# **FCC EMI TEST REPORT**

FCC ID : PY7-34943G

Equipment : GSM/WCDMA/LTE Phone with BT, DTS/UNII

a/b/g/n/ac, NFC and GNSS

Brand Name : SONY

**Applicant** : Sony Corporation

1-7-1 Konan Minato-ku Tokyo, 108-0076 Japan

Report No.: FC100310

**Manufacturer** : Sony Corporation

1-7-1 Konan Minato-ku Tokyo, 108-0076 Japan

Standard : FCC 47 CFR FCC Part 15 Subpart B Class B

Test Date(s) : Dec. 20, 2021 ~ Dec. 30, 2021

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

Reviewed by: Jason Jia / Supervisor

JasonJia

Approved by: Alex Wang / Manager

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People's Republic of China

Sporton International Inc. (Kunshan)

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# History of this test report

Report No.	Version	Description	Issued Date
FC100310	01	Initial issue of report	Feb. 11, 2022

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# **Summary of Test Result**

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.107	AC Conducted Emission	Pass	Under limit 4.54 dB at 13.560 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 4.60 dB at 41.640 MHz

#### **Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

### Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

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# 1. General Description

## 1.1. Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac, NFC and GNSS.

	Product Specification subjective to this standard				
	WWAN: PIFA Antenna				
	WLAN: PIFA Antenna				
Antenna Type	Bluetooth: PIFA Antenna				
	GPS/Glonass/Galileo/BDS: PIFA Antenna				
	NFC: Loop Antenna				

**Remark:** The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

	EUT Information List					
HW Version	HW Version SW Version IMEI Code					
A	0.549	004402543254142/004402543254159	Conducted Emission			
	0.549	004402543252100/004402543252118	Radiated Emission			

	Accessory List				
AC Adapter	Model Name : UCH-32				
Earphone Model Name : MDR-EX15AP					
USB Cable 1 Model Name : UCB24					
USB Cable 2	Model Name : A8485011				

#### Note:

- 1. Above EUT list used are electrically identical per declared by manufacturer.
- 2. For other wireless features of this EUT, test report will be issued separately.

## 1.2. Modification of EUT

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

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## 1.3. Test Location

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

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Test Firm	Sporton International Inc. (Kunshan)				
	No. 1098, Pengxi North F	Road, Kunshan Economic	Development Zone		
Took Cita Location	Jiangsu Province 215300 People's Republic of China				
Test Site Location	TEL: +86-512-57900158				
	FAX: +86-512-57900958				
			FCC Test Firm		
Test Site No.	Sporton Site No.	FCC Designation No.	Registration No.		
	CO01-KS 03CH06-KS	CN1257	314309		

## 1.4. 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 Class B
- + ANSI C63.4-2014

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

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

Test Items	Function Type
	Mode 1: GSM850 (Middle Channel) Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (2.4GHz) Idle + Camera (Rear) + Earphone + USB Cable 1(Charging from Adapter)
	Mode 2: WCDMA Band V (Lowest Channel) Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (5GHz) Idle + Camera (Front) + Earphone + USB Cable 2(Charging from Adapter)
AC Conducted	Mode 3: GSM1900 Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (2.4GHz) Idle + MPEG 4 + Earphone + USB Cable 1(Charging from Adapter)
Emission	Mode 4: LTE Band 5 (Highest Channel) Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (5GHz) Idle + NFC On + Earphone + USB Cable 1(Charging from Adapter)
	Mode 5: LTE Band 4 Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (2.4GHz) Idle + GNSS Rx + Earphone + USB Cable 1(Data Link with Notebook)
	Mode 6: LTE Band 41 Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (5GHz) Idle + GNSS Rx + Earphone + USB Cable 2(Data Link with Notebook)
	Mode 1: GSM850 (Middle Channel) Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (2.4GHz) Idle + Camera (Rear) + Earphone + USB Cable 1(Charging from Adapter)
	Mode 2: WCDMA Band V (Lowest Channel) Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (5GHz) Idle + Camera (Front) + Earphone + USB Cable 2(Charging from Adapter)
Radiated Emissions	Mode 3: GSM1900 Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (2.4GHz) Idle + MPEG 4 + Earphone + USB Cable 1(Charging from Adapter)
EIIIISSIOIIS	Mode 4: LTE Band 5 (Highest Channel) Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (5GHz) Idle + NFC On + Earphone + USB Cable 1(Charging from Adapter)
	Mode 5: LTE Band 4 Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (2.4GHz) Idle + GNSS Rx + Earphone + USB Cable 1(Data Link with Notebook)
	Mode 6: LTE Band 41 Idle + Bluetooth Idle with Bluetooth Earphone + WLAN (5GHz) Idle + GNSS Rx + Earphone + USB Cable 2(Data Link with Notebook)

#### Remark:

- 1. After pre-scanned the L/M/H channel for all frequency band which operate within the frequency range of 30MHz ~ 960MHz (GSM850/WCDMA Band V/LTE Band 5); only the worst channel for them between 30MHz ~ 960MHz test data of this mode was reported.
- 2. Data Link with Notebook means data application transferred mode between EUT and Notebook.
- For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

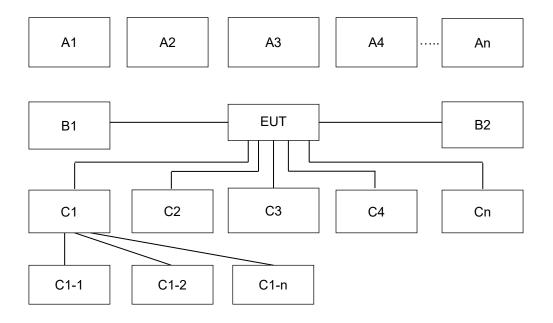
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# 2.2. Connection Diagram of Test System



	Conduction Test Setup								
No. Wireless Station Connection Tv		Connection Type	Test				t Mode		
NO.	Wireless Station	Connection Type	1	2	3	4	5	6	
A1	System Simulator	GSM/WCDMA/LTE	X	X	X	X	X	X	
A2	BT Earphone	Bluetooth	Х	X	X	X	X	X	
A3	GPS/Glonass Station	GNSS	-	-	-	-	Х	Х	
A4	AP router	WiFi	Х	Х	Х	Х	Х	Х	
A5	Notebook	WiFi	Х	Х	Х	Х	Х	Х	
No.	Power Source	Connection Type	1	2	3	4	5	6	
B1	AC: 120V/60Hz	AC Power Cable	Х	Х	Х	Х	-	-	
B2	Power from system	USB Cable	-	-	-	-	Х	Х	
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	
C1	Notebook	USB link	-	-	-	-	Х	Х	
C1-1	Hard Disk	USB Cable to C1	-	-	-	-	X	X	
C1-2	AP router	RJ 45 Cable to C1	-	-	-	-	Х	Х	
C2	SD Card	SD I/O interface	х	х	х	Х	х	х	
02	3D Calu	without cable	^	^	^	^	^	^	
C3	Earphone	Earphone jack	X	X	X	X	X	Х	

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	Radiated Test Setup								
N <sub>a</sub>	Minalaga Otation	O T		Test Mode					
No.	Wireless Station	Connection Type	1	2	3	4	5	6	
A1	System Simulator	GSM/WCDMA/LTE	Х	X	Х	Х	Х	Х	
A2	BT Earphone	Bluetooth	Х	X	X	X	Х	Х	
A3	GPS/Glonass Station	GNSS	-	•	-	-	X	X	
A4	AP router	WiFi	Х	X	X	X	Х	Х	
A5	Notebook	WiFi	X	X	X	X	Х	X	
No.	Power Source	Connection Type	1	2	3	4	5	6	
B1	AC: 120V/60Hz	AC Power Cable	Х	X	Х	Х	-	-	
B2	Power from system	USB Cable	-	-	-	-	Х	Х	
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	
C1	Notebook	USB link	-	-	-	-	Х	Х	
C1-1	Hard Disk	USB Cable to C1	-	-	-	-	X	X	
C1-2	AP router	RJ 45 Cable to C1	-	-	-	-	Х	Х	
C2	SD Card	SD I/O interface without cable	Х	X	х	х	X	х	
C3	Earphone	Earphone jack	Х	X	X	X	X	Х	

