz) + USB Cable (Charging from Adapter) + Earphone <fig.3></fig.3>
	Mode 7: FM Rx(108Mhz) + USB Cable (Charging from Adapter) + Earphone <fig.3></fig.3>

Remark:

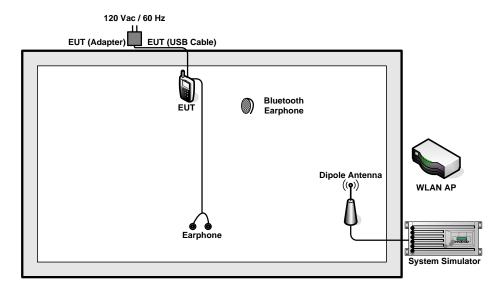
- 1. The worst case of AC is mode 7, and the USB Link mode is mode 4, the test data of these modes are reported.
- 2. The worst case of RE is mode 6, and the USB Link mode is mode 4, the test data of these modes are reported.
- Data Link with Notebook means data application transferred mode between EUT and Notebook.

Sporton International (KunShan) INC.

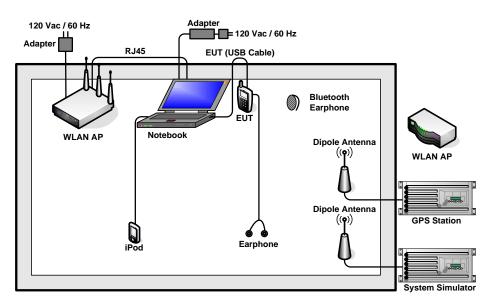
TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 8 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

2.2. Connection Diagram of Test System



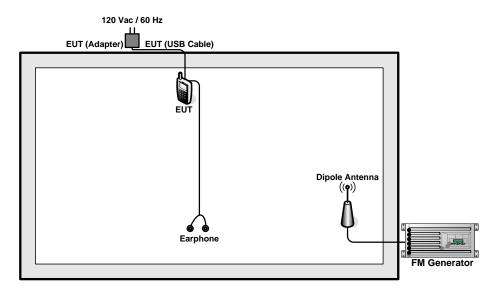
<Fig.1>



<Fig.2>

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 9 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3



<Fig.3>

2.3. Support Unit used in test configuration and system

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.	GPS Station	ADIVIE	MP9000	N/A	N/A	Unshielded,1.8m
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,1.8m
4.	Bluetooth Earphone	Samsung	HS3000	A3LHS3000	N/A	N/A
5.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8m
6.	Earphone	Lenovo	LH102	N/A	Unshielded,1.2m	N/A
7.	FM Base Station	R&S	SMB100A	FCC DoC	N/A	Unshielded,1.8m
8.	SD Card	Kingston	MicroSD HC	FCC DoC	N/A	N/A
9.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0m	N/A

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 10 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or EDGE or HSDPA 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 Bluetooth earphone or 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.
- 2. Turn on GNSS function to make the EUT receive continuous signals from GNSS station.
- 3. Execute "Video Player" to play MPEG4 files.
- 4. Turn on camera to capture images.

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 11 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

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.

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.

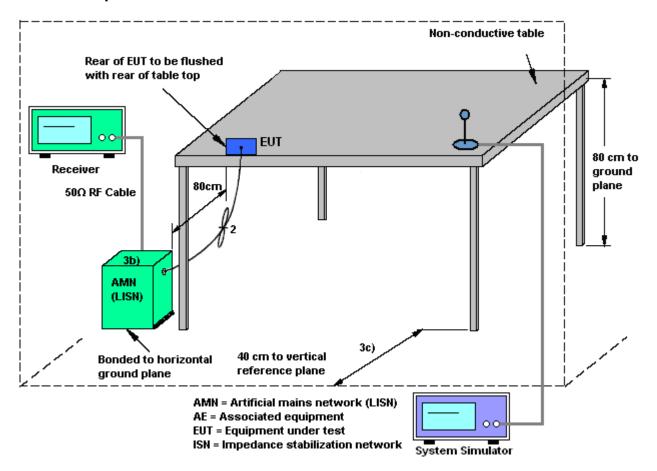
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

