# **FCC Test Report**

APPLICANT : Planet Avvio LLC

**EQUIPMENT**: Mobile Phone

BRAND NAME : Mint MODEL NAME : M350

MARKETING NAME : Mint M350 FCC ID : 2ALTAM350

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

**CLASSIFICATION**: Certification

The product was received on Apr. 07, 2017 and testing was completed on May 06, 2017. We, SPORTON International (ShenZhen) 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 (ShenZhen) INC., the test report shall not be reproduced except in full.

Prepared by: Eric Shih / Manager

Fire Shih

Approved by: Jones Tsai / Manager

SPORTON International (ShenZhen) INC.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan District, Shenzhen City, Guangdong Province, China

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 1 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

**Testing Laboratory** 

Report No.: FC740704

## **TABLE OF CONTENTS**

RE	VISIO	N HISTORY	3
		RY OF TEST RESULT	
1.		ERAL DESCRIPTION	
		Applicant	
	1.2. 1.3.	Manufacturer  Product Feature of Equipment Under Test	
	1.3. 1.4.	Product Specification of Equipment Under Test	
	1.4.	Modification of EUT	
	1.6.	Test Location	
	1.7.	Applicable Standards	
2.	TEST		
	2.1.	Test Mode	
	2.2.	Connection Diagram of Test System	
	2.3.	Support Unit used in test configuration and system	
	2.4.	EUT Operation Test Setup	
3.	TEST	RESULT	12
	3.1.	Test of AC Conducted Emission Measurement	
	3.2.	Test of Radiated Emission Measurement	
4.	LIST	OF MEASURING EQUIPMENT	22
5.	UNCI	ERTAINTY OF EVALUATION	23

APPENDIX A. SETUP PHOTOGRAPHS

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 2 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC740704	Rev. 01	Initial issue of report	May 12, 2017
FC740704 Rev. 02		1704 Rev. 02 Update report for Model Name from Mint M350 to M350.	

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 3 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

## **SUMMARY OF TEST RESULT**

Report Section	FCC Rule Description		FCC Rule Description Limit		Remark
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	12.52 dB at
					0.190 MHz
	15.109	15.109 Radiated Emission	< 15.109 limits	PASS	Under limit
3.2					3.04 dB at
3.2					240.060 MHz
					for Quasi-Peak

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 4 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

## 1. General Description

## 1.1. Applicant

**Planet Avvio LLC** 

9725 NW 117th Ave., Medley, FL 33178, United States

### 1.2. Manufacturer

**Shenzhen Crave Communication Co., Ltd.** 

Floor 3, Bldg8, Dongfangming Industrial City, No. 83 Dabao Rd., 33 District, Shenzhen, China

## 1.3. Product Feature of Equipment Under Test

	Product Feature				
Equipment	Mobile Phone				
Brand Name	Mint				
Model Name	M350				
Marketing Name	Mint M350				
FCC ID	2ALTAM350				
	GSM/GPRS/EGPRS (Downlink Only)/				
EUT supports Radios application	WCDMA/HSPA/HSPA+(16QAM uplink is not supported)				
EOT Supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40				
	Bluetooth v3.0 + EDR/Bluetooth v4.0 LE				
IMEI Code	Conduction: 359287080012019/356287080012027				
INIEI Code	Radiation: 356287080012050/356287080012068				
HW Version	V10A-MB-V1.0				
SW Version	Mint-M350-CO-OM-VO4 20170301				
EUT Stage	Production Unit				

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 (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 5 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