2.3. Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	System Simulator	Anritus	MT8820C	N/A	N/A	Unshielded,1.8m
3.	Vector Signal Generator	R&S	SMBV100A	258305	N/A	N/A
4.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
5.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded,1.8m
6.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
7.	Notebook	Lenovo	S730-13IWL	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
8.	SD Card	Kingston	8GB	N/A	N/A	N/A
9.	Hard Disk	Lenovo	F310	DoC	Shielded, 1.2m	N/A
10.	Hard disk	KINGSHARE	KSP6120G	Fcc DoC	Shielded, 1.2m	N/A
11.	Bluetooth Earphone	Sony	SBH82D	PY7-33726V	N/A	N/A

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## 2.4. EUT Operation Test Setup

The EUT was in WWAN idle mode during the test. The EUT was synchronized with the BCCH, and had been continuous receiving mode by setting paging reorganization of the system simulator.

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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 Laptop and EUT via USB cable.
- 2. Execute "GNSS Test" 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.
- 5. Turn on NFC function

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## 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.

#### <Class B>

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

Refer a test equipment and calibration data table in 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 shall be used.
- 6. Both sides of AC line were checked for maximum conducted interference.
- 7. The frequency range from 150 kHz to 30 MHz was searched.
- 8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

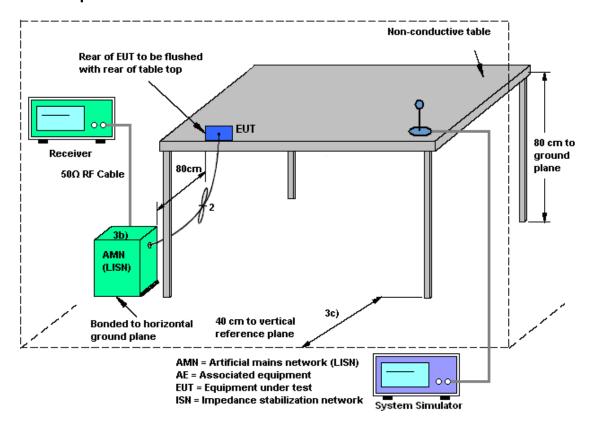
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## 3.1.4. Test Setup



### 3.1.5. Test Result of AC Conducted Emission

Please refer to Appendix A.

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#### 3.2. 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:

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#### <Class B>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

### 3.2.2. Measuring Instruments

Refer a test equipment and calibration data table in 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=120 kHz/VBW=300 kHz for frequency below 1 GHz; RBW=1 MHz VBW=3 MHz (Peak), RBW=1 MHz/VBW=10 Hz (Average) for frequency above 1 GHz).
- 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

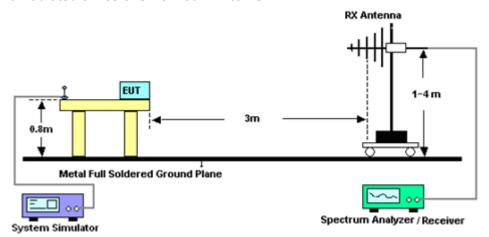
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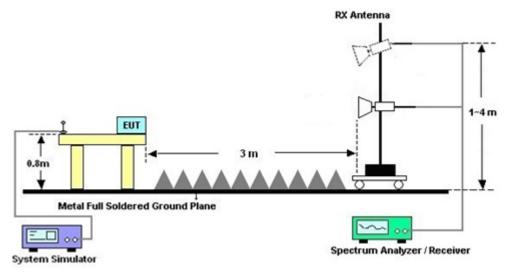
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## 3.2.4. Test Setup of Radiated Emission

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



#### For radiated emissions above 1GHz



### 3.2.5. Test Result of Radiated Emission

Please refer to Appendix B.

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# 4. List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 21, 2021	Dec. 20, 2021	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 14, 2021	Dec. 20, 2021	Oct. 13, 2022	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 14, 2021	Dec. 20, 2021	Oct. 13, 2022	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 14, 2021	Dec. 20, 2021	Oct. 13, 2022	Conduction (CO01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;M ax 30dBm	Oct. 16, 2021	Dec. 30, 2021	Oct. 15, 2022	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44GHz	Apr. 12, 2021	Dec. 30, 2021	Apr. 11, 2022	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz-1GHz	May 27, 2021	Dec. 30, 2021	May 26, 2022	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 25, 2021	Dec. 30, 2021	Apr. 24, 2022	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101093	18GHz~40GHz	Jan. 06, 2021	Dec. 30, 2021	Jan. 05, 2022	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	187289	9KHz ~1GHZ	Apr. 12, 2021	Dec. 30, 2021	Apr. 11, 2022	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5G Hz	Apr. 13, 2021	Dec. 30, 2021	Apr. 12, 2022	Radiation (03CH06-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 06, 2021	Dec. 30, 2021	Jan. 05, 2022	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Dec. 30, 2021	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Dec. 30, 2021	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Dec. 30, 2021	NCR	Radiation (03CH06-KS)

NCR: No Calibration Required

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# 5. Uncertainty of Evaluation

### <u>Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)</u>

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.9dB
01 33 % (0 = 20C(y))	

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

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

## <u>Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	5.0dB
of 95% (U = 2Uc(y))	3.VUB

#### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

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

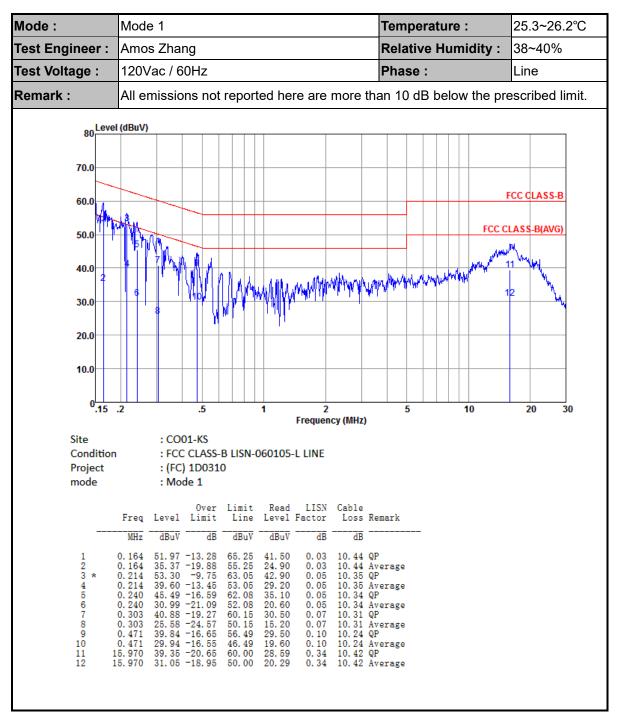
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## **Appendix A. AC Conducted Emission Test Results**



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Mode:	Mode 1	Temperature :	25.3~26.2°C
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are mo	re than 10 dB below the pr	escribed limit
80 Leve	I (dBuV)		
80			
70.0			
60.0			FCC CLASS-B
50.0		FCC (	CLASS-B(AVG)
40.0			Matheway
2		Harrist Harry Control of the State of the St	
30.0		Manual Andrews Manual Comment	h <sub>u</sub> ,
20.0			
10.0			
0.15	.2 .5 1 2	5 10	