- 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.
- 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



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 13 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

3.1.5 Test Result of AC Conducted Emission

	Mode 4				remp	erature	:	22~24	22~24 ℃			
Test Engineer :	Amos 2	Zhang			Relati	ve Hun	nidity :	42~46	42~46%			
Test Voltage :	120Va	c / 60H	Z		Phase	:		Line				
Function Type :				uetooth ne + GN			I Idle(2.	4G) + U	JSB Cable (Data Link v			
80 Level (dBuV)												
70.0												
60.0									FCC CLASS-B			
50.0									FCC CLASS-B(AVG)			
40.0												
30.0						Hallette d	يمافاله والمراد	Λ				
20.0		WY	hadea de	May property	MM/M/W	ANALAR PORT	ALPHARVY 17	W Mal	alk-physphotoschaftlikermylla			
10.0			7 W									
0.15	2		5	1		2 ncy (MHz)	5	i	10 20 30			
Site Condition		: CO01-K : FCC CLA		I-L-161017	7-060103	LINE						
mode		: Mode 4 : 865395	03002292	3/865395			C-1-1-					
	Freq	Level	Over Limit	Limit Line	Read Level		Cable Loss	Remark				
	MHz	dBuV	dB	dBuV	dBuV	dB	dB					
1 2				65.78 55.78				QP Average				
3	0.167			65.12			10.37					
4 5	0.167 0.186			55.12 64.20		0.45 0.33	10.37	Average OP	!			
6	0.186			54.20				Average				
7	0.205			63.40	21.20	0.27	10.33	QP				
8	0.205			53.40				Average				
9				56.85		0.27						
10 11				46.85 56.45			10.19	Average OP	!			
12 *				46.45				Average				

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 14 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3



22~24°C Test Mode: Mode 4 Temperature: Test Engineer: Amos Zhang **Relative Humidity:** 42~46% 120Vac / 60Hz Phase: Test Voltage: Neutral LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with Function Type: Notebook) + Earphone + GNSS RX 80 Level (dBuV) 70.0 FCC CLASS-B 60.0 FCC CLASS-B(AVG) 50.0 Wat Har har man work many from the 20.0 10.0 .15 .5 2 20 30 Frequency (MHz) : CO01-KS Site Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL : Mode 4 mode :865395030022923/865395030022931 #2 Read LISN Over Limit Cable Line Level Factor Level Limit Loss Remark MHz dBuV dBuV dBuV dB 1 0.154 39.03 -26.75 65.78 28.30 0.34 10.39 QP 0.154 27.33 -28.45 55.78 16.60 0.34 10.39 Average 3 0.160 37.32 -28.15 65.47 26.60 0.34 10.38 QP 0.160 23.32 -32.15 55.47 12.60 0.34 10.38 Average 5 0.184 33.98 -30.30 64.28 23.30 0.33 10.35 QP 0.33 10.35 Average 0.184 21.88 -32.40 54.28 11.20 6 0.194 32.47 -31.37 63.84 21.80 0.33 10.34 QP 8 0.194 22.57 -31.27 53.84 11.90 0.33 10.34 Average 9 0.481 36.37 -19.95 56.32 25.80 0.38 10.19 OP 10 * 0.481 31.17 -15.15 46.32 20.60 0.38 10.19 Average 0.494 31.77 -24.33 56.10 21.20 0.38 10.19 OP 11 0.494 22.87 -23.23 46.10 12.30 0.38 10.19 Average

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 15 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3



