# **FCC EMI TEST REPORT**

FCC ID : PY7-15465A

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

a/b/g/n/ac, GPS, FM Receiver and NFC

Brand Name : SONY

**Applicant**: Sony Corporation

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

Report No.: FC1O1906

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) : Oct. 27, 2021 ~ Nov. 25, 2021

We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Reviewed by: Jason Jia / Supervisor

JasonJia

Approved by: Alex Wang / Manager

Sporton International (Kunshan) Inc.

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300

People's Republic of China

Sporton International (Kunshan) Inc.

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# History of this test report

Report No.	Version	Description	Issued Date
FC1O1906	01	Initial issue of report	Dec. 15, 2021
FC1O1906	02	<ol> <li>Modify Remark 1 of page 7</li> <li>Radiated test plots indicated the WLAN/BT signal which can be ignored.</li> </ol>	Dec. 24, 2021

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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 7.44 dB at 0.166 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 8.09 dB at 43.580 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, FM Receiver, and GNSS.

Product Specification subjective to this standard					
	WWAN: PIFA Antenna				
	WLAN: PIFA Antenna				
Antonno Tyro	Bluetooth: PIFA Antenna				
Antenna Type	GPS/Glonass/Galileo/BDS: PIFA Antenna				
	NFC: LOOP Antenna				
	FM: External 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	SW Version	S/N	Performed Test Item			
А	0.106	HQ618X0253	Conducted Emission Radiated Emission			

	Accessory List				
AC Adapter	Model Name : XQZ-UC1				
Earphone 1	Model Name : MDR-EX15AP				
Earphone 2	Model Name : SBH82D				
USB Cable 1	Model Name : XQZ-UB1				
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 (Kunshan) Inc. 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 (Kunshan) Inc.					
	Development Zone					
Took Cita Location	Jiangsu Province 215300 People's Republic of China					
Test Site Location	TEL: +86-512-57900158					
	FAX: +86-512-57900958					
	0 1 0 N		FCC Test Firm			
Test Site No.	Sporton Site No.	FCC Designation No.	Registration No.			
	CO01-KS 03CH02-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 2 + WLAN (2.4GHz) Idle + Camera (Rear) + Earphone 1 + USB Cable 1(Charging from Adapter)
	Mode 2: WCDMA Band V (Lowest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (5GHz) Idle + Camera (Front) + Earphone 1 + USB Cable 2(Charging from Adapter)
AC	Mode 3: GSM1900 Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (2.4GHz) Idle + MPEG 4 + Earphone 1 + USB Cable 2(Charging from Adapter)
Conducted Emission	Mode 4: LTE Band 5 (Highest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (5GHz) Idle + NFC On + Earphone 1 + USB Cable 2(Charging from Adapter)
	Mode 5: LTE Band 12 (Highest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (2.4GHz) Idle + FM(Middle channel)Rx + Earphone 1 + USB Cable 2(Data Link with Notebook)
	Mode 6: WCDMA Band V (Lowest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (5GHz) Idle + GNSS Rx + Earphone 1 + USB Cable 2(Data Link with Notebook)
	Mode 1: GSM850 (Middle Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (2.4GHz) Idle + Camera (Rear) + Earphone 1 + USB Cable 1(Charging from Adapter)
	Mode 2: WCDMA Band V (Lowest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (5GHz) Idle + Camera (Front) + Earphone 1 + USB Cable 2(Charging from Adapter)
Radiated	Mode 3: GSM1900 Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (2.4GHz) Idle + MPEG 4 + Earphone 1 + USB Cable 1(Charging from Adapter)
Emissions	Mode 4: LTE Band 5 (Highest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (5GHz) Idle + NFC On + Earphone 1 + USB Cable 1(Charging from Adapter)
	Mode 5: LTE Band 12 (Highest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (2.4GHz) Idle + FM(Lowest Channel)Rx + Earphone 1 + USB Cable 1(Data Link with Notebook)
	Mode 6: LTE Band 5 (Highest Channel) Idle + Bluetooth Idle With Bluetooth Earphone 2 + WLAN (5GHz) Idle + GNSS Rx + Earphone 1 + USB Cable 1(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 (FM/GSM850/WCDMA Band V/LTE Band 5/12); 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.

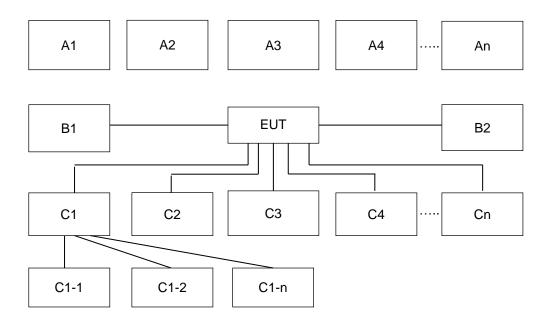
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# 2.2. Connection Diagram of Test System



	Conduction Test Setup								
No.	Wireless Station	Connection Type			Те	st Mo	de		
NO.	Wireless Station			2	3	4	5	6	
A1	System Simulator	GSM/WCDMA/LTE/FM	X	X	X	X	Χ	X	
A2	BT Earphone	Bluetooth	X	X	X	Χ	X	X	
А3	GPS/Glonass Station	GNSS	•	-	-	•	•	X	
A4	AP router	WiFi	X	X	X	X	•	•	
A5	Notebook	WiFi	X	Х	Х	Χ	-	-	
No.	Power Source	Connection Type	1	2	3	4	5	6	
B1	AC: 120V/60Hz	AC Power Cable	X	Χ	Χ	Χ	-	-	
B2	Power from system	Type C Cable	-	•	-	-	Х	Х	
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	
C1	Notebook	USB link	•	-	-	•	Χ	X	
C1-1	Hard Disk	USB Cable to C1	-	•	•	-	Χ	Χ	
C1-2	AP router	RJ 45 Cable to C1	-	•	-	-	Х	Х	
C2	SD Card	SD I/O interface without cable	х	Х	Х	Х	Х	Х	
C3	Earphone	Earphone jack	Х	Х	Х	X	Х	Х	

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	Radiated Test Setup								
				Te	st Mo	de			
No.	Wireless Station	Connection Type	1	2	3	4	5	6	
A1	System Simulator	GSM/WCDMA/LTE/FM	Х	Χ	Χ	Χ	Χ	Χ	
A2	BT Earphone	Bluetooth	Х	Χ	Х	Х	Χ	Х	
А3	GPS/Glonass Station	GNSS	-	•	•	-	•	Х	
A4	AP router	WiFi	Х	Χ	Х	Х	-	-	
A5	Notebook	WiFi	Х	Χ	Х	Х	-	-	
No.	Power Source	Connection Type	1 2		3	4	5	6	
B1	AC: 120V/60Hz	AC Power Cable	Х	Χ	Х	Х	-	-	
B2	Power from system	Type C Cable	-	-	-	-	Χ	Х	
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	
C1	Notebook	USB link	-	-	-	-	Χ	Х	
C1-1	Hard Disk	USB Cable to C1	-	-	-	-	Χ	Х	
C1-2	AP router	RJ 45 Cable to C1	-	-	-	-	Χ	Х	
C2	SD Card SD I/O interface		Х	Х	Х	Х	Х	Х	
02	3D Calu	without cable	^	^	^	^	^	^	
С3	Earphone	Earphone jack	X	X	X	X	X	X	

2.3. Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
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

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# 2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE 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
- 6. Turn on FM Receiver 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.