2 Frequency (MHz)

: CO01-KS

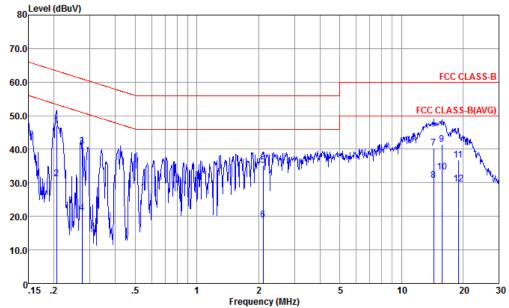
: FCC CLASS-B LISN-060105-N NEUTRAL Condition

: (FC) 1D0310 Project mode : Mode 1

Freq MHz	Level dBuV	Over Limit dB	Limit Line ————————————————————————————————————	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark
1 0.169 2 0.169 3 * 0.212 4 0.212 5 0.230 6 0.230 7 0.308 8 0.308 9 0.481 10 0.481 11 16.055	33. 34 52. 06 38. 56 45. 24 31. 04 38. 90 22. 60 39. 25 24. 85 35. 58	-15. 89 -21. 69 -11. 08 -14. 58 -17. 20 -21. 40 -21. 12 -27. 42 -17. 07 -21. 47 -24. 42 -20. 92	65. 03 55. 03 63. 14 53. 14 62. 44 52. 44 60. 02 50. 02 56. 32 46. 32 60. 00 50. 00	38. 60 22. 80 41. 60 28. 10 34. 80 20. 60 28. 50 12. 20 28. 90 14. 50 24. 80 18. 30	0. 11 0. 10 0. 10 0. 10 0. 10 0. 10 0. 10 0. 11 0. 11 0. 36 0. 36	10. 36 10. 34 10. 34 10. 30 10. 30 10. 24 10. 24 10. 42	Average QP Average QP Average QP Average QP Average

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Mode:	Mode 2	Temperature :	25.3~26.2°C			
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%			
Test Voltage :	120Vac / 60Hz	Phase :	Line			
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.					
Lovel	(dDu\/)					



Site : CO01-KS

Condition : FCC CLASS-B LISN-060105-L LINE

Project : (FC) 1D0310 mode : Mode 2

Fre	q Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
MH	z dBuV	dB	dBuV	dBuV	dB	dB	
1 * 0.20 2 0.20 3 0.27 4 0.27 5 2.11 7 14.36 8 14.36 9 15.80 10 15.80 11 19.02 12 19.02	31.20 4 40.88 4 20.98 0 35.27 0 18.87 4 40.28 4 30.78 1 41.35 1 33.25 1 36.83	-16. 36 -22. 16 -20. 10 -30. 00 -20. 73 -27. 13 -19. 72 -19. 22 -18. 65 -16. 75 -23. 17 -20. 47	63. 36 53. 36 60. 98 50. 98 56. 00 46. 00 50. 00 50. 00 50. 00 50. 00	36. 60 20. 80 30. 50 10. 60 24. 90 8. 50 29. 60 20. 10 30. 61 22. 51 25. 89 18. 59	0. 04 0. 04 0. 06 0. 06 0. 14 0. 14 0. 29 0. 29 0. 33 0. 33 0. 46 0. 46	10. 32 10. 23 10. 23 10. 39 10. 39 10. 41 10. 41 10. 48	Average QP Average QP Average QP Average QP Average

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Mode: Mode 2 Temperature: 25.3~26.2°C Test Engineer: Amos Zhang **Relative Humidity:** 38~40% Test Voltage: 120Vac / 60Hz Phase: Neutral Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 80 Level (dBuV) 70.0 FCC CLASS-B 60.0 FCC CLASS-B(AVG) 50.0 40.0 30.0 20.0 10.0 5 10 30 Frequency (MHz) Site : CO01-KS Condition : FCC CLASS-B LISN-060105-N NEUTRAL : (FC) 1D0310 Project : Mode 2 mode Over Limit Read LISN Limit Line Level Factor LISN Cable Freq Level Limit Loss Remark MHz dBuV dBuV dBuV 47. 96 -15. 53 28. 96 -24. 53 43. 02 -17. 88 22. 02 -28. 88 38. 89 -20. 24 22. 59 -26. 54 37. 57 -19. 98 18. 67 -28. 88 38. 87 -21. 13 31. 87 -18. 13 37. 03 -22. 97 29. 83 -20. 17 63. 49 53. 49 60. 90 50. 90 59. 13 49. 13 57. 55 60. 00 0.10 10.36 QP 0. 203 0. 277 0. 277 0. 343 0. 343 10.36 QF 10.36 Average 10.32 QF 10.32 Average 10.29 QF 10.29 Average 18. 50 32. 60 11. 60 28. 50 12. 20 27. 20 8. 30 28. 10 21. 10 26. 09 0. 10 0. 10 0. 10 0. 10 0. 10 0. 11 0. 11 0. 35 0. 35 0. 47 10. 26 QP 10. 26 Ave 10. 42 QP 0. 415 0. 415

Sporton International Inc. (Kunshan)

15. 970 15. 970 18. 622

10 11

50.00 60.00

50.00

18.89

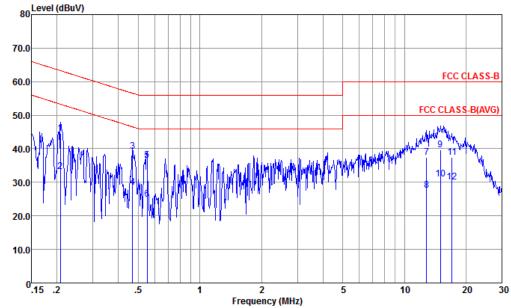
29.83 -20.17

TEL: +86-512-57900158 FAX: +86-512-57900958 Average QP

10.42 Average 10.47 QP

10.47 Average

Mode:	Mode 3	Temperature :	25.3~26.2°C
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
	All emissions not reported here are more tha	an 10 dB below the pre	escribed limit.
80 Level	(dBuV)		



Site : CO01-KS

Condition : FCC CLASS-B LISN-060105-L LINE

Project : (FC) 1D0310 mode : Mode 3

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 2 3 * 4 5 6 7 8 9 10 11 12	0. 208 0. 208 0. 469 0. 469 0. 552 12. 852 12. 852 14. 986 14. 986 17. 109	33. 30 39. 14 28. 44 36. 44 24. 94 37. 44 27. 74 39. 59 30. 99 37. 43	-18. 67 -19. 97 -17. 40 -18. 10 -19. 56 -21. 06 -22. 56 -22. 26 -20. 41 -19. 01 -22. 57 -19. 87	63. 27 53. 27 56. 54 46. 54 56. 00 46. 00 50. 00 60. 00 50. 00 60. 00 50. 00	34. 20 22. 90 28. 80 18. 10 26. 10 14. 60 26. 80 17. 10 28. 90 20. 30 26. 60 19. 30	0. 04 0. 04 0. 10 0. 10 0. 10 0. 27 0. 27 0. 30 0. 30 0. 39	10. 24 10. 24 10. 24 10. 37 10. 37 10. 39 10. 39 10. 44	Average QP Average QP Average QP Average QP Average

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Mode: Temperature: 25.3~26.2°C Mode 3 Test Engineer: Amos Zhang **Relative Humidity:** 38~40% Test Voltage: 120Vac / 60Hz Phase: Neutral Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 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 1 2 5 10 20 30 Frequency (MHz) Site : CO01-KS Condition : FCC CLASS-B LISN-060105-N NEUTRAL Project : (FC) 1D0310 mode : Mode 3 LISN Cable Loss Remark dΒ MHz dBuV dB dBuV dBuV dB 41. 37 -24. 28 28. 37 -27. 28 42. 26 -21. 14 29. 36 -24. 04 38. 52 -22. 51 25. 02 -26. 01 34. 50 -25. 50 27. 60 -22. 40 34. 96 -25. 04 28. 66 -21. 34 34. 20 -25. 80 25. 90 -24. 10 65.65  $\begin{array}{c} 0.\ 11 \\ 0.\ 10 \\ 0.\ 10 \\ 0.\ 10 \\ 0.\ 10 \\ 0.\ 30 \\ 0.\ 30 \\ 0.\ 41 \\ 0.\ 51 \\ 0.\ 51 \end{array}$ 10.46 QP 55. 65 63. 40 53. 40 61. 03 51. 03 17. 80 31. 80 2 0.156 0.205 10.46 Average 10.36 QP 31. 80 18. 90 28. 10 14. 60 23. 81 16. 91 24. 11 17. 81 23. 20 14. 90 10.36 Qr 10.36 Average 10.32 QP 10.32 Average 10.39 QP 10.39 Average 0. 205 0. 273 0. 273 51. 03 60. 00 50. 00 60. 00 50. 00 50. 00 14. 594 14. 594 17. 291 10.44 QP 10.44 Average 10.49 QP 10 11 17. 291 19. 740 19. 740