Test Mode: 22~24℃ Mode 7 Temperature: Test Engineer: Amos Zhang **Relative Humidity:** 42~46% Test Voltage: 120Vac / 60Hz Phase: Line **Function Type:** FM Rx(108Mhz) + USB Cable (Charging from Adapter) + Earphone 80 Level (dBuV) 70.0 FCC CLASS-B 60.0 FCC CLASS-B(AVG) 50.0 40.0 Mark Harry Mark Harry Color Ha 30.0 20.0 10.0 0.15 .2 10 20 30 Frequency (MHz) Site : CO01-KS Condition : FCC CLASS-B LISN-L-161017-060103 LINE mode : Mode 7 :865395030022923/865395030022931 #2 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dBuV dBuV MHz dBuV dB dB dΒ 0.269 39.15 -22.01 61.16 28.60 0.27 10.28 QP 0.269 27.65 -23.51 51.16 17.10 0.27 10.28 Average 0.341 38.70 -20.48 59.18 28.20 0.27 10.23 QP 0.341 35.10 -14.08 49.18 24.60 0.27 10.23 Average 3 4 0.484 38.66 -17.61 56.27 28.20 0.27 10.19 QP 0.484 33.36 -12.91 46.27 22.90 0.27 10.19 Average 0.544 37.75 -18.25 56.00 27.30 0.26 10.19 QP 7 0.26 10.19 Average 8 0.544 30.75 -15.25 46.00 20.30 1.216 33.74 -22.26 56.00 23.30 0.25 10.19 QP 9 1.216 24.94 -21.06 46.00 14.50 0.25 10.19 Average 10 2.261 33.21 -22.79 56.00 22.80 0.21 10.20 QP 2.261 25.91 -20.09 46.00 15.50 0.21 10.20 Average

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 16 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

22~24℃ Test Mode: Mode 7 Temperature: Test Engineer: Amos Zhang **Relative Humidity:** 42~46% Test Voltage: 120Vac / 60Hz Phase: Neutral Function Type: FM Rx(108Mhz) + USB Cable (Charging from Adapter) + Earphone 80 Level (dBuV) 70.0 FCC CLASS-B 60.0 FCC CLASS-B(AVG) 50.0 40.0 30.0 20.0 10.0 0.15 .2 .5 20 30 Frequency (MHz) : CO01-KS Site : FCC CLASS-B LISN-N-161017-060103 NEUTRAL Condition : Mode 7 mode :865395030022923/865395030022931 #2 Over Limit Read LISN Cable Line Level Factor Loss Remark Level Limit MHz dBuV dB dBuV dBuV dB dB 1 0.481 42.17 -14.15 56.32 31.60 0.38 10.19 QP 0.481 35.77 -10.55 46.32 25.20 0.38 10.19 Average 2 1.016 38.89 -17.11 56.00 28.30 0.40 10.19 QP 1.016 26.19 -19.81 46.00 15.60 0.40 10.19 Average 5 1.324 39.19 -16.81 56.00 28.60 0.40 10.19 QP 1.324 25.09 -20.91 46.00 14.50 0.40 10.19 Average 1.819 38.50 -17.50 56.00 27.90 0.41 10.19 QP 7 1.819 25.90 -20.10 46.00 15.30 0.41 10.19 Average 9 2.099 39.90 -16.10 56.00 29.30 0.41 10.19 QP 0.41 10.19 Average 10 2.099 26.90 -19.10 46.00 16.30 38.50 -17.50 56.00 27.90 11 2.396 0.40 10.20 QP 2.396 26.20 -19.80 46.00 15.60 0.40 10.20 Average 12

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 17 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

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:

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.