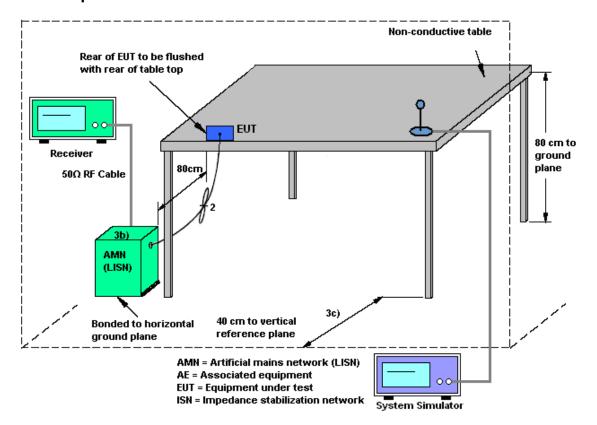
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## 3.1.4. Test Setup



### 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

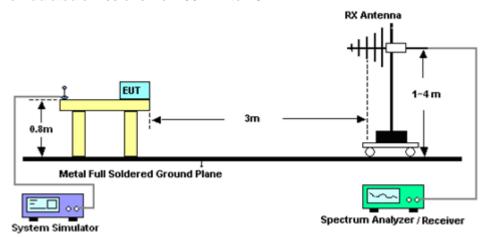
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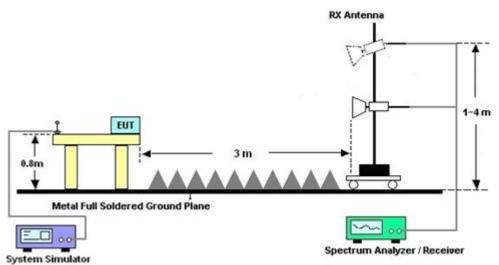
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## 3.2.4. Test Setup of Radiated Emission

#### 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	Oct. 27, 2021	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 14, 2021	Oct. 27, 2021	Oct. 13, 2022	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 14, 2021	Oct. 27, 2021	Oct. 13, 2022	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 14, 2021	Oct. 27, 2021	Oct. 13, 2022	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Oct. 16, 2021	Nov. 25, 2021	Oct. 15, 2022	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct. 16, 2021	Nov. 25, 2021	Oct. 15, 2022	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Jan. 26, 2021	Nov. 25, 2021	Jan. 25, 2022	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 30, 2021	Nov. 25, 2021	Oct. 29, 2022	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 05, 2021	Nov. 25, 2021	Nov. 04, 2022	Radiation (03CH02-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 06, 2021	Nov. 25, 2021	Jan. 05, 2022	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 06, 2021	Nov. 25, 2021	Jan. 05, 2022	Radiation (03CH02-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5G Hz	Oct. 16, 2021	Nov. 25, 2021	Oct. 15, 2022	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Nov. 25, 2021	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Nov. 25, 2021	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Nov. 25, 2021	NCR	Radiation (03CH02-KS)

NCR: No Calibration Required

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# 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence	2.9dB
of 95% (U = 2Uc(y))	21000

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

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

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

Measuring Uncertainty for a Level of Confidence	5.0dB
of 95% (U = 2Uc(y))	3.0 <b>G</b>

#### <u>Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	5.4.10
of 95% (U = 2Uc(y))	5.1dB

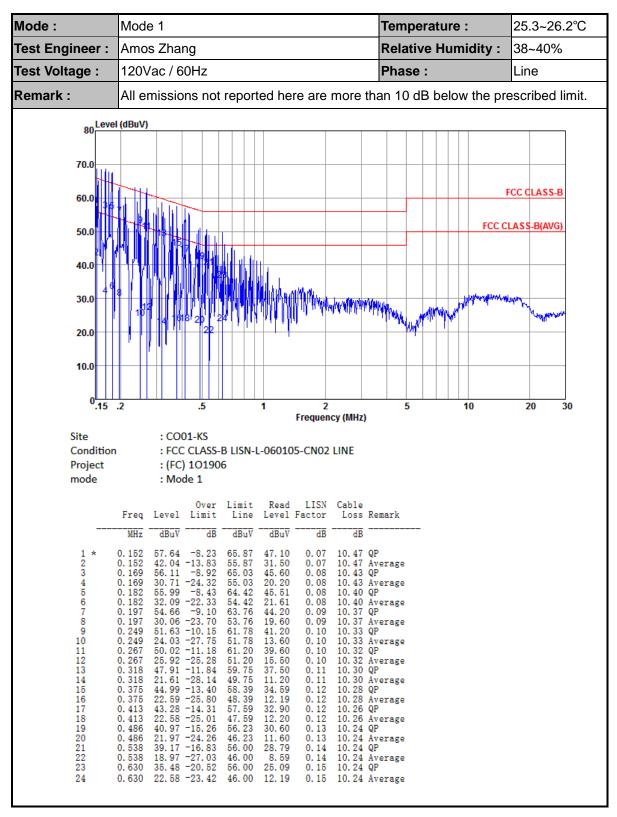
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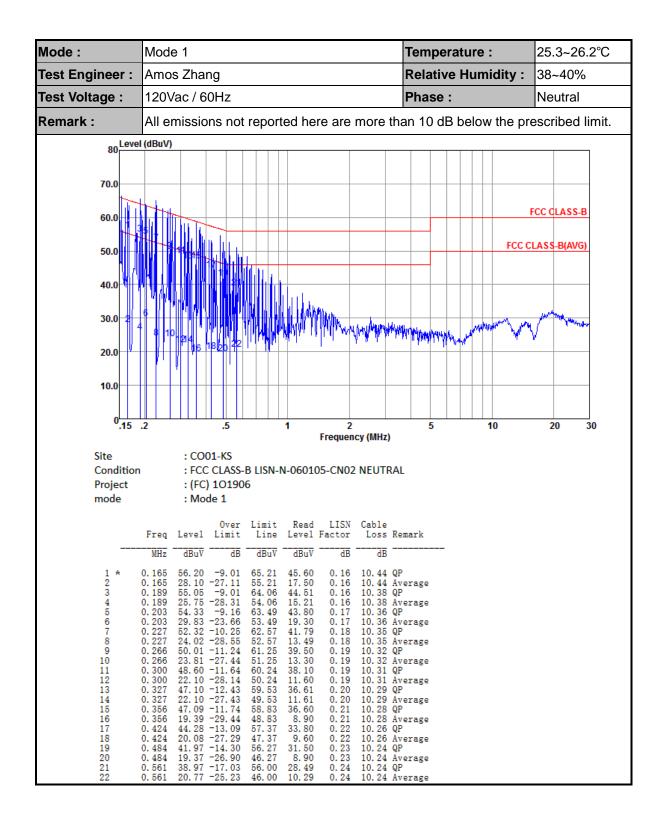
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# **Appendix A. AC Conducted Emission Test Results**



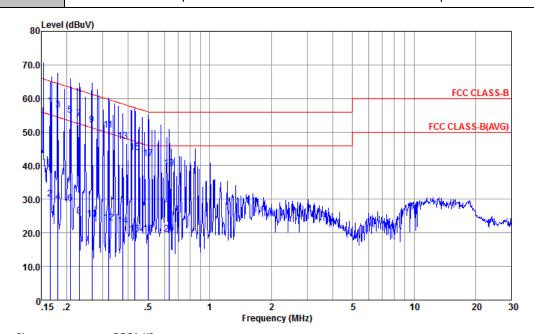
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Mode:	Mode 2	Mode 2 Temperature : 25.3~26.2°C						
Test Engineer :	Amos Zhang	Relative Humidity :	38~40%					
Test Voltage :	120Vac / 60Hz	Phase :	Line					
Remark:	All emissions not reported here are more than 10 dB below the prescribed limit							