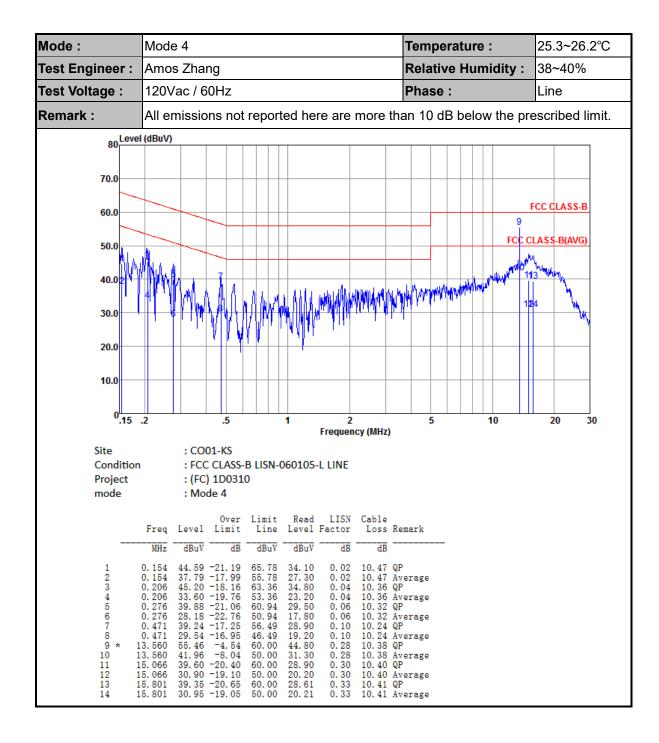
10.49 Average

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Report No.: FC100310

SPORTON LAB.	FCC EMI TEST REPORT



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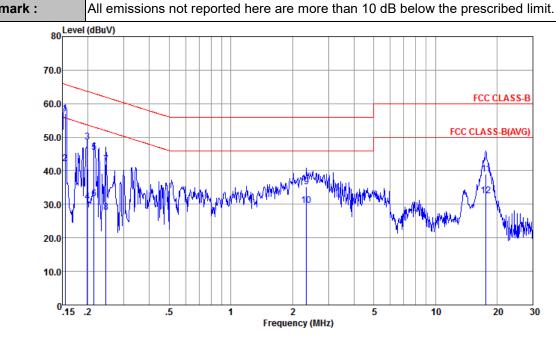
Mode:	Mode 4	Temperature :	25.3~26.2°C
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more that	an 10 dB below the pre	escribed limit.
80 Level	(dBuV)		
70.0			
60.0			CC CLASS-B
50.0		9 FCC CI	LASS-B(AVG)
40.0		10.04 July (1970)	13
30.0		Harry Harry Harry War Darly and Astronomy	2 14 1
20.0			
10.0			
0.15	2 .5 1 2	5 10	20 30
611	Frequency (MHz)		
Site Condition	: CO01-KS : FCC CLASS-B LISN-060105-N NEUTRAL		
Project mode	: (FC) 1D0310 : Mode 4		
mode	Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Re	mark	
	MHz dBuV dB dBuV dBuV dB dB		
2 3 4 5 6 7 8 9 * 1 10 1 11 1 12 1 13 1	0. 162	erage erage erage erage erage erage	

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Mode: Mode 5 Temperature: 25.3~26.2°C Test Engineer: Amos Zhang **Relative Humidity:** 38~40% Test Voltage: 120Vac / 60Hz Phase: Line Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 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 2 5 10 20 30 Frequency (MHz) : CO01-KS : FCC CLASS-B LISN-060105-L LINE Condition : (FC) 1D0310 Project : Mode 5 mode Over Limit Read LISN Freq Level Limit Line Level Factor LISN Cable Loss Remark dBuV dB dBuV dBuV 58. 19 -7. 50 42. 99 -12. 70 50. 00 -13. 27 35. 20 -18. 07 43. 19 -18. 45 28. 49 -23. 15 33. 54 -22. 46 22. 94 -23. 06 33. 69 -22. 31 27. 69 -18. 31 33. 00 -23. 00 27. 70 -18. 30 65. 69 55. 69 63. 27 53. 27 61. 64 51. 64 10.47 QP 10.47 Average 10.36 QP 10.36 Average 10.33 QP 10.33 Average 47. 70 32. 50  $\begin{array}{c} 0.02\\ 0.02\\ 0.04\\ 0.06\\ 0.06\\ 0.10\\ 0.15\\ 0.15\\ 0.15\\ 0.15\\ \end{array}$ 0.156 0. 156 0. 208 0. 208 0. 253 0. 253 39. 60 24. 80 32. 80 18. 10 23. 20 12. 60 23. 30 17. 30 22. 61 17. 31 Average 0. 253 0. 546 0. 546 2. 824 2. 824 3. 241 3. 241 10.33 Average 10.24 QP 10.24 Average 10.24 QP 10.24 Average 10.24 Average 56. 00 46. 00 56. 00 46. 00 56. 00 46. 00 10 11

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Mode:	Mode 5	Temperature :	25.3~26.2°C			
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%			
Test Voltage :	120Vac / 60Hz Phase : Neutral					
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.					



Site : CO01-KS

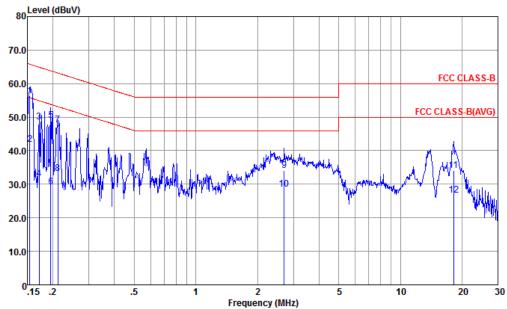
Condition : FCC CLASS-B LISN-060105-N NEUTRAL

Project : (FC) 1D0310 mode : Mode 5

Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
 MHz	dBuV	dB	dBuV	dBuV	dB	dB	
0. 155 0. 155 0. 199 0. 199 0. 214 0. 214 0. 246 0. 246 2. 346 2. 346 17. 661	42. 07 48. 67 30. 77 45. 35 31. 65 41. 94 27. 74 35. 28 29. 68 39. 08	-8. 67 -13. 67 -15. 00 -22. 90 -17. 70 -21. 40 -19. 97 -24. 17 -20. 72 -16. 32 -20. 92 -17. 52	65. 74 55. 74 63. 67 53. 67 63. 05 53. 05 61. 91 51. 91 56. 00 46. 00 60. 00 50. 00	46. 49 31. 49 38. 20 20. 30 34. 90 21. 20 31. 50 17. 30 24. 91 19. 31 28. 20 21. 60	0. 11 0. 10 0. 10 0. 10 0. 10 0. 10 0. 10 0. 10 0. 14 0. 14 0. 43 0. 43	10. 37 10. 35 10. 35 10. 34 10. 34 10. 23 10. 23 10. 45	Average QP Average QP Average QP Average QP Average