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 $(dB\mu V/m) = 20 \log Emission level (\mu V/m)$
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

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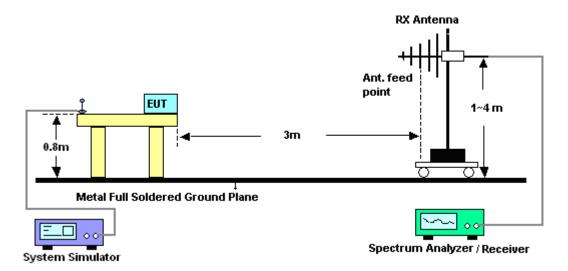
TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 18 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report No.: FC762302

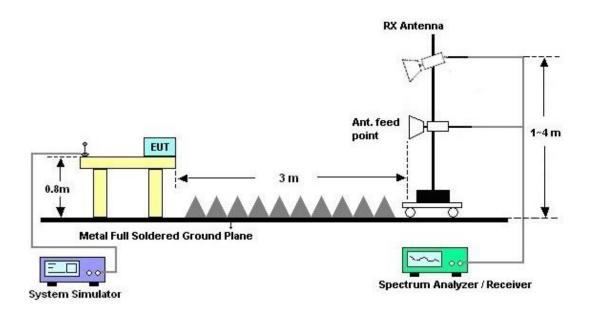
Report Template No.: BU5-FD15B Version 1.3

For radiated emissions from 30MHz to 1GHz

3.2.4. Test Setup of Radiated Emission



For radiated emissions above 1GHz



Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 19 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

3.2.5. Test Result of Radiated Emission

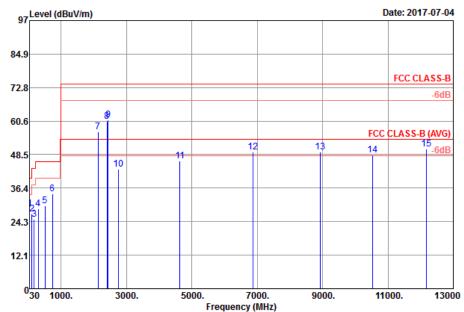
Test Mode :	Mod	e 4			-	Гетре	rature	:	24~	24~25°C			
Test Engineer :	Clea	ır Penç)		i	Relativ	e Hui	nidity :	48~	48~49%			
Test Distance :	3m				ı	Polarization :				izonta	al		
Function Type :		E Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Dat otebook) + Earphone + GNSS RX									Data Link	with	
Remark :		is system simulator signal which can be ignored. 8, #9 are signals from BT/WLAN access point which can be ignored.										d.	
97	Level (dBuV/m)								[Date: 2017-0	07-04	
84.9													
72.8											FCC CLAS	-6dB	
60.6			9 7 8							FCC	CLASS-B (AVG)	
48.5			10		11	•	12 13		14			15 6dB	
36.4	1 _{28 4} 51												
24.3													
12.1													
d	30 10	000.	300	0.	5000		7000.		000.	11	000.	13000	
Site Condition Mode	:	03CH03- FCC CL/ Mode 4		m HF_A	NT(3117	Frequen)_119436							
IMEI Plane		8653950 Y	3002458 Over	0/865399 Limit		598 Antenna	Cable	Preamp	A/Pos	T/Pos			
		Level		Line	Level	Factor	Loss	Factor			Remark	_	
	99.93		-11.57			19.30		dB 31.60 31.17	100		Peak		
3 2 4 5 5 6	99.73 00.20 28.30	31.12 30.20 31.17	-14.88 -15.80 -14.83	46.00 46.00 46.00	41.88 35.79 34.24	16.50 18.50 23.10 25.34	2.04 2.71 3.09	31.30 31.40 31.50			Peak Peak Peak Peak		
7 21 8 24 9 24	32.00 02.00 38.00	57.24 56.74 61.18			78.48 75.34 79.31	27.27 29.57 31.38 31.74	6.29 6.81 6.86	31.50 57.10 56.79 56.73			Peak Peak Peak Peak		
11 49 12 66	28.00 10.00	45.20 48.89	-28.80 -25.11	74.00 74.00	56.93 54.75	32.60 33.36 35.98 35.49	10.99 15.58	57.42			Peak Peak Peak Peak		
						37.67 38.89			100		Peak Peak		

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 20 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3



			-			
Test Mode :	Mode 4	Temperature :	24~25°C			
Test Engineer :	Clear Peng	Relative Humidity :	48~49%			
Test Distance :	3m	Polarization :	Vertical			
Function Type:	LTE Band 4 Idle + Bluetooth Idle + WLAN Idle(2.4G) + USB Cable (Data Link with					
	Notebook) + Earphone + GNSS RX					
Remark :	#7 is system simulator signal which can be ignored.					
	#8, #9 are signals from BT/WLAN access point which can be ignored.					