## 1.4. Product Specification of Equipment Under Test

Standards-related Product Specification					
	GSM850: 824.2 MHz ~ 848.8 MHz				
	GSM1900: 1850.2 MHz ~ 1909.8MHz				
Tx Frequency	WCDMA Band V: 826.4 MHz ~ 846.6 MHz				
TX T requericy	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz				
	802.11b/g/n: 2412 MHz ~ 2462 MHz				
	Bluetooth: 2402 MHz ~ 2480 MHz				
	GSM850: 869.2 MHz ~ 893.8 MHz				
	GSM1900: 1930.2 MHz ~ 1989.8 MHz				
	WCDMA Band V: 871.4 MHz ~ 891.6 MHz				
Rx Frequency	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz				
	802.11b/g/n: 2412 MHz ~ 2462 MHz				
	Bluetooth: 2402 MHz ~ 2480 MHz				
	GPS: 1.57542 GHz				
	WWAN : PIFA Antenna				
Antenna Type	WLAN : PIFA Antenna				
Antenna Type	Bluetooth : PIFA Antenna				
	GPS: PIFA Antenna				
	GSM: GMSK				
	GPRS: GMSK				
	EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK(Downlink Only)				
	WCDMA: BPSK (Uplink)				
	HSDPA: QPSK (Uplink)				
	HSUPA: QPSK (Uplink)				
Type of Modulation	HSPA+ : 16QAM (16QAM uplink is not supported)				
	802.11b: DSSS (DBPSK / DQPSK / CCK)				
	802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)				
	Bluetooth LE : GFSK				
	Bluetooth (1Mbps): GFSK				
	Bluetooth (2Mbps) : π /4-DQPSK				
	Bluetooth (3Mbps): 8-DPSK				
	GPS: BPSK				

### 1.5. Modification of EUT

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

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 6 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

### 1.6. Test Location

Test Site	SPORTON International (ShenZhen) INC.				
	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan District,				
	Shenzhen City, Guangdong Province, China				
Test Site Location	TEL: +86-755-8637-9589				
	FAX: +86-755-8637-9595				
Toot Site No	Sporton Site No.				
Test Site No.	CO01-SZ				

Test Site	SPORTON International (ShenZhen) INC.				
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755-3320-2398				
Test Site No.	Sporton Site No.	FCC Registration No.			
Test Site NO.	03CH03-SZ	565805			

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 (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 7 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B 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 + Earphone + USB Cable (Charging from Adapter) + Camera(Front) <fig. 1=""></fig.>
AC Conducted	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Rear) <fig. 1=""></fig.>
Emission	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + MPEG4 <fig. 1=""></fig.>
	Mode 4: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig. 2=""></fig.>
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Front) <fig. 1=""></fig.>
Radiated	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + Camera(Rear) <fig. 1=""></fig.>
Emissions < 1GHz	Mode 3 : WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging from Adapter) + MPEG4 <fig. 1=""></fig.>
	Mode 4: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig. 2=""></fig.>
Radiated Emissions ≥ 1GHz	Mode 1: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data Link with Notebook) + GPS Rx <fig. 2=""></fig.>

#### Remark:

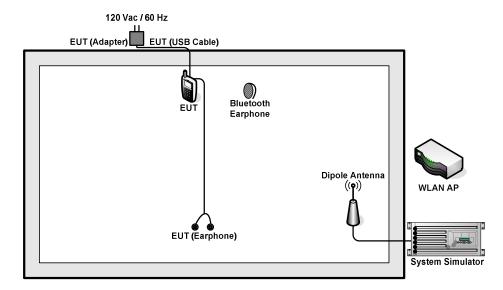
- 1. The worst case of AC is mode 2; and the USB Link mode is mode 4, the test data of this mode was reported.
- 2. The worst case of RE < 1G is mode 4; only the test data of this mode was reported.
- Data Link with Notebook means data application transferred mode between EUT and Notebook.

SPORTON International (ShenZhen) INC.

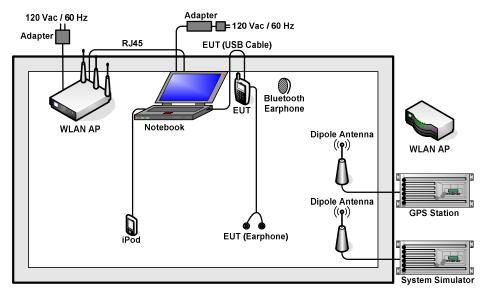
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 8 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report No.: FC740704

## 2.2. Connection Diagram of Test System



<Fig. 1>



<Fig. 2>

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 9 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

## 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, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	ASUS	RT-AC66U	MSQ-TRAC66U	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-820L	KA2IR820LAI	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Samsung	HS3000	A3LHS30000	N/A	N/A
6.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
7.	Notebook	Lenovo	E540	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
8.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.2 m	N/A
9.	iPod nano 8GB	Apple	MC690ZP/A	FCC DoC	Shielded, 1.2 m	N/A
10.	SD Card	Kingston	SDC10/8GB	Fcc DoC	N/A	N/A

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 10 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

### 2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA 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. Execute "GPS Test" to make the EUT receive continuous signals from GPS station.
- 3. Execute "Video player" to play MPEG4 files.
- 4. Turn on camera to capture images.