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Mode:	Mode 6	Temperature :	25.3~26.2°C					
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%					
Test Voltage :	120Vac / 60Hz	Phase :	Line					
Remark :	Remark : All emissions not reported here are more than 10 dB below the prescribed limit.							
80 Level (dBuV)								



Site : CO01-KS

Condition : FCC CLASS-B LISN-060105-L LINE

Project : (FC) 1D0310 mode : Mode 6

Fre		Over Limit	Limit Line — dBuV	Read Level — <u>dBuV</u>	LISN Factor	Cable Loss	Remark
1 * 0.18 2 0.11 3 0.17 4 0.17 5 0.18 6 0.15 7 0.21 8 0.22 9 2.70 10 2.77 11 18.23	41.99 1 48.66 1 31.66 15 49.01 29.21 2 47.60 2 33.30 17 33.99 17 28.49 32 34.19	-9. 39 -13. 79 -16. 24 -23. 24 -14. 79 -24. 59 -15. 54 -19. 84 -22. 01 -17. 51 -25. 81 -23. 31	65. 78 55. 78 64. 90 54. 90 63. 80 53. 80 63. 14 53. 14 56. 00 46. 00 60. 00 50. 00	45. 90 31. 50 38. 20 21. 20 38. 60 18. 80 37. 20 22. 90 23. 60 18. 10 23. 30 15. 80	0.02 0.02 0.03 0.03 0.04 0.04 0.04 0.15 0.15 0.43 0.43	10. 43 10. 43 10. 37 10. 36 10. 36 10. 24 10. 24 10. 46	Average QP Average QP Average QP Average QP Average

Mode: Temperature: 25.3~26.2°C Mode 6 Test Engineer: Amos Zhang **Relative Humidity:** 38~40% Test Voltage: 120Vac / 60Hz Phase: Neutral Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 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<mark>.15</mark> .2 .5 2 5 10 20 30 Frequency (MHz) Site : CO01-KS : FCC CLASS-B LISN-060105-N NEUTRAL Condition : (FC) 1D0310 Project mode : Mode 6 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark ďΒ MHz dBuV dB dBuV dBuV dB 56. 49 -9. 42 42. 09 -13. 82 48. 58 -15. 22 31. 58 -22. 22 46. 35 -16. 53 31. 75 -21. 13 41. 03 -20. 35 29. 03 -22. 35 35. 29 -20. 71 29. 29 -16. 71 38. 98 -21. 02 32. 48 -17. 52 65. 91 55. 91 63. 80 0. 11 0. 11 0. 10 31. 50 38. 11 0. 152 0. 195 10.48 Average 10.37 QP 0. 10 0. 10 0. 10 0. 10 0. 10 0. 10 0. 195 0. 219 0. 219 53. 80 62. 88 52. 88 21. 11 35. 90 21. 30 10.37 Average 10.35 QP 10.35 Average

Report No.: FC100310

#### Note:

1. Level( $dB\mu V$ ) = Read Level( $dB\mu V$ ) + LISN Factor(dB) + Cable Loss(dB)

61. 38 51. 38 56. 00

46. 00 60. 00 50. 00

21. 30 30. 60 18. 60 24. 90 18. 90 28. 10 21. 60

0.15 0.43

10.33 QP 10.33 Average

10.24 QP 10.24 Average 10.45 QP

Page Number

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2. Over Limit(dB) = Level(dB $\mu$ V) – Limit Line(dB $\mu$ V)

0. 262 0. 262 2. 750

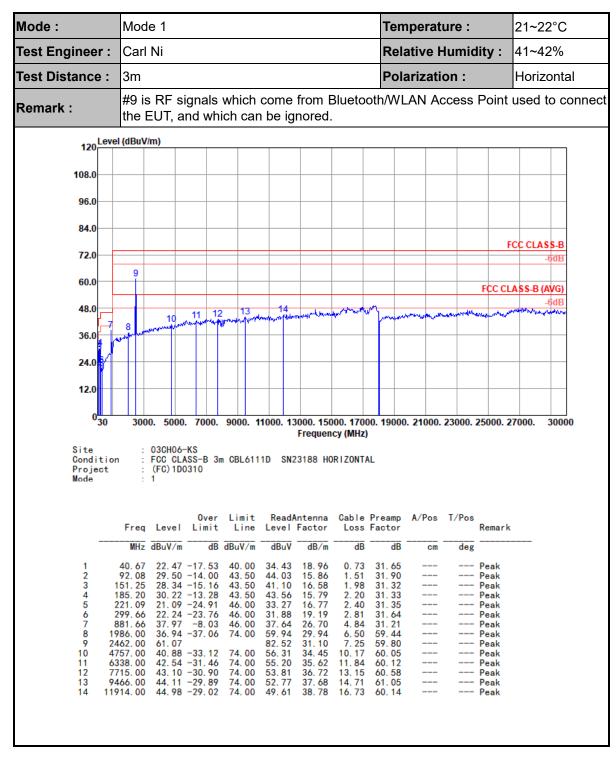
2. 750 2. 750

17.661

10 11

Sporton International Inc. (Kunshan)

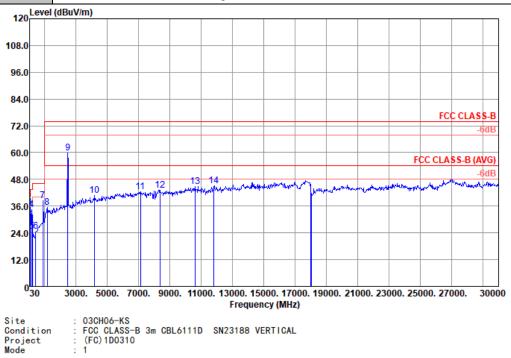
## **Appendix B. Radiated Emission Test Result**



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#9 is RF signals which come from Bluetooth/WLAN Access Point used to connect Remark: the EUT, and which can be ignored.



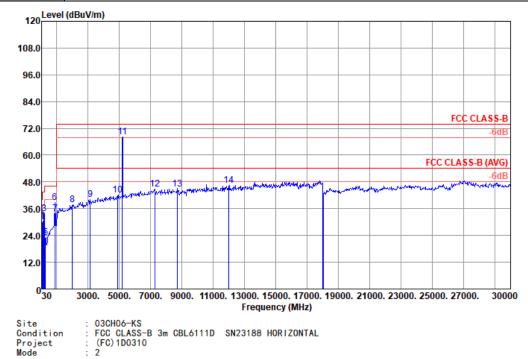
Site Condition

Project Mode

		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1	41.64	35. 40	-4. 60	40.00	47. 44	18.86	0.75	31.65	200	241	Peak
2		74. 62	26.87	-13.13	40.00	43.93	13, 56	1. 24	31.86			Peak
3		91. 11	29.89	-13.61	43.50	44.07	16, 21	1.50	31.89			Peak
4		156, 10	34, 50	-9.00	43.50	46.45	17. 36	2.01	31. 32			Peak
5		216, 24	24, 78	-21.22	46, 00	36, 44	17, 31	2. 38	31, 35			Peak
6		428, 67	24, 87	-21.13	46, 00	29, 53	23, 22	3, 37	31, 25			Peak
7		881.66	38. 44	-7.56	46.00	37.48	27. 33	4.84	31, 21			Peak
8		1170, 00	35, 42	-38.58	74.00	61, 85	28, 13	4, 98	59, 54			Peak
9		2462, 00	59, 86			81, 31	31, 10	7, 25	59, 80			Peak
10		4196, 00	40.79	-33. 21	74.00	57. 33	34.00	9.56	60.10			Peak
11		7120, 00	42, 51	-31.49	74, 00	53, 86	36, 53	12, 59	60, 47			Peak
12		8361, 00	43, 13	-30.87	74, 00	53, 14	37, 12	13, 75	60, 88			Peak
13		10588, 00	44, 64	-29.36	74.00	51, 35	38, 39	15, 53	60, 63			Peak
14		11812.00	44. 98	-29.02	74.00	49.80	38.76	16.63	60. 21			Peak



