FCC Test Report

APPLICANT: Sony Mobile Communications Inc.

EQUIPMENT: GSM/WCDMA/LTE Phone+Bluetooth, DTS/UNII

a/b/g/n and NFC

BRAND NAME : Sony

FCC ID : PY7-PM0960

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : FCC CLASS B PERSONAL COMPUTERS AND

PERIPHERALS

The product was received on Jan. 22, 2016 and testing was completed on Feb. 10, 2016. We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Louis Wu / Manager

Lunis Win

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 1 of 27
Report Issued Date : May 09, 2016

Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

Testing Laboratory 1190

TABLE OF CONTENTS

RE	EVISION HISTORY	3
SU	UMMARY OF TEST RESULT	4
1.	GENERAL DESCRIPTION	5
	1.1. Applicant	5
	1.2. Manufacturer	5
	1.3. Product Feature of Equipment Under Test	5
	1.4. Modification of EUT	5
	1.5. Test Location	
	1.6. Applicable Standards	6
2.	TEST CONFIGURATION OF EQUIPMENT UNDER TEST	7
	2.1. Test Mode	7
	2.2. Connection Diagram of Test System	
	2.3. Support Unit used in test configuration and system	9
	2.4. EUT Operation Test Setup	9
3.	TEST RESULT	10
	3.1. Test of AC Conducted Emission Measurement	10
	3.2. Test of Radiated Emission Measurement	
4.	LIST OF MEASURING EQUIPMENT	26
5	UNCERTAINTY OF EVALUATION	27

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 2 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC612117-01	Rev. 01	Initial issue of report	Mar. 31, 2016
FC612117-01	Rev. 02	 Detail changes list as below: Adding test description in section 2.1 Revising the connection diagram of test system in section 2.2. Revising the description of radiation frequency range in section 2.1 	Apr. 15, 2016
FC612117-01	Rev. 03	Updating the SW Version.	May 09, 2016

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 3 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit 8.20 dB at 0.158 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 6.44 dB at 39.990 MHz

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 4 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

1. General Description

1.1. Applicant

Sony Mobile Communications Inc.

4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

1.2. Manufacturer

Sony Mobile Communications Inc.

4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

1.3. Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n, NFC, and GPS

Product Specification subjective to this standard					
	WWAN: Coupling type (LDS) Antenna				
	WLAN: PIFA Antenna				
Antenna Type	Bluetooth: PIFA Antenna				
	GPS: PIFA Antenna				
	NFC: Loop Antenna				

Report No.: FC612117-01

EUT Information List								
IMEI	Performed Test Item							
004402455895585	Α	37.0.A.0.43	RQ3000DQQU	Radiated Spurious Emission Conducted Emission				

Accessory List					
	Model No. : MH410c				
Earphone	Type No. : AG-1100				
	S/N: 13511E570075F40				
	Model No. : UCB16				
USB Cable	Type No. : AI-0142				
	S/N: N/A				

Note:

- 1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
- 2. Above the accessories list are used to exercise the EUT during test.
- 3. For other wireless features of this EUT, test report will be issued separately.

1.4. Modification of EUT

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

 SPORTON INTERNATIONAL INC.
 Page Number
 : 5 of 27

 TEL: 886-3-327-3456
 Report Issued Date
 : May 09, 2016

 FAX: 886-3-328-4978
 Report Version
 : Rev. 03

FCC ID: PY7-PM0960 Report Template No.: BU5-FC15B Version 1.3

1.5. Test Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.				
	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park,				
Test Site Location	Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.				
Test Site Location	TEL: +886-3-327-3456				
	FAX: +886-3-328-4978				
Toot Cito No	Sporton	Site No.			
Test Site No.	CO05-HY	03CH06-HY			

1.6. 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.
- 2. For FCC 15 Subpart B Unintentional Radiators, device supporting USB interface or similar peripherals (defined as the Section 15.3 (r) Peripheral device) acting as a peripheral for personal computers shall be authorized as "The Class B personal computers and peripherals" per the Section 15.101 (a) Equipment authorization of unintentional radiators.
- 3. For other Unintentional Radiators features of this EUT, test reports are be issued separately. Per the Note of the Section 15.101, when device supports features (USB, FM Radio, digital devices...etc) more than one category of authorization, type of authorization shall be appropriately chosen for FCC 15B compliance rule, and the Section 15.101 (b), only those receivers that operate (tune) within the frequency range of 30-960 MHz, CB receivers and radar detectors are subject to the authorizations shown in paragraph (a) of the Section 15.101. However, receivers indicated as being subject to Declaration of Conformity that are contained within a transceiver, the transmitter portion of which is subject to certification, shall be authorized under the verification procedure.