Site : CO01-KS

Condition : FCC CLASS-B LISN-L-060105-CN02 LINE

Project : (FC) 101906 mode : Mode 2

MHz dBuV dB dBuV dBuV dB dB  1 * 0.166 57.72 -7.44 65.16 47.20 0.08 10.44 QP  2 0.166 30.12 -25.04 55.16 19.60 0.08 10.44 Average  3 0.181 56.59 -7.87 64.46 46.11 0.08 10.40 QP  4 0.181 29.29 -25.17 54.46 18.81 0.08 10.40 QP  5 0.208 55.05 -8.22 63.27 44.60 0.09 10.36 QP  6 0.208 28.65 -24.62 53.27 18.20 0.09 10.36 Average  7 0.230 54.04 -8.40 62.44 43.61 0.09 10.34 QP  8 0.230 25.04 -27.40 52.44 14.61 0.09 10.34 QP  10 0.266 52.23 -9.02 61.25 41.81 0.10 10.32 QP  10 0.266 52.03 -9.02 61.25 41.81 0.10 10.32 QP  11 0.320 50.61 -9.10 59.71 40.20 0.11 10.30 QP  12 0.320 23.01 -26.70 49.71 12.60 0.11 10.30 QP  12 0.377 47.19 -11.15 58.34 36.79 0.12 10.28 QP  14 0.377 21.99 -26.35 48.34 11.59 0.12 10.28 QP  15 0.431 43.98 -13.26 57.24 33.60 0.12 10.26 QP  16 0.431 19.58 -27.66 47.24 9.20 0.12 10.26 Average  17 0.502 42.17 -13.83 56.00 31.80 0.13 10.24 QP  18 0.502 19.57 -26.43 46.00 9.20 0.13 10.24 Average		Freq	Level	Limit	Limit Line	Level	Factor		Remark
2 0.166 30.12 -25.04 55.16 19.60 0.08 10.44 Average 3 0.181 56.59 -7.87 64.46 46.11 0.08 10.40 QP 4 0.181 29.29 -25.17 54.46 18.81 0.08 10.40 Average 5 0.208 55.05 -8.22 63.27 44.60 0.09 10.36 QP 6 0.208 28.65 -24.62 53.27 18.20 0.09 10.36 Average 7 0.230 54.04 -8.40 62.44 43.61 0.09 10.34 QP 8 0.230 25.04 -27.40 52.44 14.61 0.09 10.34 Average 9 0.266 52.23 -9.02 61.25 41.81 0.10 10.32 QP 10 0.266 24.03 -27.22 51.25 13.61 0.10 10.32 QP 11 0.320 50.61 -9.10 59.71 40.20 0.11 10.30 QP 12 0.320 23.01 -26.70 49.71 12.60 0.11 10.30 QP 12 0.377 47.19 -11.15 58.34 36.79 0.12 10.28 QP 14 0.377 21.99 -26.35 48.34 11.59 0.12 10.28 Average 15 0.431 43.98 -13.26 57.24 33.60 0.12 10.26 QP 16 0.431 19.58 -27.66 47.24 9.20 0.12 10.26 QP 16 0.431 19.58 -27.66 47.24 9.20 0.12 10.26 QP 17 0.502 42.17 -13.83 56.00 31.80 0.13 10.24 QP		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
19 0.634 39.18 -16.82 56.00 28.79 0.15 10.24 QP	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	0. 166 0. 181 0. 181 0. 208 0. 208 0. 230 0. 230 0. 266 0. 320 0. 320 0. 377 0. 377 0. 431 0. 502	30. 12 56. 59 29. 29 55. 05 54. 04 25. 04 52. 23 24. 03 50. 61 23. 01 47. 19 21. 99 43. 98 19. 58 19. 57	-25. 04 -7. 87 -25. 17 -8. 22 -24. 62 -8. 40 -27. 40 -9. 02 -27. 22 -9. 10 -26. 70 -11. 15 -26. 35 -13. 26 -27. 66 -27. 66 -13. 83 -26. 43	55. 16 64. 46 54. 46 63. 27 62. 44 52. 44 51. 25 59. 71 49. 71 48. 34 57. 24 47. 24 56. 00 46. 00	19. 60 46. 11 18. 81 44. 60 18. 20 43. 61 14. 61 41. 81 13. 61 40. 20 36. 79 11. 59 33. 60 9. 20 31. 80 9. 20	0. 08 0. 08 0. 09 0. 09 0. 09 0. 10 0. 11 0. 11 0. 12 0. 12 0. 12 0. 13	10. 44 10. 40 10. 40 10. 36 10. 36 10. 34 10. 32 10. 30 10. 30 10. 28 10. 28 10. 26 10. 26 10. 24 10. 24	Average QP Average QP Average QP Average QP Average QP Average QP Average QP Average QP Average QP Average QP

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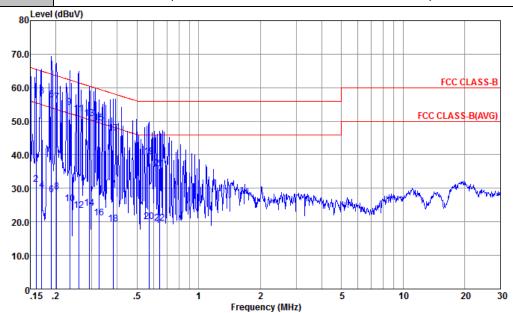
120Vac / 60Hz

Test Voltage:

lode :	Mode 2	Temperature :	25.3~26.2°C
est Engineer :	Amos Zhang	Relative Humidity :	38~40%

Phase:

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



Site : CO01-KS

Condition : FCC CLASS-B LISN-N-060105-CN02 NEUTRAL

Project : (FC) 101906 mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
2	0. 160 0. 160 0. 170 0. 170 0. 170 0. 190 0. 190 0. 202 0. 202 0. 234 0. 234 0. 259 0. 259 0. 291 0. 291	57. 91 31. 21 57. 38 29. 38 56. 35 528. 05 55. 63 29. 03 54. 12 25. 42 52. 11 23. 31 50. 70 24. 10 49. 40	-7. 56 -24. 26 -7. 56 -25. 56 -7. 67 -25. 97 -7. 91 -8. 18 -26. 88 -9. 36 -28. 16 -9. 80 -26. 40 -10. 17 -28. 47	65. 47 55. 47 64. 94 64. 02 54. 02 63. 54 52. 30 61. 47 51. 47 65. 50 59. 57	47. 31 20. 61 46. 79 18. 79 45. 81 17. 51 45. 10 18. 50 43. 60 41. 60 12. 80 40. 20	0. 15 0. 15 0. 16 0. 16 0. 16 0. 17 0. 17 0. 18 0. 18 0. 18 0. 19	10. 45 10. 45 10. 43 10. 43 10. 38 10. 36 10. 36 10. 34 10. 33 10. 31 10. 31 10. 31	Average QP Average QP Average QP Average QP Average QP Average QP Average QP Average
18 0	. 381	19.28	-11.87 -28.97 -16.63	58. 25 48. 25 56. 00	35. 90 8. 80 28. 89	0. 21 0. 21 0. 24	10. 27 10. 27 10. 24	Average
20 0 21 0	). 570 ). 644	20. 08 35. 99	-25. 92 -20. 01 -26. 31	46.00	9. 60 25. 50 9. 20	0.24	10. 24 10. 24	Average