Mode:	Mode 2	Temperature :	21~22°C
Test Engineer :	Carl Ni	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
IRemark '	#11 is RF signals which come from WLAN A	Access Point used to c	onnect the EUT,



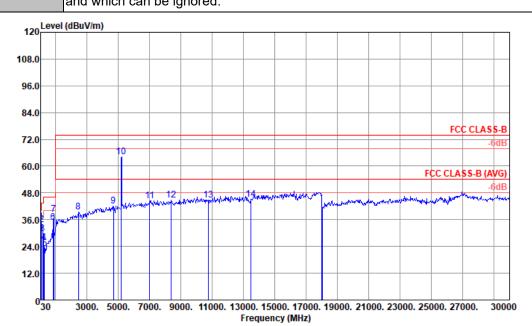
Site Condition Project Mode

			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	92. 08	30. 22	-13.28	43.50	44. 75	15.86	1.51	31.90			Peak
2	106. 63	30.45	-13.05	43.50	43. 27	17. 29	1. 68	31. 79			Peak
3	176. 47	33. 72	-9. 78	43.50	46, 92	15, 99	2. 14	31. 33			Peak
4	215. 27	23. 48	-20.02	43.50	36.04	16. 41	2. 38	31.35			Peak
5	270.56	23. 18	-22.82	46.00	33. 17	18.83	2.66	31.48			Peak
6	870.99	38. 68	-7. 32	46.00	38, 43	26. 69	4. 81	31. 25			Peak
7	900.09	33.80	-12.20	46.00	33. 36	26.70	4.89	31. 15			Peak
8	1986.00	37. 74	-36.26	74.00	60.74	29.94	6.50	59.44			Peak
9	3142.00	40.01	-33.99	74.00	59.67	31.83	8. 22	59.71			Peak
10	4910.00	42.08	-31.92	74.00	57.01	34. 72	10.37	60.02			Peak
11 !	5199.00	68. 20			82.45	35.08	10.71	60.04			Peak
12	7256.00	44.86	-29.14	74.00	56. 10	36. 55	12.71	60.50			Peak
13	8718.00	44. 72	-29.28	74.00	54. 52	37. 29	14.03	61. 12			Peak
14	11999. 00	46. 58	-27. 42	74. 00	51.05	38. 80	16. 81	60.08			Peak



Mode: Mode 2 21~22°C Temperature: Test Engineer: Carl Ni **Relative Humidity:** 41~42% **Test Distance:** 3m Polarization: Vertical #10 is RF signals which come from WLAN Access Point used to connect the EUT, Remark: and which can be ignored.

Report No.: FC100310



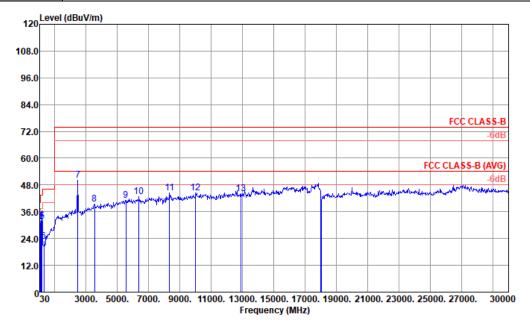
Site Condition Project Mode 

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	$\overline{dBuV/m}$	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	41.64	35. 13	-4. 87	40.00	47. 17	18.86	0.75	31. 65	100	248	Peak
2	92. 08	33. 67	-9.83	43.50	47.64	16, 42	1.51	31.90			Peak
3	172. 59	29.80	-13.70	43.50	42.05	16, 96	2, 12	31. 33			Peak
4	233. 70	25. 59	-20.41	46.00	36.08	18. 39	2.47	31. 35			Peak
5	287. 05	23.06	-22.94	46.00	31.89	20.00	2.74	31.57			Peak
6	831. 22	34. 92	-11.08	46.00	34, 42	27. 09	4, 70	31, 29			Peak
7	870. 99	38. 38	-7. 62	46.00	37.54	27. 28	4.81	31. 25			Peak
8	2445.00	39.37	-34.63	74.00	60.93	31.07	7. 23	59.86			Peak
9	4689.00	41.97	-32.03	74.00	57. 61	34, 33	10.09	60.06			Peak
10	5199.00	64.07			78. 32	35.08	10.71	60.04			Peak
11	7001.00	44, 61	-29.39	74.00	56.08	36, 50	12, 48	60.45			Peak
12	8378.00	44. 63	-29.37	74.00	54.64	37. 13	13.76	60.90			Peak
13	10758, 00	44, 81	-29.19	74.00	51.30	38, 45	15, 65	60.59			Peak
14	13478.00	44. 98	-29.02	74.00	47. 35	40.09	17. 65	60.11			Peak

Sporton International Inc. (Kunshan) Page Number : B4 of B12



Mode:	Mode 3	Temperature :	21~22°C
Test Engineer :	Carl Ni	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
IROMark .	#7 is RF signals which come from Bluetooth the EUT, and which can be ignored.	n/WLAN Access Point	used to connect



Site Condition

Project Mode

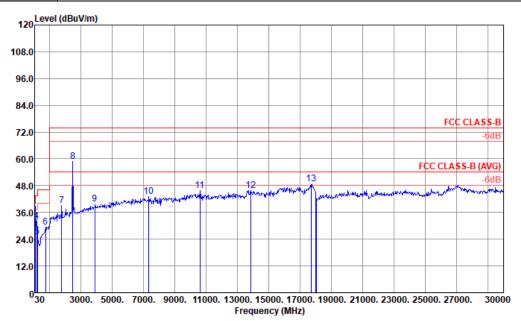
ReadAntenna Cable Preamp A/Pos T/Pos Remark Over Limit ReadAntenna Freq Level Limit Line Level Factor dBuV MHz dBuV/m dB dBuV/m dB/m dB dB cm deg 25. 63 -14. 37 31. 30 -12. 20 30. 28 -13. 22 32. 34 -11. 16 31. 60 -11. 90 22. 63 -23. 37 50. 15 39. 45 -34. 55 41. 00 -33. 00 42. 75 -31. 25 44. 38 -29. 62 44. 51 -29. 49 44. 21 -29. 79 40. 00 43. 50 43. 50 43. 50 43. 50 13. 34 15. 86 17. 34 16. 63 15. 92 19. 33 31. 10 0. 97 1. 51 56. 19 92. 08 42. 66 45. 83 31.34 31.90 --- Peak --- Peak 1. 51 1. 66 1. 96 2. 16 2. 83 7. 25 8. 74 11. 02 31. 90 31. 82 31. 34 31. 33 31. 64 59. 80 59. 93 60. 13 60. 12 --- Peak
--- Peak
--- Peak
--- Peak
--- Peak 103. 72 148. 34 179. 38 43. 10 45. 09 44. 85 32. 11 71. 60 57. 77 54. 71 55. 36 54. 41 51. 95 47. 51 305. 48 2462. 00 3533. 00 5539. 00 46.00 74. 00 74. 00 74. 00 74. 00 74. 00 74. 00 32. 87 35. 40 --- Peak 11. 02 11. 91 13. 73 15. 12 17. 23 10 11 12 35. 60 37. 10 38. 20 Peak --- Peak 8327.00 60. 86 60. 76 10010.00 44. 21 -29. 79 12883.00 39.57

Sporton International Inc. (Kunshan) Page Number : B5 of B12

FCC EN	II TEST REPORT	Report	No. : FC1O0310	
Mode:	Mode 3	Temperature :	21~22°C	

Test Engineer: Carl Ni Relative Humidity: 41~42% Test Distance: 3m Polarization: Vertical

#8 is RF signals which come from Bluetooth/WLAN Access Point used to connect Remark: the EUT, and which can be ignored.