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 6 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

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).

The following tables are showing the test modes as the worst cases and recorded in this report.

		Test Co	ondition
Item	EUT Configuration	EMI	EMI
		AC	RE
1.	Data Link with Notebook	\boxtimes	

- The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM, WLAN, and Bluetooth and GPS idle.
- 2. After pretest mode 1, 2 and 3, which found mode 1 is the worst case and test frequency above 1GHz of this mode was reported.

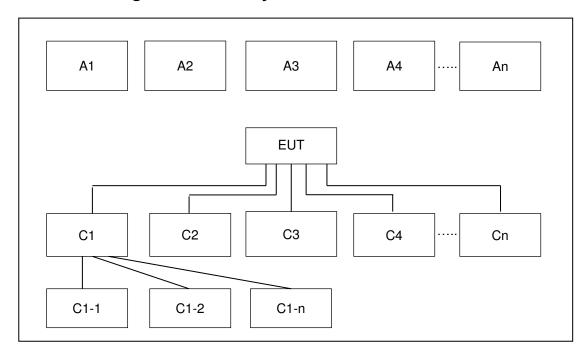
Abbreviations:

EMI AC: AC conducted emissions
 EMI RE: EUT radiated emissions

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 7 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

2.2. Connection Diagram of Test System



Conduction and Radiation Test Setup										
No	Wireless Station	O T		Test Mode						
No.		Connection Type	1	2	3	-	-	-	-	
A1	Bluetooth Earphone	Bluetooth	Х	Х	Χ					
A2	System Simulator	GSM	Х	Х	Х					
A 3	GPS Station	GPS	Х		Х					
A4	WLAN AP	WiFi	Х	Х	Х					
No.	Setup Peripherals	Connection Type	1	2	3	-	-	-	•	
C1	Notebook	USB cable	Х	Х	Χ					
C1-1	iPod	USB Cable to C1	Х	Х	Х					
C1-2	WLAN AP	RJ-45 Cable to C1	Х	Х	Х					
C2	Earphone	Earphone jack	Х	Х	Х					
C2	CD cord	SD I/O interface	Х	Х						
C3	SD card	without cable	^	X	Х					

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 8 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03
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.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Sony	SBH20	PY7-RD0010	Unshielded, 0.75m	N/A
5.	WLAN AP	D-Link	DIR-865L	KA2IR865LA1	N/A	Unshielded, 1.8 m
6.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
8.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
9.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A

2.4. EUT Operation Test Setup

The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM and Bluetooth, WLAN, and GPS idle.

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 9 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

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		

^{*}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.

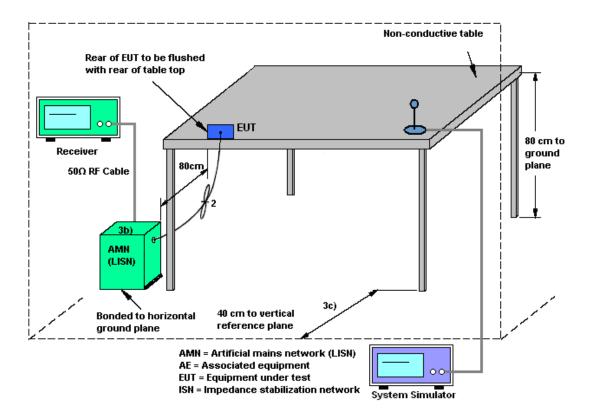
TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 10 of 27

Report Issued Date : May 09, 2016

Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

3.1.4 Test Setup

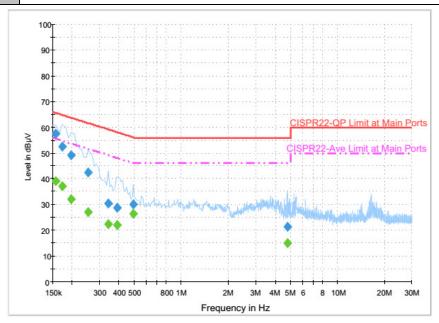


TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 11 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25 ℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	47~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Eupation Type	Data Link with Notebook (wi	th USB Cable) + WLAI	N (2.4GHz) Idle + GPS Rx +
Function Type :	Earphone + Battery 1		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	57.4	Off	L1	19.6	8.2	65.6
0.174000	52.6	Off	L1	19.6	12.2	64.8
0.198000	49.2	Off	L1	19.6	14.5	63.7
0.254000	42.3	Off	L1	19.6	19.3	61.6
0.342000	30.5	Off	L1	19.6	28.7	59.2
0.390000	28.8	Off	L1	19.6	29.3	58.1
0.494000	30.0	Off	L1	19.6	26.1	56.1
4.774000	21.3	Off	L1	19.7	34.7	56.0