TEL: +86-512-57900158 FAX: +86-512-57900958 Report No.: FC1O1906

Neutral

Mode :	Mode 3 Temperature : 2	25.3~26.2°C
Test Engineer :	-	38~40%
Test Voltage :		_ine
Remark :	All emissions not reported here are more than 10 dB below the pres	scribed limit.
	· · ·	
80 Leve	el (dBuV)	
70.0		
100		
60.0	FC SI III	C CLASS-B
50.0	FCC CLA	SS-B(AVG)
40.0		
30.0		
30.0	1 10 12 16 66 6 1 1 1 2 1 1 1 1 1 1 1 1 1 1	AND
20.0	·	
10.0		
10.0		
0 <mark>.15</mark>	.2 .5 1 2 5 10	20 30
611	Frequency (MHz)	
Site Conditio	: CO01-KS n : FCC CLASS-B LISN-L-060105-CN02 LINE	
Project mode	: (FC) 101906 : Mode 3	
mode		
	Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark	
	MHz dBuV dB dBuV dBuV dB dB	
1 2	0.160 56.43 -9.04 65.47 45.91 0.07 10.45 QP 0.160 30.13 -25.34 55.47 19.61 0.07 10.45 Average	
3 * 4	0.171 56.00 -8.90 64.90 45.49 0.08 10.43 QP 0.171 30.80 -24.10 54.90 20.29 0.08 10.43 Average	
5 6 7	0.194 54.56 -9.28 63.84 44.10 0.09 10.37 QP 0.194 27.96 -25.88 53.84 17.50 0.09 10.37 Average 0.217 53.24 -9.68 62.92 42.80 0.09 10.35 QP	
8 9	0.217 24.64 -28.28 52.92 14.20 0.09 10.35 Average 0.274 50.02 -10.96 60.98 39.60 0.10 10.32 QP	
10 11	0.274 22.62 -28.36 50.98 12.20 0.10 10.32 Average 0.303 48.61 -11.54 60.15 38.19 0.11 10.31 QP	
12 13	0.303 22.61 -27.54 50.15 12.19 0.11 10.31 Average 0.339 46.30 -12.92 59.22 35.90 0.11 10.29 QP 0.339 19.20 -30.02 49.22 8.80 0.11 10.29 Average	
14 15 16	0.339 19.20 -30.02 49.22 8.80 0.11 10.29 Average 0.358 45.90 -12.88 58.78 35.51 0.11 10.28 QP 0.358 22.00 -26.78 48.78 11.61 0.11 10.28 Average	
17 18	0.379 44.29 -14.01 58.30 33.90 0.12 10.27 QP 0.379 21.99 -26.31 48.30 11.60 0.12 10.27 Average	
19 20	0.419 42.18 -15.28 57.46 31.80 0.12 10.26 QP 0.419 20.98 -26.48 47.46 10.60 0.12 10.26 Average	
21	0. 469 40. 87 -15. 67 56. 54 30. 50 0. 13 10. 24 QP	
22 23	0.469 19.17 -27.37 46.54 8.80 0.13 10.24 Average 0.630 36.68 -19.32 56.00 26.29 0.15 10.24 QP	

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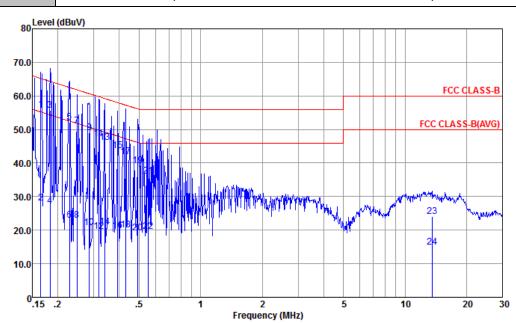
Mode :	Mode 3	Temperature :	25.3~26.2°C
Test Engineer :	Amos Zhang	Relative Humidity:	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more that	an 10 dB below the pre	escribed limit.
80 Leve	I (dBuV)		
70.0			
60.0		F	CC CLASS-B
-		<del>                                     </del>	
50.0		FCC CI	_ASS_B(AVG)
40.0			
	"TYYTIYATTIATIHTII AAAAAAAAAAAAAAAAA		
30.0		Market aller Joseph John John	A STATE OF THE PARTY OF THE PAR
20.0		List March Jordan	<u> </u>
40.0			
10.0			
0.15	.2 .5 1 2	5 10	20 30
Cit-	Frequency (MHz)		
Site Condition	: CO01-KS : FCC CLASS-B LISN-N-060105-CN02 NEUTRAL	L	
Project	: (FC) 101906		
mode	: Mode 3		
	Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Re	mark	
	MHz dBuV dB dBuV dBuV dB dB	<del></del>	
1 *	0.163 56.20 -9.10 65.30 45.60 0.15 10.45 QP 0.163 27.20 -28.10 55.30 16.60 0.15 10.45 Av		
3 4	0. 187 54. 75 -9. 40 64. 15 44. 20 0. 16 10. 39 QP 0. 187 25. 15 -29. 00 54. 15 14. 60 0. 16 10. 39 Av	erage	
6	0. 228 52. 12 -10. 40 62. 52 41. 59 0. 18 10. 35 QP 0. 228 24. 02 -28. 50 52. 52 13. 49 0. 18 10. 35 Av	erage	
8	0. 247 51. 12 -10. 74 61. 86 40. 60 0. 18 10. 34 QP 0. 247 22. 12 -29. 74 51. 86 11. 60 0. 18 10. 34 AV	erage	
10	0.270 50.11 -11.01 61.12 39.60 0.19 10.32 QP 0.270 23.11 -28.01 51.12 12.60 0.19 10.32 Av 0.207 40.00 -11.05 0.06 28.50 0.20 10.30 Av	erage	
12	0.307 49.00 -11.06 60.06 38.50 0.20 10.30 QP 0.307 20.80 -29.26 50.06 10.30 0.20 10.30 Av 0.358 44.99 -13.79 58.78 34.50 0.21 10.28 QP	erage	
14	0. 358 21.99 -26.79 48.78 11.50 0.21 10.28 Av 0. 408 42.98 -14.70 57.68 32.50 0.22 10.26 QP	erage	
16	0. 408 19. 68 -28. 00 47. 68 9. 20 0. 22 10. 26 Av 0. 471 41. 07 -15. 42 56. 49 30. 60 0. 23 10. 24 QP	erage	
18 19	0. 471	erage	
20	0.527 19.67 -26.33 46.00 9.20 0.23 10.24 Av	erage	

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FCC EMI TEST REPORT	Report No. : FC1O1906

Mode :Mode 4Temperature :25.3~26.2°CTest Engineer :Amos ZhangRelative Humidity :38~40%Test Voltage :120Vac / 60HzPhase :Line