: 03CH06-KS : FCC CLASS-B 3m CBL6111D SN23188 VERTICAL : (FC)1D0310 : 3 Site Condition Project

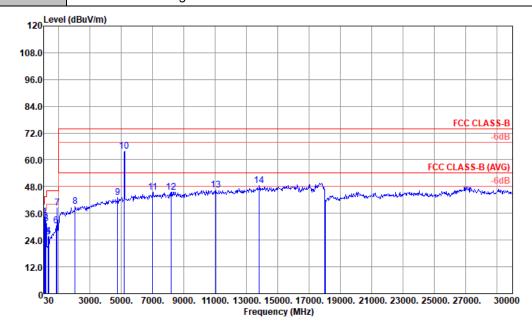
Mode

		Eroa	Level	0ver			Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
		rreq	revei	Limit	Line	revei	ractor	LUSS	ractor			Nemar K
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1	41, 64	34. 68	-5, 32	40, 00	46, 72	18, 86	0. 75	31, 65	100	259	Peak
2		74, 62		-11, 68	40.00	45. 38	13, 56	1. 24	31. 86			Peak
3		92. 08		-12.05	43, 50	45, 42	16, 42	1. 51	31, 90			Peak
4		151, 25	32, 13	-11.37	43.50	43.99	17, 48	1.98	31, 32			Peak
5		219. 15	25. 14	-20.86	46.00	36, 61	17, 49	2. 39	31, 35			Peak
6		722. 58	29.32	-16.68	46.00	30.02	26.06	4. 37	31.13			Peak
7		1748.00	39. 24	-34.76	74.00	63.90	29.10	6. 12	59.88			Peak
8		2462.00	58.71			80.16	31.10	7. 25	59.80			Peak
9		3873.00	39. 66	-34.34	74.00	56.82	33. 35	9. 18	59. 69			Peak
10		7324.00	43. 22	-30.78	74.00	54, 41	36, 56	12, 77	60.52			Peak
11		10605.00	45.76	-28.24	74.00	52. 45	38.40	15.54	60.63			Peak
12		13852.00	45. 78	-28.22	74.00	48. 11	39.81	17. 93	60.07			Peak
13		17728.00	48. 66	-25.34	74.00	42.70	42.52	20.75	57. 31			Peak

Sporton International Inc. (Kunshan) Page Number : B6 of B12

Mode:	Mode 4	Temperature :	21~22°C
Test Engineer :	Carl Ni	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
IROMark '	#10 is RF signals which come from WLAN and which can be ignored.	Access Point used to c	onnect the EUT,

: B7 of B12



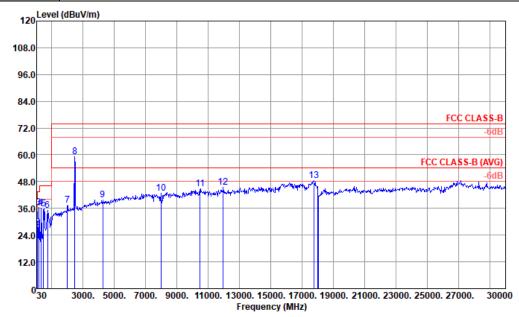
Site Condition Project Mode

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	$\overline{dBuV/m}$	dB	$\overline{dBuV/m}$	dBuV	dB/m	dB	dB	cm	deg	
1	93. 05	34. 38	-9. 12	43.50	48. 71	16.06	1.53	31. 92			Peak
2	148. 34	32. 29	-11.21	43.50	45.04	16, 63	1.96	31.34			Peak
3	179. 38	31.55	-11.95	43.50	44.80	15, 92	2. 16	31.33			Peak
4	337. 49	25.89	-20.11	46.00	34.46	20.10	2. 98	31.65			Peak
5	347. 19	25. 44	-20.56	46.00	33.73	20.34	3.02	31.65			Peak
6	826. 37	30.54	-15.46	46.00	30.73	26, 41	4. 68	31. 28			Peak
7	891.36	38. 53	-7. 47	46.00	38.14	26.70	4.87	31. 18			Peak
8	2037.00	39.03	-34.97	74.00	61.80	30.05	6. 58	59.40			Peak
9	4757.00	43. 23	-30.77	74.00	58.66	34, 45	10.17	60.05			Peak
10	5199.00	63.75			78.00	35.08	10.71	60.04			Peak
11	7001.00	45.37	-28.63	74.00	56.84	36, 50	12.48	60.45			Peak
12	8191.00	45. 51	-28.49	74.00	55.63	37. 01	13.63	60.76			Peak
13	11013.00	46, 47	-27.53	74.00	52. 63	38.54	15.84	60.54			Peak
14	13818.00	48. 63	-25. 37	74.00	50.95	39.84	17. 91	60.07			Peak

Mode :	Mode 4					Tem	perat	ure :		21~22°C
Test Engineer :	Carl Ni		Rela	ative F	lity :	41~42%				
Test Distance :	3m					Pola	arizati	,	Vertical	
Remark :		signals whic		from \	WLAN	Acces	ss Poir	nt use	d to co	nnect th
120 Leve	el (dBuV/m)									
108.0										
96.0										
84.0										
72.0									FC	C CLASS-B
60.0	9									
_		10 11	12	13	14				FCC CLA	-6dB
48.0	8 Redamble		established by the second	PV-D4-VOPAR-MORNIN	Mr. Markey	AND	eran Apple	mand the special section	الخدطس إنصاله للمستريد ومروعاتها	والمراجعة
36.0	The state of the s									
24.0										
12.0										
030	3000. 5000	0. 7000. 9000.	11000. 13				. 21000.	23000.	25000. 27	000. 3000
Site Gonditio Project Mode	: 03CH06 n : FCC CL : (FC) 1D : 4	ASS-B 3m CBL6	111D SN2	Frequen 23188 VE						
		Over Limi Limit Lin		Antenna		Preamp Factor	A/Pos	T/Pos	Remark	
	Freq Level	Ellille Elli	e Level	ractor	Loss	ractor				
	Freq Level			dB/m	Loss	dB	cm	deg		
4 5 6 7 8 3	MHz dBuV/m 40. 67 34. 53 90. 14 33. 91 157. 07 32. 28 219. 15 25. 41 338. 46 23. 62 331. 22 31. 11 391. 36 39. 33	dB dBuV/  3 -5.47 40.0 1 -9.59 43.5 3 -11.22 43.5 1 -20.59 46.0 2 -22.38 46.0 1 -14.89 46.0 3 -6.67 46.0 3 -33.22 74.0	dBuV 0 46. 07 0 48. 31 0 44. 24 0 36. 88 0 31. 17 0 30. 61 0 38. 27	dB/m  19. 38 16. 00 17. 34 17. 49 21. 12 27. 09 27. 37 32. 87	0. 73 1. 48	dB 31. 65 31. 88 31. 32 31. 35 31. 65 31. 29 31. 18	100  	252    	Peak Peak Peak Peak Peak Peak Peak Peak	

Mode:	Mode 5	Temperature :	21~22°C
Test Engineer :	Carl Ni	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
IRemark '	#8 is RF signals which come from Bluetootl	n/WLAN Access Point	used to connect

the EUT, and which can be ignored.