Final Result : Average

equency (MHz)	Average (dΒμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
.158000	39.1	Off	L1	19.6	16.5	55.6
.174000	37.1	Off	L1	19.6	17.7	54.8
.198000	32.0	Off	L1	19.6	21.7	53.7
.254000	27.0	Off	L1	19.6	24.6	51.6
.342000	22.5	Off	L1	19.6	26.7	49.2
.390000	22.1	Off	L1	19.6	26.0	48.1
.494000	26.4	Off	L1	19.6	19.7	46.1
.774000	15.2	Off	L1	19.7	30.8	46.0
	equency (MHz) .158000 .174000 .198000 .254000 .342000 .390000 .494000	equency (MHz) Average (dBμV) .158000 39.1 .174000 37.1 .198000 32.0 .254000 27.0 .342000 22.5 .390000 22.1 .494000 26.4	equency (MHz) Average (dBμV) Filter .158000 39.1 Off .174000 37.1 Off .198000 32.0 Off .254000 27.0 Off .342000 22.5 Off .390000 22.1 Off .494000 26.4 Off	equency (MHz) Average (dBμV) Filter Line .158000 39.1 Off L1 .174000 37.1 Off L1 .198000 32.0 Off L1 .254000 27.0 Off L1 .342000 22.5 Off L1 .390000 22.1 Off L1 .494000 26.4 Off L1	equency (MHz) Average (dBμV) Filter Line (dB) Corr. (dB) .158000 39.1 Off L1 19.6 .174000 37.1 Off L1 19.6 .198000 32.0 Off L1 19.6 .254000 27.0 Off L1 19.6 .342000 22.5 Off L1 19.6 .390000 22.1 Off L1 19.6 .494000 26.4 Off L1 19.6	(MHz) (dBμV) Filter Line (dB) (dB) .158000 39.1 Off L1 19.6 16.5 .174000 37.1 Off L1 19.6 17.7 .198000 32.0 Off L1 19.6 21.7 .254000 27.0 Off L1 19.6 24.6 .342000 22.5 Off L1 19.6 26.7 .390000 22.1 Off L1 19.6 26.0 .494000 26.4 Off L1 19.6 19.7

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 12 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

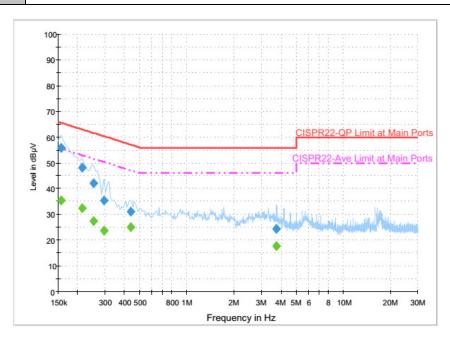
Report Template No.: BU5-FC15B Version 1.3

Test Mode: Mode 1
Temperature: 24~25°C

Test Engineer: Kai-Chun Chu
Relative Humidity: 47~48%

Test Voltage: 120Vac / 60Hz
Phase: Neutral

Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dB _µ V)	Filter	Line	Corr.	Margin (dB)	Limit (dBµV)
0.158000	55.8	Off	N	19.6	9.8	65.6
0.214000	48.3	Off	N	19.6	14.7	63.0
0.254000	42.0	Off	N	19.6	19.6	61.6
0.294000	35.4	Off	N	19.6	25.0	60.4
0.438000	31.2	Off	N	19.6	25.9	57.1
3.750000	24.3	Off	N	19.6	31.7	56.0

Final Result : Average

Frequency (MHz)	Average (dΒμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	35.4	Off	N	19.6	20.2	55.6
0.214000	32.6	Off	N	19.6	20.4	53.0
0.254000	27.5	Off	N	19.6	24.1	51.6
0.294000	23.7	Off	N	19.6	26.7	50.4
0.438000	25.2	Off	N	19.6	21.9	47.1
3.750000	17.9	Off	N	19.6	28.1	46.0