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



Site : CO01-KS

Condition : FCC CLASS-B LISN-L-060105-CN02 LINE

Project : (FC) 101906 mode : Mode 4

			Over Limit	Line		Factor	Loss	Remark
1 2 3 * 4 5 6 6 7 8 9 10 11 112 13 14 15 16 17 18 19 20	MHz  0. 165 0. 165 0. 183 0. 228 0. 228 0. 228 0. 248 0. 285 0. 285 0. 317 0. 341 0. 393 0. 431 0. 491	28. 02 55. 60 27. 08 52. 04 23. 04 51. 03 23. 03 48. 92 20. 62 47. 21 19. 61 46. 20 20. 90 43. 59 41. 88 19. 98 39. 17 19. 17		55. 21 64. 33 54. 32 62. 52 52. 52 61. 82 60. 68 50. 68 59. 18 49. 18 57. 99 57. 24 47. 24 46. 14	17. 50 45. 12 16. 60 41. 60 12. 60 40. 60 12. 60 38. 51 10. 21 36. 80 9. 20 35. 80 10. 50 33. 20 9. 50 9. 60 28. 80 9. 20	dB 0. 08 0. 08 0. 08 0. 09 0. 09 0. 10 0. 10 0. 11 0. 11 0. 11 0. 12 0. 12 0. 12 0. 13 0. 13	10. 40 10. 40 10. 35 10. 35 10. 33 10. 31 10. 31 10. 30 10. 29 10. 29 10. 27 10. 26 10. 26 10. 24 10. 24	Average QP
21 22 23 24	0. 552 0. 552 13. 560 13. 560	19. 57 23. 98	-19.83 -26.43 -36.02 -35.12	56. 00 46. 00 60. 00 50. 00	25. 79 9. 19 12. 20 3. 10	0. 14 0. 14 1. 40 1. 40	10.38	Average

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Test Engineer : Amos Zh Test Voltage : 120Vac /		Relative Humidity :	38~40%
Test Voltage: 120Vac/	/ 0011		1070
	/ 60HZ	Phase :	Neutral
Remark: All emiss	sions not reported here are more than	n 10 dB below the pre	escribed limit.
80 Level (dBuV)  70.0  60.0  30.0  20.0  10.0  10.0  10.0  Freq Level  MHz dBi  1 0.159 56.4 2 0.159 27.4 3 0.182 55.6 4 0.182 26.4 5 * 0.190 55.6 6 0.190 25.6 7 0.217 53.8 8 0.217 53.8 9 0.243 51.8	sions not reported here are more than  5  1  2  Frequency (MHz)  CO01-KS  FCC CLASS-B LISN-N-060105-CN02 NEUTRAL  (FC) 101906  Mode 4  0ver Limit Read LISN Cable Limit Line Level Factor Loss Remains and Line Level Factor Loss Remai	ark rage rage rage	

Report No.: FC1O1906

Sporton International (Kunshan	ı) Inc.	Page Number	: A8 of A1

TEL: +86-512-57900158 FAX: +86-512-57900958 Mode: Temperature: 25.3~26.2°C Mode 5 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 5 10 20 30 Frequency (MHz) : CO01-KS Site Condition : FCC CLASS-B LISN-L-060105-CN02 LINE : (FC) 101906 Project : Mode 5 mode LISN Cable Loss Remark dBuV dB dBuV dBuV 53. 29 -11. 30 38. 59 -16. 00 50. 77 -13. 25 30. 07 -23. 95 43. 24 -19. 02 27. 24 -25. 02 34. 87 -21. 54 23. 87 -22. 54 33. 88 -22. 12 27. 88 -18. 12 35. 63 -24. 37 27. 93 -22. 07 10. 41 QP 10. 41 Average 10. 38 QP 10. 38 Average 10. 34 QP 10. 34 Average 10. 24 QP 10. 23 QP 10. 23 QP 64. 59 54. 59 64. 02 54. 02 62. 26 52. 26 56. 41 46. 41 56. 00 42. 80 28. 10 40. 31 19. 61 32. 81 16. 81 24. 50 13. 50 23. 20 17. 20 23. 21 15. 51 0.08 0. 178 0. 178 0. 190 0. 190 0. 235 0. 235 0.08 0.08 0.09 0.09 0.13 0.13 0.45 0. 476 0. 476 2. 409 2. 409 18. 232 10.23 Average 10.46 QP 46. 00 60. 00 50. 00 10 11 0. 45 1. 96

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

Mode: 25.3~26.2°C Mode 5 Temperature: 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 2 5 10 20 30 Frequency (MHz) : CO01-KS Condition : FCC CLASS-B LISN-N-060105-CN02 NEUTRAL Project : (FC) 101906 mode : Mode 5 Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dBuV dB dBuV dBuV 51. 20 -13. 96 34. 80 -20. 36 51. 67 -12. 97 35. 47 -19. 17 39. 11 -22. 18 27. 11 -24. 18 34. 92 -21. 08 29. 32 -16. 68 34. 99 -21. 91 27. 79 -18. 21 38. 95 -21. 05 33. 65 -16. 35 65. 16 55. 16 64. 64 54. 64 61. 29 51. 29 40.60 24.20 41.10 24.90 28.60 16.60 24.10 18.50 23.20 16.90 26.10 20.80 0.166 0.16 0. 16 0. 16 0. 16 0. 19 0. 19 0. 59 0. 59 10.44 QP 10.44 Average 10.41 QP 10.41 Average 10.32 QP 10.32 Average 0. 166 0. 177 0. 177 2 3 4 5 6 7 0. 264 0. 264 2. 448 2. 448 2. 900 2. 900 17. 568 17. 568 56. 00 46. 00 56. 00 10.23 QP 10.23 Average 10.24 QP 46. 00 60. 00 50. 00 0. 65 2. 40 2. 40 10 11 10.24 Average 10.45 QP

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

Mode: Temperature: 25.3~26.2°C Mode 6 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 .15 .2 .5 5 10 20 Frequency (MHz) : CO01-KS Site Condition : FCC CLASS-B LISN-L-060105-CN02 LINE Project : (FC) 101906 : Mode 6 mode Over Limit Read LISN Limit Line Level Factor Cable Loss Remark LISN Freq Level Limit MHz dBuV dB dBuV dBuV dB 50. 64 -15. 10 33. 84 -21. 90 50. 79 -13. 71 36. 59 -17. 91 47. 37 -16. 78 34. 27 -19. 88 43. 65 -19. 53 28. 95 -24. 23 37. 00 -21. 69 24. 50 -24. 19 33. 58 -22. 42 28. 18 -17. 82 10.47 QP 10.47 Average 10.41 QP 10.41 Average 10.39 QP 10.36 QP 65. 74 55. 74 64. 50 54. 50 64. 15 54. 15 63. 18 53. 18 58. 69 48. 69 56. 00 46. 00 40. 10 23. 30 40. 30 26. 10 36. 90 23. 80 33. 20 18. 50 26. 61 14. 11 22. 90 17. 50 0.155 0.07 0.08 0.08 0.08 0.08 0.09 0.09 0. 155 0. 180 0. 180 2 3 4 5 6 7 0. 187 0. 187 0.211 0.361 10.36 Average 10.28 QP 10 11 12 0. 361 2. 384 2. 384 0.11 10.28 Average 10.23 QP