: 03CH03-SZ Site

Condition : FCC CLASS-B 3m HF_ANT(3117)_119436 VERTICAL

Mode

: 865395030024580/865395030024598 IMEI

Plane	:	Υ									
			Over	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	41.34	28.81	-11.19	40.00	38.52	21.34	0.40	31.45	200	189	Peak
2	99.66	26.99	-16.51	43.50	38.44	19.30	0.85	31.60			Peak
3	178.50	25.11	-18.39	43.50	37.96	16.96	1.47	31.28			Peak
4	300.00	28.91	-17.09	46.00	39.67	18.50	2.04	31.30			Peak
5	499.50	30.02	-15.98	46.00	35.58	23.13	2.71	31.40			Peak
6	735.40	34.37	-11.63	46.00	34.82	27.65	3.40	31.50			Peak
7	2132.00	56.87			78.11	29.57	6.29	57.10			Peak
8	2402.00	60.54			79.14	31.38	6.81	56.79			Peak
9	2438.00	61.01			79.14	31.74	6.86	56.73			Peak
10	2752.00	43.23	-30.77	74.00	59.98	32.60	7.40	56.75			Peak
11	4632.00	46.23	-27.77	74.00	59.43	33.18	10.68	57.06			Peak
12	6866.00	49.48	-24.52	74.00	55.79	35.93	15.59	57.83			Peak
13	8932.00	49.49	-24.51	74.00	55.23	36.47	12.81	55.02			Peak
14	10526.00	48.27	-25.73	74.00	52.25	37.90	14.65	56.53			Peak
15	12166.00	50.41	-23.59	74.00	53.56	38.80	15.02	56.97	120	130	Peak

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6

Page Number : 21 of 25 Report Issued Date: Jul. 12, 2017 Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3



24~25°C Test Mode: Mode 6 Temperature: Test Engineer: Clear Peng **Relative Humidity:** 48~49% Test Distance: Polarization: 3m Horizontal FM Rx(98Mhz) + USB Cable (Charging from Adapter) + Earphone Function Type: Remark: #2 is Base station (FM option) signal which can be ignored. 97 Level (dBuV/m) Date: 2017-07-04 84.9 72.8 -6dE 60.6 FCC CLASS-B (AVG 10 48.5 8 36.4 24.3 12.1 1000. 9000. 11000. 13000 5000. 7000. Frequency (MHz) Site : 03CH03-SZ Condition : FCC CLASS-B 3m HF_ANT(3117)_119436 HORIZONTAL : Mode 6 Mode : 865395030024580/865395030024598 IMFI Plane A/Pos T/Pos Over Limit ReadAntenna Cable Preamp Remark Freq Level Limit Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV cmdeg 31.62 28.11 -11.89 40.00 33.49 26.00 0.27 31.65 130 168 Peak --- Peak 98.04 38.05 50.04 18.78 0.83 31.60 17.59 162.57 22.00 -21.50 43.50 34.36 --- Peak 1.39 31.34 23.12 -20.38 213.60 36.13 16.48 Peak 414.10 27.35 -18.65 46.00 32.14 24.07 2.44 31.30 --- Peak 642.30 30.06 -15.94 46.00 32.92 25.51 3.13 31.50 --- Peak 948.20 33.11 -12.89 46.00 74.00 31.00 29.67 3.94 31.50 --- Peak 42.70 -31.30 2752.00 59.45 32.60 7.40 56.75 --- Peak 4928.00 45.20 -28.80 74.00 56.93 10.99 Peak 10 6552.00 49.02 -24.98 48.24 -25.76 74.00 55.02 35.99 15.35 --- Peak 74.00 --- Peak 11 7144.00 56.88 35.68 13.75 58.07 9866.00 49.98 -24.02 74.00 54.60 Peak 12 37.67 13.93 56.22 50.79 -23.21 12786.00 74.00 53.98 57.32 253 Peak 39.03 15.10