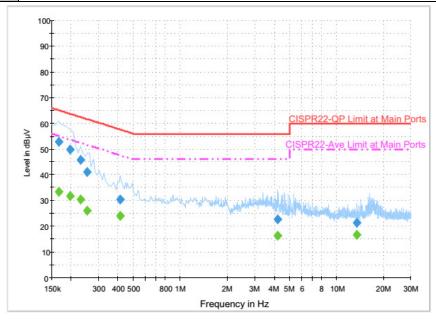
SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 13 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

CC Test Report Report No. : FC612117-01

Test Mode :	Mode 2	Temperature :	24~25℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	47~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type	Data Link with Notebook (wi	th USB Cable) + WLAI	N (5GHz) Idle + NFC On +
Function Type :	Earphone + Battery 1		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	52.9	Off	L1	19.6	12.3	65.2
0.198000	49.7	Off	L1	19.6	14.0	63.7
0.230000	45.9	Off	L1	19.6	16.5	62.4
0.254000	41.2	Off	L1	19.6	20.4	61.6
0.414000	30.5	Off	L1	19.6	27.1	57.6
4.214000	22.9	Off	L1	19.7	33.1	56.0
13.558000	21.6	Off	L1	19.8	38.4	60.0

Final Result : Average

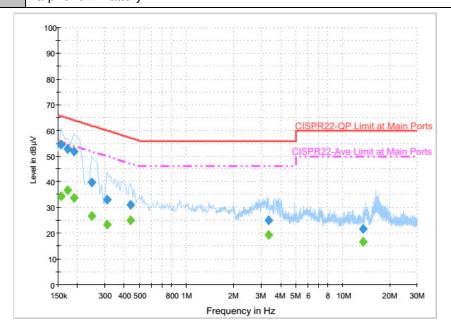
mai riocait						
Frequency	Average	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Filler	Lille	(dB)	(dB)	(dBµV)
0.166000	33.5	Off	L1	19.6	21.7	55.2
0.198000	31.7	Off	L1	19.6	22.0	53.7
0.230000	30.3	Off	L1	19.6	22.1	52.4
0.254000	26.0	Off	L1	19.6	25.6	51.6
0.414000	24.2	Off	L1	19.6	23.4	47.6
4.214000	16.3	Off	L1	19.7	29.7	46.0
13.558000	16.6	Off	L1	19.8	33.4	50.0

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 14 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

FCC Test Report No. : FC612117-01

Test Mode :	Mode 2	Temperature :	24~25℃		
Test Engineer :	Kai-Chun Chu	Relative Humidity :	47~48%		
Test Voltage :	120Vac / 60Hz	Phase :	Neutral		
Function Type	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On +				
Function Type :	Earphone + Battery 1				



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	54.7	Off	N	19.6	10.9	65.6
0.174000	52.8	Off	N	19.6	12.0	64.8
0.190000	51.7	Off	N	19.6	12.3	64.0
0.246000	39.9	Off	N	19.6	22.0	61.9
0.310000	33.0	Off	N	19.6	27.0	60.0
0.438000	31.1	Off	N	19.6	26.0	57.1
3.350000	25.1	Off	N	19.6	30.9	56.0
13.558000	21.6	Off	N	19.8	38.4	60.0

Final Result : Average

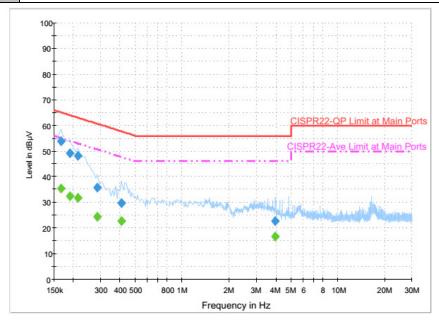
Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.4	Off	N	19.6	21.2	55.6
0.174000	36.7	Off	N	19.6	18.1	54.8
0.190000	33.8	Off	N	19.6	20.2	54.0
0.246000	26.9	Off	N	19.6	25.0	51.9
0.310000	23.5	Off	N	19.6	26.5	50.0
0.438000	25.2	Off	N	19.6	21.9	47.1
3.350000	19.5	Off	N	19.6	26.5	46.0
13.558000	16.7	Off	N	19.8	33.3	50.0

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 15 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

CC Test Report Report No.: FC612117-01

Test Mode :	Mode 3	Temperature :	24~25 ℃		
Test Engineer :	Kai-Chun Chu	Relative Humidity :	47~48%		
Test Voltage :	120Vac / 60Hz	Phase :	Line		
Function Type	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx +				
Function Type :	Earphone + Battery 2				