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 11 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B 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		

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedure

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

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 12 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

### 3.1.4 Test Setup

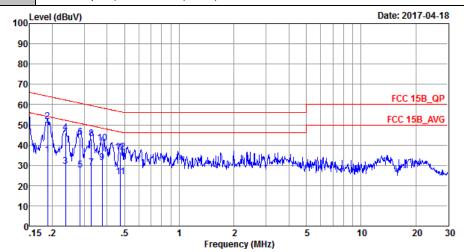


TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 13 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

#### 3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	21~23℃		
Test Engineer :	Tao Cheng	Relative Humidity :	41~43%		
Test Voltage :	120Vac / 60Hz	Phase :	Line		
Function Tune	GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging				
Function Type :	from Adapter) + Camera(Rear)				



: CO01-SZ

Condition: FCC 15B\_QP LISN\_20170301\_L LINE Project : (FC)740704

: Mode 2 Mode

: 359287080012019/356287080012027 IMEI

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∀	dB	dBu∀	dBu∀	dB	dB	
1	0.19	35.09	-19.02	54.11	24.80	0.03	10.26	Average
2 *	0.19	51.59	-12.52	64.11	41.30	0.03	10.26	QP
3	0.24	29.45	-22.77	52.22	19.20	0.03	10.22	Average
4	0.24	46.05	-16.17	62.22	35.80	0.03	10.22	QP
5	0.28	27.65	-23.03	50.68	17.40	0.03	10.22	Average
6	0.28	43.95	-16.73	60.68	33.70	0.03	10.22	QP
7	0.33	28.94	-20.55	49.49	18.70	0.03	10.21	Average
8	0.33	43.34	-16.15	59.49	33.10	0.03	10.21	QP
9	0.38	31.23	-17.11	48.34	21.00	0.03	10.20	Average
10	0.38	41.03	-17.31	58.34	30.80	0.03	10.20	QP
11	0.47	24.50	-21.95	46.45	14.30	0.02	10.18	Average
12	0.47	36.40	-20.05	56.45	26.20	0.02	10.18	QP

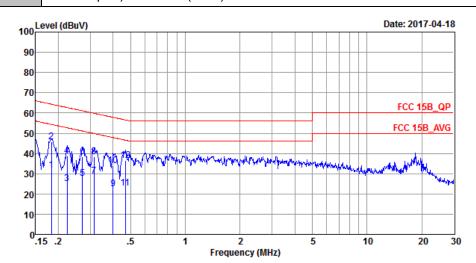
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350

Page Number : 14 of 23 Report Issued Date: May 16, 2017 Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

FCC Test Report Report No. : FC740704

Test Mode :	Mode 2	Temperature :	21~23℃				
Test Engineer :	Tao Cheng	Relative Humidity :	41~43%				
Test Voltage :	120Vac / 60Hz	Phase :	Neutral				
	GSM1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Charging						
Function Type :	from Adapter) + Camera(Rear)						



: CO01-SZ

Condition: FCC 15B\_QP LISN\_20170301\_N NEUTRAL

Project : (FC)740704 Mode : Mode 2 Mode

: 359287080012019/356287080012027 Over Limit I IMEI

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBu∀	dB	dB	
1	0.18	31.81	-22.52	54.33	21.50	0.03	10.28	Average
2 🔻	0.18	45.71	-18.62	64.33	35.40	0.03	10.28	QP
3	0.22	25.25	-27.45	52.70	15.00	0.03	10.22	Average
4	0.22	38.75	-23.95	62.70	28.50	0.03	10.22	QP
5	0.27	27.85	-23.22	51.07	17.60	0.03	10.22	Average
6	0.27	38.45	-22.62	61.07	28.20	0.03	10.22	QP
7	0.31	28.84	-21.00	49.84	18.59	0.03	10.22	Average
8	0.31	38.54	-21.30	59.84	28.29	0.03	10.22	QP
9	0.40	22.41	-25.45	47.86	12.20	0.02	10.19	Average
10	0.40	33.81	-24.05	57.86	23.60	0.02	10.19	QP
11	0.47	22.70	-23.84	46.54	12.50	0.02	10.18	Average
12	0.47	36.50	-20.04	56.54	26.30	0.02	10.18	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350