TEL: +86-512-57900158 FAX: +86-512-57900958 10.23 Average

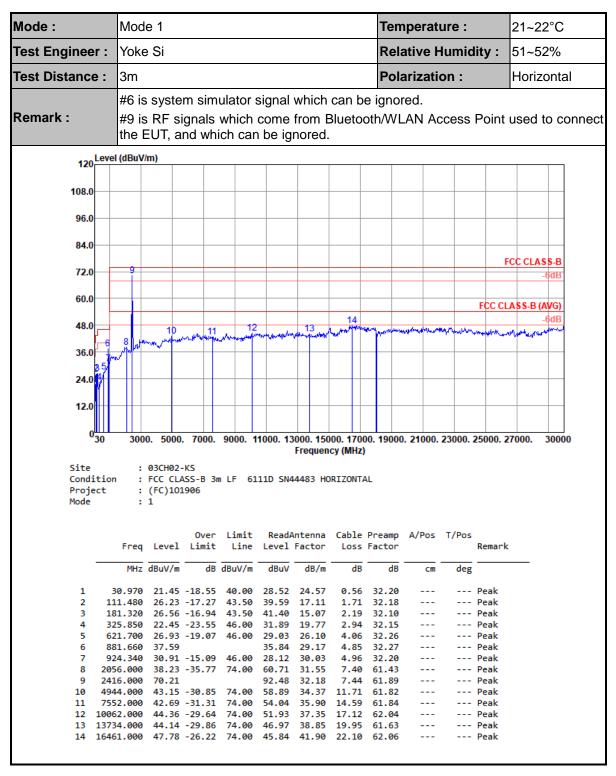
Mode: Temperature: 25.3~26.2°C Mode 6 Test Engineer: Amos Zhang **Relative Humidity:** 38~40% Test Voltage: 120Vac / 60Hz Phase: Neutral Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 80 Level (dBuV) 70.0 FCC CLASS-B 60.0 FCC CLASS-B(AVG) 50.0 40.0 30.0 20.0 10.0 .15 .2 .5 5 10 Frequency (MHz) Site : CO01-KS Condition : FCC CLASS-B LISN-N-060105-CN02 NEUTRAL Project : (FC) 101906 mode : Mode 6 Cable Read LISN 0ver Limit Line Level Factor Loss Remark Freq Level Limit MHz dBuV dB dBuV dBuV dB 50. 81 -14. 79 34. 51 -21. 09 50. 37 -14. 18 34. 77 -19. 78 46. 75 -17. 31 28. 05 -26. 01 43. 43 -19. 67 28. 03 -25. 07 34. 32 -21. 68 29. 32 -16. 68 38. 26 -21. 74 32. 86 -17. 14 10.46 QP 10.46 Average 10.41 QP 10.41 Average 10.38 QP 10.38 Average 65.60 55.60 64.55 54.55 0. 15 0. 15 0. 16 0. 16 0. 16 0. 16 0. 17 40. 20 23. 90 39. 80 24. 20 36. 21 17. 51 32. 90 17. 50 23. 50 18. 50 25. 50 20. 10 0.157 0. 157 0. 179 0. 179 2 3 4 5 6 7 0. 189 0. 189 64. 06 54. 06 63. 10 Average QP 0. 213 2. 435 2. 435 17. 109 53. 10 56. 00 0. 17 0. 59 10.36 Average 10.23 QP 0. 59 2. 32 2. 32 46.00 60.00 10.23 Average 10.44 QP 11 10.44

#### Note:

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

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

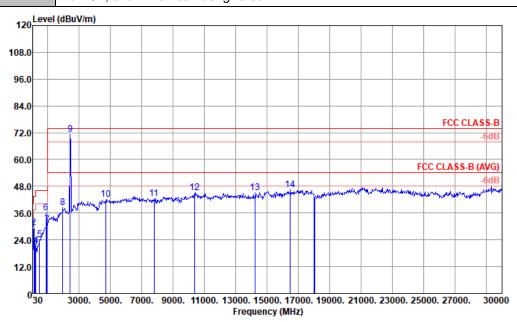


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Mode:	Mode 1	Temperature :	21~22°C
Test Engineer :	Yoke Si	Relative Humidity :	51~52%
Test Distance :	3m	Polarization :	Vertical

#6 s system simulator signal which can be ignored.

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



Site : 03CH02-KS

Condition : FCC CLASS-B 3m LF 6111D SN44483 VERTICAL

Project : (FC)101906

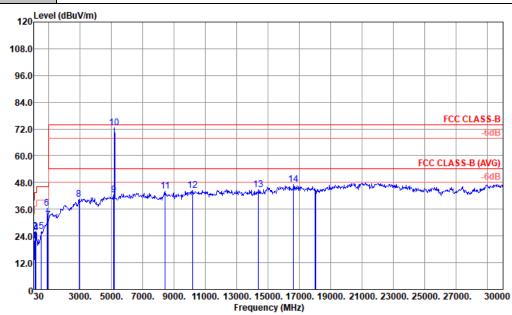
Mode : 1

			0ver					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	39.700	28.66	-11.34	40.00	40.28	19.80	0.70	32.12			Peak
2	110.510	29.41	-14.09	43.50	42.84	17.05	1.70	32.18			Peak
3	186.170	20.86	-22.64	43.50	35.82	14.92	2.22	32.10			Peak
4	221.090	21.54	-24.46	46.00	35.84	15.41	2.43	32.14			Peak
5	477.170	24.13	-21.87	46.00	29.30	23.58	3.56	32.31			Peak
6	881.660	36.25			34.50	29.17	4.85	32.27			Peak
7	940.830	30.85	-15.15	46.00	27.38	30.66	5.01	32.20			Peak
8	1936.000	38.58	-35.42	74.00	62.08	31.10	7.21	61.81			Peak
9	2416.000	71.06			93.33	32.18	7.44	61.89			Peak
10	4712.000	41.96	-32.04	74.00	58.29	34.40	11.44	62.17			Peak
11	7776.000	42.49	-31.51	74.00	53.63	35.90	14.77	61.81			Peak
12	10386.000	45.02	-28.98	74.00	52.01	37.61	17.39	61.99			Peak
13	14238.000	45.12	-28.88	74.00	47.36	39.19	20.32	61.75			Peak
14	16488.000	46.49	-27.51	74.00	44.42	41.97	22.14	62.04			Peak

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Mode:	Mode 2	Temperature :	21~22°C						
Test Engineer :	Yoke Si	Relative Humidity :	51~52%						
Test Distance :	3m	Polarization :	Horizontal						
	#6 is system simulator signal which can be ignored.								
Remark:	#10 is RF signals which come from WLAN Access Point used to connect the EUT								

and which can be ignored.



: 03CH02-KS Site

: FCC CLASS-B 3m LF 6111D SN44483 HORIZONTAL

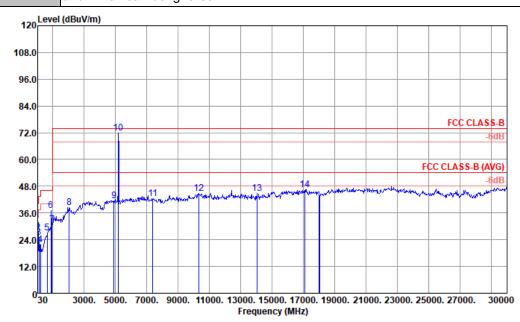
Condition Project Mode : (FC)101906 : 2

	Freq	Level	Over Limit					Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.970	21.82	-18.18	40.00	28.89	24.57	0.56	32.20			Peak
2	115.360	25.81	-17.69	43.50	38.91	17.33	1.74	32.17			Peak
3	170.650	26.01	-17.49	43.50	40.34	15.65	2.12	32.10			Peak
4	186.170	25.37	-18.13	43.50	40.33	14.92	2.22	32.10			Peak
5	519.850	26.18	-19.82	46.00	30.27	24.55	3.72	32.36			Peak
6	881.660	36.32			34.57	29.17	4.85	32.27			Peak
7	937.920	31.15	-14.85	46.00	27.80	30.55	5.00	32.20			Peak
8	2928.000	40.32	-33.68	74.00	60.29	32.69	8.91	61.57			Peak
9	5136.000	42.33	-31.67	74.00	57.48	34.60	11.95	61.70			Peak
10	5184.000	72.44			88.30	34.67	11.16	61.69			Peak
11	8424.000	43.99	-30.01	74.00	54.55	36.07	15.60	62.23			Peak
12	10170.000	44.48	-29.52	74.00	51.86	37.43	17.21	62.02			Peak
13	14364.000	44.66	-29.34	74.00	46.68	39.38	20.42	61.82			Peak
14	16623.000	46.98	-27.02	74.00	44.49	42.14	22.29	61.94			Peak

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

Mode :	Mode 2	Temperature :	21~22°C						
Test Engineer :	Yoke Si	Relative Humidity :	51~52%						
Test Distance :	3m	Vertical							
	#6 is system simulator signal which can be ignored.								