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	53.8	Off	L1	19.6	11.4	65.2
0.190000	49.3	Off	L1	19.6	14.7	64.0
0.214000	48.2	Off	L1	19.6	14.8	63.0
0.286000	35.8	Off	L1	19.6	24.8	60.6
0.406000	29.8	Off	L1	19.6	27.9	57.7
3.982000	22.7	Off	L1	19.7	33.3	56.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	35.5	Off	L1	19.6	19.7	55.2
0.190000	32.4	Off	L1	19.6	21.6	54.0
0.214000	31.6	Off	L1	19.6	21.4	53.0
0.286000	24.6	Off	L1	19.6	26.0	50.6
0.406000	22.9	Off	L1	19.6	24.8	47.7
3.982000	16.8	Off	L1	19.7	29.2	46.0

SPORTON INTERNATIONAL INC.

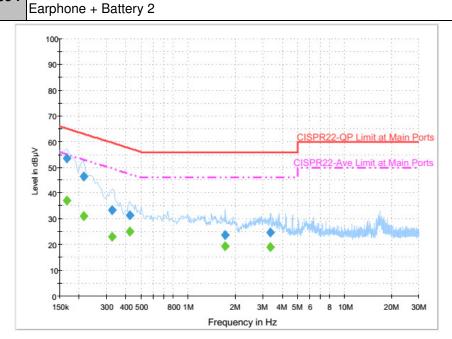
TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 16 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

 Test Mode :
 Mode 3
 Temperature :
 24~25°C

 Test Engineer :
 Kai-Chun Chu
 Relative Humidity :
 47~48%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Neutral

 Function Type :
 Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx +



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	53.5	Off	N	19.6	11.7	65.2
0.214000	46.6	Off	N	19.6	16.4	63.0
0.326000	33.4	Off	N	19.6	26.2	59.6
0.422000	31.3	Off	N	19.6	26.1	57.4
1.726000	23.9	Off	N	19.6	32.1	56.0
3.366000	24.7	Off	N	19.6	31.3	56.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	37.0	Off	N	19.6	18.2	55.2
0.214000	31.1	Off	N	19.6	21.9	53.0
0.326000	23.1	Off	N	19.6	26.5	49.6
0.422000	25.0	Off	N	19.6	22.4	47.4
1.726000	19.4	Off	N	19.6	26.6	46.0
3.366000	19.1	Off	N	19.6	26.9	46.0

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 17 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B 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.
- 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 INC.

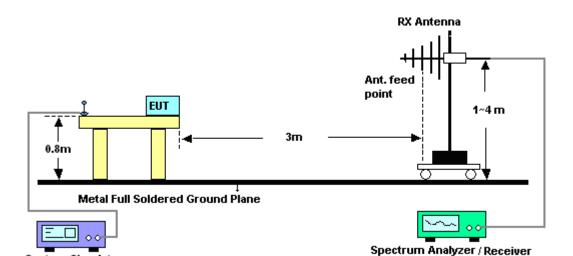
TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 18 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

CC Test Report No. : FC612117-01

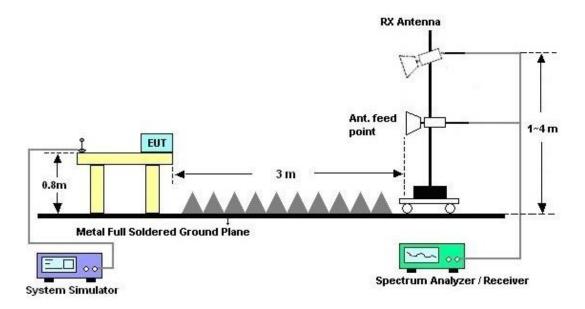
For radiated emissions from 30MHz to 1GHz

3.2.4. Test Setup of Radiated Emission



For radiated emissions above 1GHz

System Simulator

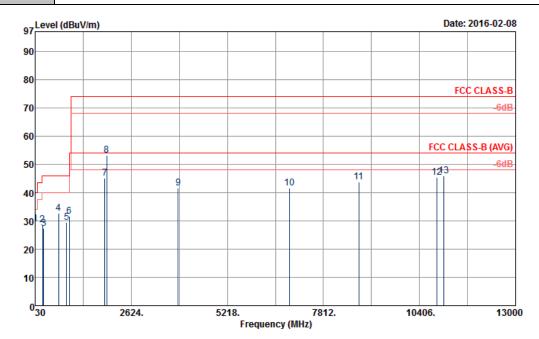


SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 19 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	20~23°C				
Test Engineer :	Donny Pang	Relative Humidity :	50~53%				
Test Distance :	3m	Polarization :	Horizontal				
F I'	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx +						
Function Type :	Earphone + Battery 1						
Remark :	#8 is system simulator signal which	ch can be ignored.					