: 15 of 23 Page Number Report Issued Date: May 16, 2017 Report Version : Rev. 02



Test Mode :	Mode 4	Temperature :	21~23℃				
Test Engineer :	Tao Cheng	Relative Humidity :	41~43%				
Test Voltage :	120Vac / 60Hz	Phase :	Line				
	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data						
Function Type :	Link with Notebook) + GPS Rx						

100 Level (dBuV) Date: 2017-04-18 90 80 70 FCC 15B\_QP 60 FCC 15B\_AVG 50 40 30 20 0.15 .2 .5 2 5 10 20 30

Frequency (MHz)

Site : CO01-SZ Condition: FCC 15B\_QP LISN\_20170301\_L LINE

Project : (FC) 740704

Mode : Mode 4
IMEI : 359287080012019/356287080012027

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.17	30.06	-24.93	54.99	19.70	0.03	10.33	Average
2	0.17	46.16	-18.83	64.99	35.80	0.03	10.33	QP
3	0.19	31.77	-22.07	53.84	21.50	0.03	10.24	Average
4	0.19	43.17	-20.67	63.84	32.90	0.03	10.24	QP
5	0.24	26.85	-25.10	51.95	16.60	0.03	10.22	Average
6	0.24	38.55	-23.40	61.95	28.30	0.03	10.22	QP
7	0.32	23.14	-26.57	49.71	12.90	0.03	10.21	Average
8	0.32	34.04	-25.67	59.71	23.80	0.03	10.21	QP
9 *	0.53	29.80	-16.20	46.00	19.60	0.02	10.18	Average
10	0.53	35.90	-20.10	56.00	25.70	0.02	10.18	QP
11	2.40	27.52	-18.48	46.00	17.21	0.13	10.18	Average
12	2.40	32.62	-23.38	56.00	22.31	0.13	10.18	QP

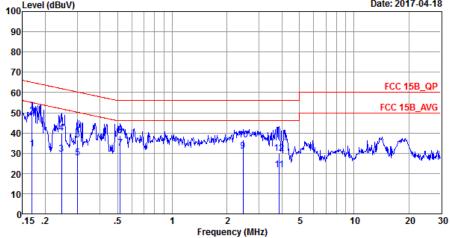
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350

Page Number : 16 of 23 Report Issued Date: May 16, 2017 Report Version : Rev. 02

Report No. : FC740704

FCC Test Report

		_							
Test Mode :	Mode 4	Temperature :	21~23°C						
Test Engineer :	Tao Cheng	Relative Humidity :	41~43%						
Test Voltage :	120Vac / 60Hz	Phase :	Neutral						
Function Tune	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data								
Function Type :	Link with Notebook) + GPS	Rx							
400 <sup>L</sup>	evel (dBuV)	Date: 2017-04-18							
100									
90									



: CO01-SZ

Condition: FCC 15B\_QP LISN\_20170301\_N NEUTRAL

Project : (FC)740704

: Mode 4 Mode

: 359287080012019/356287080012027 IMEI

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBu₹	dB	dBu∇	dBu∀	dB	dB	
1	0.17	32.16	-22.83	54.99	21.80	0.03	10.33	Average
2	0.17	48.46	-16.53	64.99	38.10	0.03	10.33	QP
3	0.25	29.35	-22.56	51.91	19.10	0.03	10.22	Average
4	0.25	39.75	-22.16	61.91	29.50	0.03	10.22	QP
5	0.30	27.85	-22.34	50.19	17.60	0.03	10.22	Average
6	0.30	36.56	-23.63	60.19	26.31	0.03	10.22	QP
7 *	0.52	32.60	-13.40	46.00	22.40	0.02	10.18	Average
8	0.52	38.90	-17.10	56.00	28.70	0.02	10.18	QP
9	2.45	31.13	-14.87	46.00	20.90	0.04	10.19	Average
10	2.45	36.53	-19.47	56.00	26.30	0.04	10.19	QP
11	3.88	21.80	-24.20	46.00	11.50	0.05	10.25	Average
12	3.88	29.90	-26.10	56.00	19.60	0.05	10.25	QP