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 22 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

SPORTON LAB.	FCC Test Report

24~25°C Test Mode: Mode 6 Temperature: Test Engineer: Clear Peng **Relative Humidity:** 48~49% Test Distance: Polarization: 3m Vertical FM Rx(98Mhz) + USB Cable (Charging from Adapter) + Earphone Function Type: #2 is Base station (FM option) signal which can be ignored. Remark: 97 Level (dBuV/m) Date: 2017-07-04 FCC CLASS-E 72.8 60.6 FCC CLASS-B (AVG) 10 48.5 12.1 0<mark>111</mark> 1000. 3000. 7000. 9000. 11000. 13000 5000. Frequency (MHz) Site : 03CH03-SZ Condition : FCC CLASS-B 3m HF_ANT(3117)_119436 VERTICAL Mode : Mode 6 IMEI : 865395030024580/865395030024598 Plane Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Freq Level Limit Line Level Factor Loss Factor Remark dB dBuV/m MHz dBuV/m dBuV dB dB dB/m cm deg 39.32 31.89 33.94 -6.06 40.00 26.00 0.27 31.65 100 360 QP --- Peak --- Peak 2 98.04 39.04 51.03 18.78 0.83 31.60 Peak 21.71 -21.79 43.50 3 177.42 34.52 17.00 1.47 31.28 230.34 22.56 -23.44 46.00 34.97 16.96 1.77 ------ Peak 31.14 26.83 -19.17 439.30 46.00 31.23 24.37 2.53 31.30 --- Peak --- Peak 638.10 32.19 -13.81 32.92 -13.08 43.23 -30.77 947.50 46.00 30.83 29.65 3.94 31.50 ------ Peak --- Peak 2752.00 74.00 59.98 32.60 7.40 56.75 46.23 -27.77 --- Peak 4632.00 74.00 59.43 33.18 10.68 57.06 49.49 -24.51 55.41 10 6766.00 74.00 35.95 15.80 57.67 Peak 8932.00 49.49 -24.51 74.00 55.23 36.47 12.81 55.02 --- Peak 12 10988.00 49.93 -24.07 74.00 52.77 38.00 14.76 55.60 Peak 50.52 -23.48 74.00 315 Peak 12748.00 53.78 39.00 15.10 57.36 120

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 23 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 20, 2017	Jul. 02, 2017	Apr. 19, 2018	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2016	Jul. 02, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2016	Jul. 02, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 13, 2016	Jul. 02, 2017	Oct. 12, 2017	Conduction (CO01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;M ax 30dBm	Oct. 22.2016	Jul. 04, 2017	Oct. 21.2017	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Apr. 18, 2017	Jul. 04, 2017	Apr.17, 2018	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz-2GHz	Apr. 22, 2017	Jul. 04, 2017	Apr 21, 2018	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Apr. 22, 2017	Jul. 04, 2017	Apr 21, 2018	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz ~1000MHz / 32 dB	Apr 18, 2017	Jul. 04, 2017	Apr 17, 2018	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 13, 2016	Jul. 04, 2017	Oct. 12, 2017	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 04, 2017	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 04, 2017	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 04, 2017	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 24 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3



5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2.3dB
Confidence of 95% (U = 2Uc(y))	2.306

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

Measuring Uncertainty for a Level of	4.6.10
Confidence of 95% (U = 2Uc(y))	4.6dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of	4.5dB
Confidence of 95% (U = 2Uc(y))	4.505

Sporton International (KunShan) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFZZ-RMSG6 Page Number : 25 of 25
Report Issued Date : Jul. 12, 2017
Report Version : Rev. 01

Report Template No.: BU5-FD15B Version 1.3