Site : 03CH06-HY

Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL

 $\begin{array}{ll} {\sf Power} & : {\sf From \, System} \\ {\sf Mode} & : {\sf Mode \, 1} \end{array}$

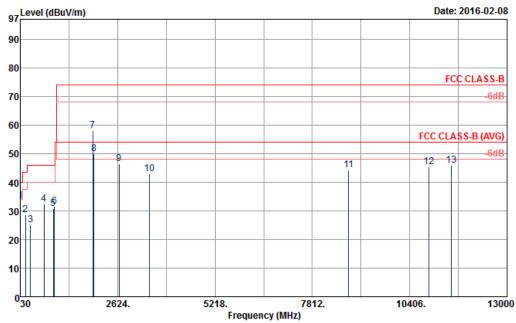
			0ver	Limit	ReadA	ntenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	39.99	28.83	-11.17	40.00	38.83	20.00	1.78	31.78	100	106	Peak
2	232.50	28.68	-17.32	46.00	41.22	17.07	2.11	31.72			Peak
3	260.85	27.38	-18.62	46.00	37.22	19.64	2.23	31.71			Peak
4	665.40	32.76	-13.24	46.00	35.24	26.28	3.33	32.09			Peak
5	881.00	29.35	-16.65	46.00	28.26	29.28	3.36	31.55			Peak
6	953.80	31.65	-14.35	46.00	28.87	30.70	3.06	30.98			Peak
7	1908.00	45.02	-28.98	74.00	73.21	26.16	6.15	60.50			Peak
8	1960.00	53.12			81.08	26.23	6.31	60.50			Peak
9	3892.00	41.51	-32.49	74.00	63.37	29.49	10.11	61.46			Peak
10	6906.00	41.66	-32.34	74.00	55.17	35.05	11.76	60.32			Peak
11	8764.00	43.83	-30.17	74.00	51.90	37.33	14.48	59.88			Peak
12	10872.00	45.43	-28.57	74.00	49.62	40.40	14.87	59.46			Peak
13	11066.00	45.89	-28.11	74.00	49.23	40.46	15.21	59.01	100	217	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 20 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3

	Temperature :	20~23°C					
ang	Relative Humidity :	50~53%					
	Polarization :	Vertical					
Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx +							
Earphone + Battery 1							
#7 is system simulator signal which can be ignored.							
	ang with Notebook (with USB e + Battery 1	Relative Humidity: Polarization: with Notebook (with USB Cable) + WLAN (2.46) e + Battery 1					



Site : 03CH06-HY

Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL

Power : From System Mode : Mode 1

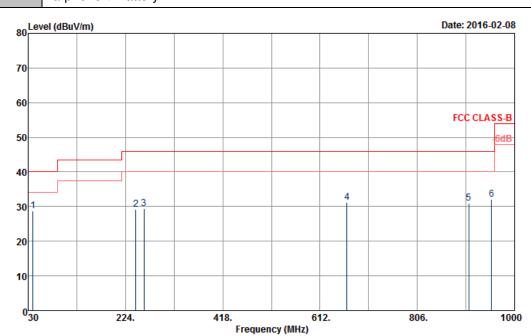
	Frea	Level	Over Limit			Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	11.04	LCVCI	LIMIT	Line	LCVCI	, ac coi	2033	i de coi			remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	39.99	33.56	-6.44	40.00	43.56	20.00	1.78	31.78	100	199	Peak
2	172.29	28.67	-14.83	43.50	42.72	15.64	2.04	31.73			Peak
3	298.65	25.17	-20.83	46.00	35.09	19.50	2.28	31.70			Peak
4	664.70	32.51	-13.49	46.00	35.00	26.27	3.33	32.09			Peak
5	909.00	30.69	-15.31	46.00	29.11	29.63	3.33	31.38			Peak
6	944.00	31.67	-14.33	46.00	29.10	30.55	3.09	31.07			Peak
7	1960.00	58.21			86.17	26.23	6.31	60.50			Peak
8	1994.00	50.06	-23.94	74.00	77.97	26.28	6.31	60.50	100	213	Peak
9	2662.00	46.54	-27.46	74.00	72.06	27.77	7.34	60.63			Peak
10	3472.00	43.02	-30.98	74.00	67.37	28.69	8.23	61.27			Peak
11	8774.00	44.19	-29.81	74.00	52.26	37.33	14.48	59.88			Peak
12	10926.00	45.31	-28.69	74.00	49.18	40.44	15.00	59.31			Peak
13	11510.00	46.04	-27.96	74.00	48.29	40.20	15.95	58.40			Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 21 of 27 Report Issued Date: May 09, 2016 Report Version : Rev. 03