Remark: #10 is RF signals which come from WLAN Access Point used to connect the EUT, and which can be ignored.



: 03CH02-KS

Site Condition : FCC CLASS-B 3m LF 6111D SN44483 VERTICAL

Project : (FC)101906

Mode

		1 1	0ver					Preamp	A/Pos	T/Pos	Dame ele
	Freq	Level	Limit	Line	rever	Factor	LOSS	ractor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	Cm	deg	
1	41.640	27.71	-12.29	40.00	40.28	18.82	0.73	32.12			Peak
2	46.490	26.97	-13.03	40.00	42.01	16.36	0.80	32.20			Peak
3	113.420	25.12	-18.38	43.50	38.35	17.22	1.72	32.17			Peak
4	199.750	21.82	-21.68	43.50	36.50	15.10	2.32	32.10			Peak
5	627.520	26.93	-19.07	46.00	28.92	26.18	4.08	32.25			Peak
6	881.660	37.23			35.48	29.17	4.85	32.27			Peak
7	949.560	30.76	-15.24	46.00	26.93	31.00	5.03	32.20			Peak
8	2032.000	38.52	-35.48	74.00	61.02	31.53	7.37	61.40			Peak
9	4912.000	41.58	-32.42	74.00	57.43	34.35	11.67	61.87			Peak
10	5184.000	72.00			87.86	34.67	11.16	61.69			Peak
11	7384.000	42.51	-31.49	74.00	53.98	35.92	14.47	61.86			Peak
12	10332.000	44.91	-29.09	74.00	52.00	37.57	17.34	62.00			Peak
13	14031.000	44.80	-29.20	74.00	47.41	38.86	20.15	61.62			Peak
14	17091.000	46.61	-27.39	74.00	42.96	42.42	22.80	61.57			Peak

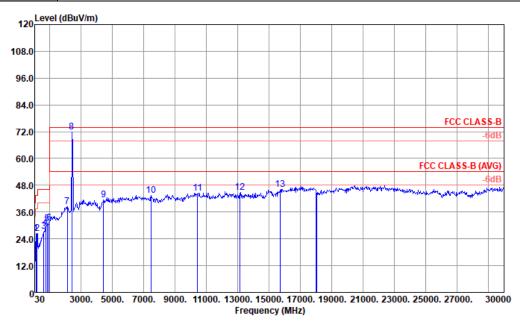
TEL: +86-512-57900158 FAX: +86-512-57900958

Mode: Mode 3 Temperature: 21~22°C

Test Engineer: Yoke Si Relative Humidity: 51~52%

Test Distance: 3m Polarization: Horizontal

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



Site : 03CH02-KS

Condition : FCC CLASS-B 3m LF 6111D SN44483 HORIZONTAL

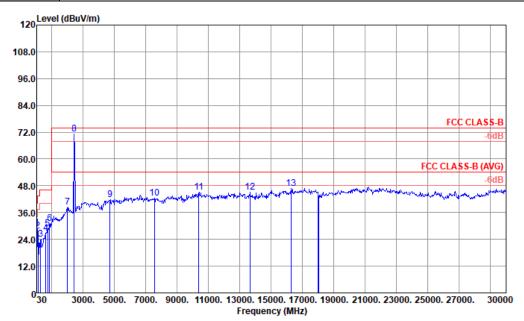
Project : (FC)101906

Mode : 3

			0ver	Limit	ReadA	ntenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
		In w/		In 11/	- In a						
	MHZ	dBuV/m	ав	dBuV/m	dBuV	dB/m	dB	dB	Cm	deg	
1	112.450	26.46	-17.04	43.50	39.77	17.16	1.71	32.18			Peak
2	183.260	26.41	-17.09	43.50	41.30	15.01	2.20	32.10			Peak
3	607.150	27.35	-18.65	46.00	29.73	25.90	4.01	32.29			Peak
4	732.280	28.95	-17.05	46.00	29.12	27.67	4.42	32.26			Peak
5	817.640	30.87	-15.13	46.00	29.95	28.59	4.67	32.34			Peak
6	936.950	30.97	-15.03	46.00	27.65	30.52	5.00	32.20			Peak
7	2120.000	38.35	-35.65	74.00	60.74	31.62	7.52	61.53			Peak
8	2408.000	71.76			94.03	32.18	7.44	61.89			Peak
9	4424.000	41.39	-32.61	74.00	58.89	33.86	11.05	62.41			Peak
10	7440.000	43.41	-30.59	74.00	54.85	35.91	14.51	61.86			Peak
11	10440.000	44.52	-29.48	74.00	51.42	37.65	17.43	61.98			Peak
12	13149.000	44.93	-29.07	74.00	47.75	39.18	19.59	61.59			Peak
13	15705.000	46.08	-27.92	74.00	46.56	40.47	21.40	62.35			Peak

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

Mode :	Mode 3	Temperature :	21~22°C					
Test Engineer :	Yoke Si	Relative Humidity :	51~52%					
Test Distance :	3m	Vertical						
IROMark:	#8 is RF signals which come from Bluetooth/WLAN Access Point used to conr the EUT, and which can be ignored.							



Site : 03CH02-KS

Condition : FCC CLASS-B 3m LF 6111D SN44483 VERTICAL

Project : (FC)101906

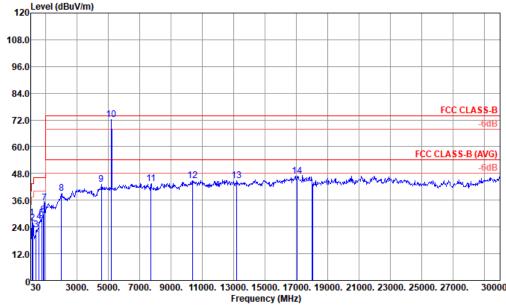
Mode : 3

	Freq	Level	Over Limit			Antenna Factor				T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	40.670	28.99	-11.01	40.00	41.06	19.31	0.72	32.10			Peak
2	112.450	27.69	-15.81	43.50	41.00	17.16	1.71	32.18			Peak
3	268.620	24.03	-21.97	46.00	33.72	19.80	2.67	32.16			Peak
4	607.150	26.88	-19.12	46.00	29.26	25.90	4.01	32.29			Peak
5	724.520	28.78	-17.22	46.00	29.20	27.44	4.39	32.25			Peak
6	861.290	30.99	-15.01	46.00	29.31	29.25	4.79	32.36			Peak
7	2000.000	38.35	-35.65	74.00	60.89	31.50	7.31	61.35			Peak
8	2416.000	71.34			93.61	32.18	7.44	61.89			Peak
9	4720.000	41.80	-32.20	74.00	58.11	34.38	11.46	62.15			Peak
10	7552.000	42.38	-31.62	74.00	53.73	35.90	14.59	61.84			Peak
11	10386.000	45.22	-28.78	74.00	52.21	37.61	17.39	61.99			Peak
12	13635.000	45.02	-28.98	74.00	47.90	38.87	19.89	61.64			Peak
13	16263.000	46.79	-27.21	74.00	45.57	41.53	21.89	62.20			Peak