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350

Page Number : 17 of 23 Report Issued Date: May 16, 2017 Report Version : Rev. 02

Report No. : FC740704

#### 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

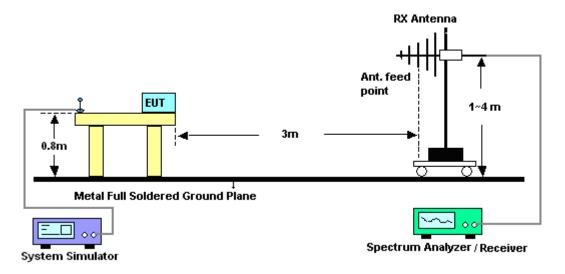
SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 18 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

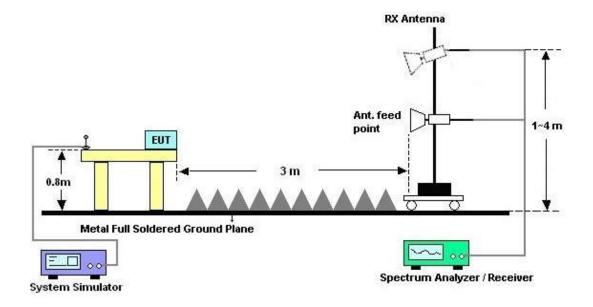
Report No.: FC740704

### 3.2.4. Test Setup of Radiated Emission

#### For radiated emissions from 30MHz to 1GHz



#### For radiated emissions above 1GHz



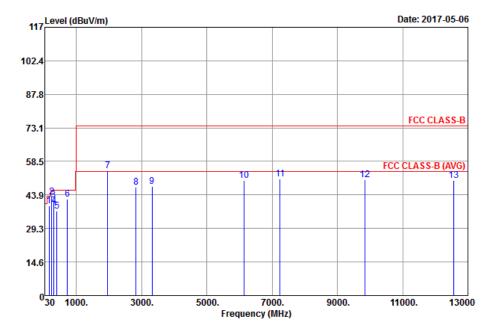
SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 19 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

#### 3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 4	Temperature :	23~25°C								
Test Engineer :	Leo Liao	Relative Humidity :	48~52%								
Test Distance :	3m	Polarization :	Horizontal								
Eurotion Type	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data										
Function Type :	Link with Notebook) + GPS Rx										
Remark :	#7 is system simulator signa	al which can be ignored	†7 is system simulator signal which can be ignored.								



Site : 03CH03-SZ

Condition : FCC CLASS-B 3m LF\_ANT(35407)\_6 HORIZONTAL

Project : (FC) 740704 Mode : Mode 4

IMEI : 356287080012050/356287080012068

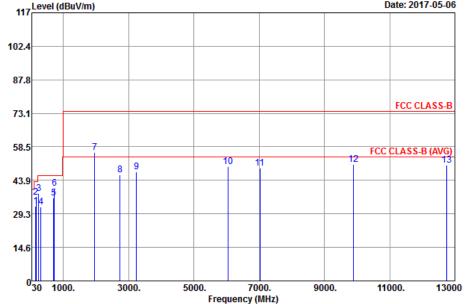
		Level				Antenna Factor ——— dB/m			T/Pos ———— deg	A/Pos	Remark
1	161.22	38.95	-4.55	43.50	51.25	17.67	1.38	31.35	246	100	QP
2	240.06	42.96	-3.04	46.00	55.04	17.23	1.81	31.12	348	115	QP
3	298.65	41.58	-4.42	46.00	52.35	18.48	2.04	31.29			Peak
4	314.70	39.08	-6.92	46.00	49.20	19.08	2.10	31.30			Peak
5	399.40	36.81	-9.19	46.00	41.82	23.90	2.39	31.30			Peak
6	720.00	42.03	-3.97	46.00	42.92	27.27	3.34	31.50			Peak
7	1960.00	54.35			77.05	28.56	6.03	57.29			Peak
8	2828.00	47.26	-26.74	74.00	63.50	32.77	7.77	56.78			Peak
9	3314.00	47.67	-26.33	74.00	62.87	32.73	9.18	57.11			Peak
10	6144.00	50.09	-23.91	74.00	56.84	36.14	13.79	56.68			Peak
11	7242.00	50.80	-23.20	74.00	59.91	35.51	13.46	58.08	307	150	Peak
12	9834.00	50.56	-23.44	74.00	55.16	37.72	13.93	56.25			Peak
13	12572.00	50.09	-23.91	74.00	53.70	38.87	15.08	57.56			Peak