FCC Test Report No.: FC612117-01

Test Mode :	Mode 2	Temperature :	20~23°C				
Test Engineer :	Donny Pang	Relative Humidity :	50~53%				
Test Distance :	3m	Polarization :	Horizontal				
Function Tune	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On +						
Function Type :	Earphone + Battery 1						



Site : 03CH06-HY

Condition : FCC CLASS-B 3m LF_ANT_2725 HORIZONTAL

Power : From System Mode : Mode 2

			0ver	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	39.99	28.78	-11.22	40.00	38.78	20.00	1.78	31.78	100	131	Peak
2	244.38	29.22	-16.78	46.00	40.61	18.15	2.18	31.72			Peak
3	260.85	29.51	-16.49	46.00	39.35	19.64	2.23	31.71			Peak
4	666.10	31.22	-14.78	46.00	33.68	26.30	3.33	32.09			Peak
5	908.30	30.93	-15.07	46.00	29.38	29.60	3.34	31.39			Peak
6	954.50	31.99	-14.01	46.00	29.21	30.70	3.06	30.98			Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 22 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Test Mode :	Mode 2	Temperature :	20~23°C				
Test Engineer :	Donny Pang	Relative Humidity :	50~53%				
Test Distance :	3m	Polarization :	Vertical				
Franchica Trace	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On +						
Function Type :	Earphone + Battery 1						

80 Level (dBuV/m) Date: 2016-02-08 70 60 FCC CLASS-B 50 40 5 6 30 20 10 030 224. 612. 806. 1000 418. Frequency (MHz)

: 03СН06-НУ Site

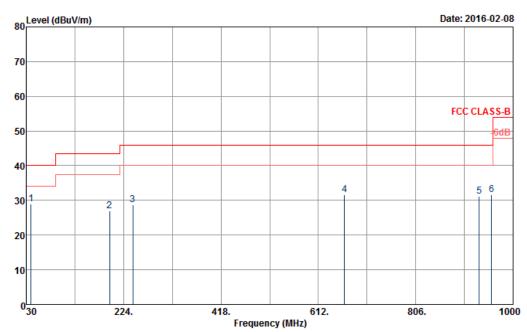
: FCC CLASS-B 3m LF_ANT_2725 VERTICAL Condition

Power : From System Mode : Mode 2

	Freq	Level		Limit Line					A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	35.13	33.36	-6.64	40.00	40.32	22.90	1.92	31.78	100		Peak
2	178.50	28.75	-14.75	43.50	43.17	15.31	2.00	31.73			Peak
3	247.89	25.81	-20.19	46.00	36.81	18.52	2.20	31.72			Peak
4	665.40	31.45	-14.55	46.00	33.93	26.28	3.33	32.09			Peak
5	936.30	31.41	-14.59	46.00	29.06	30.34	3.15	31.14			Peak
6	956.60	31.43	-14.57	46.00	28.63	30.70	3.06	30.96			Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 23 of 27 Report Issued Date: May 09, 2016 Report Version : Rev. 03

Test Mode :	Mode 3	Temperature :	20~23°C				
Test Engineer :	Donny Pang	Relative Humidity :	50~53%				
Test Distance :	3m	Polarization :	Horizontal				
Function Type (Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx +						
Function Type :	Earphone + Battery 2						



Site : 03CH06-HY

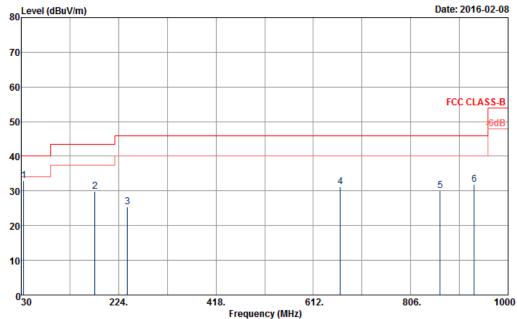
Condition : FCC CLASS-B 3m LF_ANT_2725 HORIZONTAL