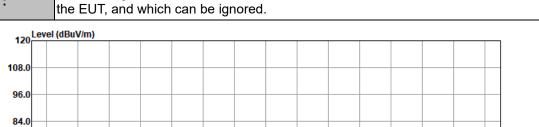
Site Condition Project Mode

	Freq	Level	Over Limit	Limit Line		ntenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	36. 79	30. 46	-9.54	40.00	40.05	21. 19	0. 68	31. 46			Peak
2	92. 08	27. 57	-15.93	43.50	42.10	15.86	1, 51	31.90			Peak
3	163.86	36, 41	-7.09	43.50	49.40	16, 28	2.06	31.33			Peak
4	300.63	36, 10	-9.90	46.00	45.72	19, 21	2.81	31.64			Peak
5	480.08	35.81	-10.19	46.00	40.18	23. 37	3, 56	31.30			Peak
6	742. 95	35.05	-10.95	46.00	36. 13	25. 61	4. 43	31. 12			Peak
7	1986, 00	37. 53	-36.47	74.00	60.53	29.94	6, 50	59.44			Peak
8	2462.00	59. 21			80.66	31.10	7. 25	59.80			Peak
9	4247.00	39.94	-34.06	74.00	56. 43	34.00	9. 61	60.10			Peak
10	7970.00	42.84	-31.16	74.00	53. 24	36, 88	13.34	60.62			Peak
11	10469.00	44.86	-29.14	74.00	51.72	38.35	15.45	60.66			Peak
12	11965.00	45.54	-28.46	74.00	50.07	38. 79	16, 78	60.10			Peak
13	17745.00	48. 61	-25. 39	74.00	42.60	42.54	20.76	57. 29			Peak

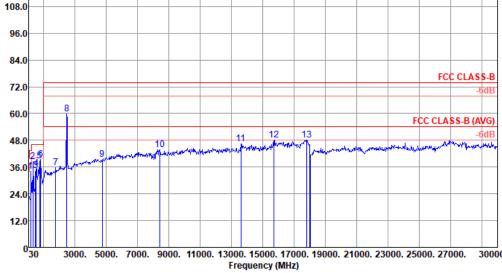
: B9 of B12 Sporton International Inc. (Kunshan) Page Number



Mode: Mode 5 21~22°C Temperature: Test Engineer: Carl Ni **Relative Humidity:** 41~42% Test Distance: 3m Polarization: Vertical #8 is RF signals which come from Bluetooth/WLAN Access Point used to connect Remark:



Report No.: FC100310

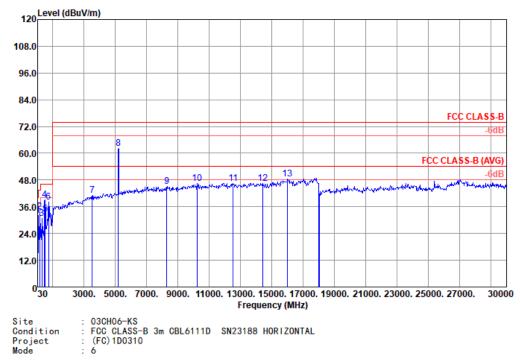


: 03CH06-KS : FCC CLASS-B 3m CBL6111D SN23188 VERTICAL : (FC) 1D0310 Site Condition Project Mode

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	163.86	34. 13	-9. 37	43.50	46. 23	17. 17	2.06	31. 33			Peak
2	310.33	38. 55	-7. 45	46.00	46.89	20.45	2.85	31.64			Peak
3	480.08	34, 47	-11.53	46.00	38.07	24. 14	3, 56	31.30			Peak
4	529.55	35.40	-10.60	46.00	37.85	25. 32	3.74	31.51			Peak
5	739. 07	38. 64	-7.36	46.00	39.01	26. 33	4. 42	31, 12			Peak
6	800.18	39.50	-6.50	46.00	39, 23	26. 90	4, 60	31, 23			Peak
7	1748.00	35.83	-38.17	74.00	60.49	29. 10	6. 12	59.88			Peak
8	2462.00	59.82			81. 27	31.10	7. 25	59.80			Peak
9	4740.00	39.54	-34.46	74.00	55.02	34, 42	10.15	60.05			Peak
10	8412.00	43.74	-30.26	74.00	53.73	37. 15	13.78	60. 92			Peak
11	13597, 00	46, 49	-27.51	74.00	48, 83	40, 02	17, 74	60, 10			Peak
12	15722. 00	48.06	-25.94	74.00	47, 21	41, 22	19.38	59.75			Peak
13	17779. 00	48. 23	-25. 77	74. 00	42. 11	42. 59	20. 78	57. 25			Peak

Sporton International Inc. (Kunshan) Page Number : B10 of B12

Mode:	Mode 6	Temperature :	21~22°C
Test Engineer :	Carl Ni	Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
	#8 is RF signals which come from WLAN A and which can be ignored.	ccess Point used to co	onnect the EUT,

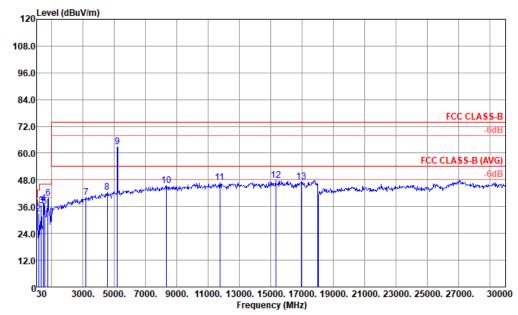


Site Condition Project Mode

	Freq	Level	Over Limit	Limit Line		Intenna Factor		Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	38. 73	32. 17	-7. 83	40.00	43.00	20.06	0.70	31.59			Peak
2	163.86	33.80	-9.70	43.50	46. 79	16, 28	2.06	31.33			Peak
3	309.36	30.91	-15.09	46.00	40, 28	19, 42	2.85	31.64			Peak
4	480.08	39.02	-6. 98	46.00	43.39	23. 37	3.56	31.30			Peak
5	527. 61	32.87	-13.13	46.00	36.07	24. 57	3.73	31.50			Peak
6	739.07	38. 12	-7.88	46.00	39, 26	25. 56	4, 42	31, 12			Peak
7	3516.00	41, 27	-32.73	74.00	59.65	32.83	8.72	59.93			Peak
8	5199.00	62. 12			76.37	35.08	10.71	60.04			Peak
9	8293.00	45, 12	-28.88	74.00	55. 18	37.08	13.70	60.84			Peak
10	10214.00	46, 44	-27.56	74.00	53. 61	38. 27	15. 27	60.71			Peak
11	12526.00	46, 52	-27.48	74.00	50. 29	39, 26	17.06	60.09			Peak
12	14430.00	46, 53	-27.47	74.00	48.48	39.74	18.35	60.04			Peak
13	15994.00	48. 55	-25. 45	74.00	46.81	41.77	19. 62	59.65			Peak



Mode: Mode 6 Temperature: 21~22°C Test Engineer: Carl Ni **Relative Humidity:** 41~42% Test Distance: 3m Polarization: Vertical #9 is RF signals which come from WLAN Access Point used to connect the EUT, Remark: and which can be ignored.



: 03CH06-KS : FCC CLASS-B 3m CBL6111D SN23188 VERTICAL : (FC) 1D0310 Site Condition Project Mode

			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	! 37.76	35. 08	-4. 92	40.00	44. 81	21.10	0.69	31.52	100	161	Peak
2	163. 86	32.78	-10.72	43.50	44.88	17, 17	2.06	31.33			Peak
3	319.06	36.35	-9. 65	46.00	44. 44	20.66	2.89	31.64			Peak
4	480.08	37. 28	-8. 72	46.00	40.88	24. 14	3.56	31.30			Peak
5	530. 52	35.94	-10.06	46.00	38. 37	25. 35	3.74	31.52			Peak
6	756, 53	39.74	-6. 26	46.00	39.85	26. 55	4. 47	31. 13			Peak
7	3176.00	40.12	-33.88	74.00	59.70	31.81	8. 27	59.66			Peak
8	4536.00	42.55	-31.45	74.00	58. 67	34.06	9. 91	60.09			Peak
9	5199.00	62. 94			77. 19	35.08	10.71	60.04			Peak
10	8310.00	45. 52	-28.48	74.00	55. 56	37.09	13.72	60.85			Peak
11	11744.00	46. 72	-27. 28	74.00	51.67	38.75	16.56	60. 26			Peak
12	15314.00	47. 68	-26. 32	74.00	48. 16	40.41	19.02	59. 91			Peak
13	16963.00	47. 10	-26. 90	74.00	43. 56	41.51	20. 28	58. 25			Peak

-THE END-----

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