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 20 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3

Report No.: FC740704

Test Mode :	Mode 4		Temperature : 23~25°C						
Test Engineer :	Leo Liao		Relative Humidity: 48~52%						
Test Distance :	3m	m Polarization : Vertical							
Fatian Time	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable (Data								
Function Type :	Link with Notebook) + GPS Rx								
Remark :	#7 is system simu	ılator signa	l which ca	n be ignored	i.				
117	Level (dBuV/m)				D	ate: 2017-05-06			
""									
402.4									



: 03CH03-SZ Site

Condition : FCC CLASS-B 3m LF\_ANT(35407)\_6 VERTICAL

Project : (FC) 740704 Mode : Mode 4

IMEI : 356287080012050/356287080012068

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	T/Pos	A/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	deg	cm	
1	155.55	32.66	-10.84	43.50	44.80	17.90	1.34	31.38			Peak
2	160.95	36.66	-6.84	43.50	48.96	17.67	1.38	31.35			Peak
3	240.06	38.17	-7.83	46.00	50.25	17.23	1.81	31.12	32	200	QP
4	314.00	32.38	-13.62	46.00	42.54	19.05	2.09	31.30			Peak
5	694.10	36.27	-9.73	46.00	37.85	26.66	3.26	31.50			Peak
6	720.00	40.51	-5.49	46.00	41.40	27.27	3.34	31.50			Peak
7	1960.00	55.94			78.64	28.56	6.03	57.29			Peak
8	2738.00	46.37	-27.63	74.00	63.15	32.57	7.40	56.75			Peak
9	3236.00	47.49	-26.51	74.00	62.64	32.81	9.09	57.05			Peak
10	6038.00	49.84	-24.16	74.00	56.77	36.19	13.37	56.49			Peak
11	7028.00	49.34	-24.66	74.00	57.19	35.84	14.36	58.05			Peak
12	9878.00	50.91	-23.09	74.00	55.38	37.67	14.08	56.22	243	100	Peak
13	12742.00	50.54	-23.46	74.00	53.80	39.00	15.10	57.36			Peak

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350

Page Number : 21 of 23 Report Issued Date: May 16, 2017 Report Version : Rev. 02

## 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jan. 06, 2017	Apr. 18, 2017	Jan. 05, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103892	9kHz~30MHz	Jan. 05, 2017	Apr. 18, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103912	9kHz~30MHz	Jan. 05, 2017	Apr. 18, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Jul. 16, 2016	Apr. 18, 2017	Jul. 15, 2017	Conduction (CO01-SZ)
Pulse Limiter	COM-POWER	LIT-153 Transient Limiter	53139	150kHz~30MHz	Oct. 11, 2016	Apr. 18, 2017	Oct. 10, 2017	Conduction (CO01-SZ)
RF Cable	Woken	B0720#0001	CO01SZ0007	150kHz~30MHz	Oct. 08, 2016	Apr. 18, 2017	Oct. 07, 2017	Conduction (CO01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	May 07, 2016	May 06, 2017	May 06, 2017	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz	May 07, 2016	May 06, 2017	May 06, 2017	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz~2GHz	May 21, 2016	May 06, 2017	May 20, 2017	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBE CK	BBHA9120D	9120D-1355	1GHz~18GHz	May 07, 2016	May 06, 2017	May 06, 2017	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 11, 2016	May 06, 2017	Oct. 10, 2017	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P- R	1943528	1GHz~18GHz	Oct. 11, 2016	May 06, 2017	Oct. 10, 2017	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	May 06, 2017	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 06, 2017	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 06, 2017	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 22 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3



## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2.5dB
Confidence of 95% (U = 2Uc(y))	2.50B

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

Measuring Uncertainty for a Level of	5.1dB
Confidence of 95% (U = 2Uc(y))	

#### <u>Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)</u>

Measuring Uncertainty for a Level of	5.0dB
Confidence of 95% (U = 2Uc(y))	5.VUB

SPORTON International (ShenZhen) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: 2ALTAM350 Page Number : 23 of 23
Report Issued Date : May 16, 2017
Report Version : Rev. 02

Report Template No.: BU5-FC15B Version 1.3