: From System Power : Mode 3 Mode

	Freq	Level		Limit Line					A/Pos	T/Pos	Remark
	MHz	dBuV/m	——dB	dBuV/m	dBuV	dB/m	dB	——dB		deg	
1	39.99	29.08	-10.92	40.00	39.08	20.00	1.78	31.78	100	191	Peak
2	195.78	27.03	-16.47	43.50	41.15	15.66	1.95	31.73			Peak
3	242.49	28.68	-17.32	46.00	40.26	17.97	2.17	31.72			Peak
4	664.00	31.63	-14.37	46.00	34.12	26.27	3.33	32.09			Peak
5	932.80	31.28	-14.72	46.00	29.01	30.27	3.17	31.17			Peak
6	957.30	31.57	-14.43	46.00	28.77	30.70	3.06	30.96			Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 24 of 27 Report Issued Date: May 09, 2016 Report Version : Rev. 03

Test Mode :	Mode 3	Temperature :	20~23°C				
Test Engineer :	Donny Pang	Relative Humidity :	50~53%				
Test Distance :	3m	Polarization :	Vertical				
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx +						
unction type.	Earphone + Battery 2						
on Le	vel (dBuV/m)		Date: 2016-02-08				
80							
70							



Site : 03CH06-HY

Condition : FCC CLASS-B 3m LF_ANT_2725 VERTICAL

Power : From System : Mode 3 Mode

	Erea	Level		Limit Line					A/Pos	T/Pos	Remark
	1164	Level	LIMIC	LINE	Level	raccor	LUSS	ractor			Kellark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	35.13	33.08	-6.92	40.00	40.04	22.90	1.92	31.78	100	161	Peak
2	176.88	29.93	-13.57	43.50	44.24	15.42	2.00	31.73			Peak
3	241.41	25.48	-20.52	46.00	37.16	17.88	2.16	31.72			Peak
4	665.40	31.30	-14.70	46.00	33.78	26.28	3.33	32.09			Peak
5	864.90	30.13	-15.87	46.00	29.24	29.19	3.33	31.63			Peak
6	932.80	31.90	-14.10	46.00	29.63	30.27	3.17	31.17			Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 25 of 27 Report Issued Date: May 09, 2016 Report Version : Rev. 03

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	Date N/A	Feb. 10, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Feb. 10, 2016	Aug. 25, 2016	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 20, 2015	Feb. 10, 2016	Apr. 19, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Feb. 10, 2016	Dec. 01, 2016	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 14, 2015	Feb. 10, 2016	Dec. 13, 2016	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 06, 2016	Feb. 10, 2016	Jan. 05, 2017	Conduction (CO05-HY)
Test Software	R&S	EMC32	8.40.0	N/A	N/A	Feb. 10, 2016	N/A	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~1GHz	Nov. 17, 2015	Feb. 08, 2016	Nov. 16, 2016	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 07, 2016	Feb. 08, 2016	Jan. 06, 2017	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 21, 2015	Feb. 08, 2016	Aug. 20, 2016	Radiation (03CH06-HY)
Hygrometer	WISEWIND	410	BU5004	N/A	May 04, 2015	Feb. 08, 2016	May 03, 2016	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 20, 2015	Feb. 08, 2016	Apr. 19, 2016	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1850117	1GHz ~ 18GHz	Jul. 01, 2015	Feb. 08, 2016	Jun. 30, 2016	Radiation (03CH06-HY)
Controller	INN-CO	EM1000	060782	Control Turn table & Ant Mast	N/A	Feb. 08, 2016	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1m~4m	N/A	Feb. 08, 2016	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Feb. 08, 2016	N/A	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	RG_142_B/U	NA	30MHz ~ 1GHz	Nov. 26, 2015	Feb. 08, 2016	Nov. 25, 2016	Radiation (03CH06-HY)
RF Cable	Infinet	LL142	Infinet CA3601-3601 -1000	1GHz ~ 26.5GHz	Nov. 26, 2015	Feb. 08, 2016	Nov. 25, 2016	Radiation (03CH06-HY)
Test Software	Audix	E3	6.2009-8-24 (K5) (sporton)	N/A	N/A	Feb. 08, 2016	N/A	Radiation (03CH06-HY)

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 26 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

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 Confidence of 95% (U = 2Uc(y))	2.26

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

Measuring Uncertainty for a Level of	4.00
Confidence of 95% (U = 2Uc(y))	4.00

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: PY7-PM0960 Page Number : 27 of 27
Report Issued Date : May 09, 2016
Report Version : Rev. 03

Report Template No.: BU5-FC15B Version 1.3