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

SPORTON LAB.	FCC EMI TEST REPORT

			1								
Mode:	Mode 4	Temperature :	21~22°C								
Test Engineer :	est Engineer : Yoke Si Relative Humidity										
Test Distance :	3m	Polarization :	Horizontal								
	#7 is system simulator signal which can be ignored.  #10 is RF signals which come from WLAN Access Point used to connect the EUT and which can be ignored.										
120 Leve	(dBuV/m)										



: 03CH02-KS

: FCC CLASS-B 3m LF 6111D SN44483 HORIZONTAL : (FC)101906 : 4

Site Condition Project Mode

	-		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	106.630	28.01	-15.49	43.50	41.79	16.73	1.68	32.19			Peak
2	169.680	25.62	-17.88	43.50	39.90	15.70	2.12	32.10			Peak
3	374.350	22.77	-23.23	46.00	30.77	21.09	3.16	32.25			Peak
4	570.290	26.29	-19.71	46.00	29.14	25.56	3.89	32.30			Peak
5	741.010	27.83	-18.17	46.00	27.73	27.94	4.44	32.28			Peak
6	829.280	29.31	-16.69	46.00	28.12	28.85	4.70	32.36			Peak
7	889.000	34.84			33.07	29.14	4.87	32.24			Peak
8	1984.000	39.26	-34.74	74.00	62.05	31.40	7.28	61.47			Peak
9	4552.000	42.99	-31.01	74.00	59.82	34.33	11.24	62.40			Peak
10	5184.000	72.27			88.13	34.67	11.16	61.69			Peak
11	7712.000	43.30	-30.70	74.00	54.50	35.90	14.72	61.82			Peak
12	10359.000	44.73	-29.27	74.00	51.76	37.59	17.37	61.99			Peak
13	13176.000	44.91	-29.09	74.00	47.74	39.16	19.61	61.60			Peak
14	17055.000	46.67	-27.33	74.00	43.01	42.51	22.76	61.61			Peak

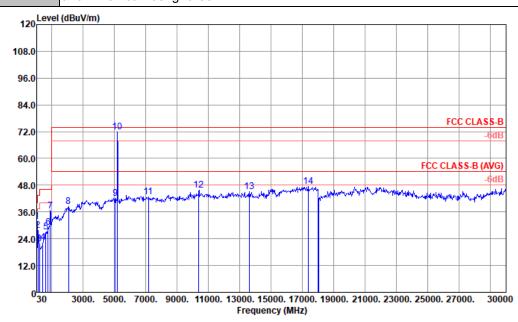
TEL: +86-512-57900158 FAX: +86-512-57900958

Report No.: FC1O1906

Mode:	Mode 4	Temperature :	21~22°C
Test Engineer :	Yoke Si	Relative Humidity :	51~52%
Test Distance :	3m	Polarization :	Vertical

#7 is system simulator signal which can be ignored.

Remark: #10 is RF signals which come from WLAN Access Point used to connect the EUT, and which can be ignored.



: 03CH02-KS Site

: FCC CLASS-B 3m LF 6111D SN44483 VERTICAL Condition

Project : (FC)101906

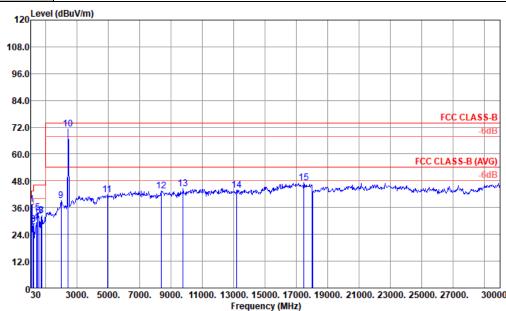
Mode

			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	43.580	31.91	-8.09	40.00	45.47	17.84	0.76	32.16			Peak
2	105.660	27.90	-15.60	43.50	41.78	16.64	1.67	32.19			Peak
3	205.570	21.76	-21.74	43.50	36.36	15.16	2.35	32.11			Peak
4	428.670	22.28	-23.72	46.00	28.55	22.59	3.38	32.24			Peak
5	611.030	27.09	-18.91	46.00	29.39	25.95	4.03	32.28			Peak
6	755.560	29.18	-16.82	46.00	28.79	28.20	4.49	32.30			Peak
7	889.000	36.48			34.71	29.14	4.87	32.24			Peak
8	2072.000	38.35	-35.65	74.00	60.80	31.57	7.43	61.45			Peak
9	5056.000	42.18	-31.82	74.00	57.53	34.50	11.86	61.71			Peak
10	5168.000	71.88			87.78	34.65	11.14	61.69			Peak
11	7168.000	42.68	-31.32	74.00	54.46	35.97	14.13	61.88			Peak
12	10386.000	45.75	-28.25	74.00	52.74	37.61	17.39	61.99			Peak
13	13617.000	45.13	-28.87	74.00	48.02	38.88	19.88	61.65			Peak
14	17388.000	47.34	-26.66	74.00	43.67	41.91	23.06	61.30			Peak

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

Mode:	Mode 5	Temperature :	21~22°C					
Test Engineer :	Yoke Si	Relative Humidity :	51~52%					
Test Distance :	3m	Polarization :	Horizontal					
#1 is FM signal which can be ignored.  #8 is system simulator signal which can be ignored.  #10 is RF signals which come from Bluetooth/WLAN Access Point used								

the EUT, and which can be ignored.



Site : 03CH02-KS

: FCC CLASS-B 3m LF 6111D SN44483 HORIZONTAL Condition

: (FC)101906 : 5 Project

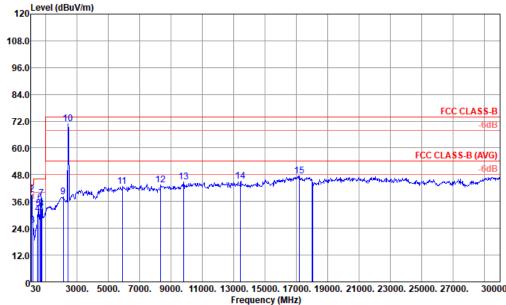
Mode

			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	88.000	37.30			53.51	14.56	1.45	32.22			Peak
2	193.930	27.50	-16.00	43.50	42.40	14.92	2.28	32.10			Peak
3	216.240	28.38	-17.62	46.00	42.85	15.26	2.40	32.13			Peak
4	408.300	29.34	-16.66	46.00	36.21	22.11	3.30	32.28			Peak
5	480.080	33.87	-12.13	46.00	38.98	23.64	3.57	32.32			Peak
6	533.430	32.07	-13.93	46.00	35.71	24.93	3.76	32.33			Peak
7	712.880	32.01	-13.99	46.00	32.80	27.08	4.36	32.23			Peak
8	741.010	32.55			32.45	27.94	4.44	32.28			Peak
9	1960.000	39.13	-34.87	74.00	62.39	31.20	7.24	61.70			Peak
10	2408.000	71.13			93.40	32.18	7.44	61.89			Peak
11	4928.000	41.71	-32.29	74.00	57.51	34.36	11.69	61.85			Peak
12	8360.000	43.51	-30.49	74.00	54.07	36.04	15.56	62.16			Peak
13	9765.000	44.58	-29.42	74.00	52.90	37.03	16.68	62.03			Peak
14	13185.000	43.82	-30.18	74.00	46.65	39.15	19.62	61.60			Peak
15	17469.000	47.22	-26.78	74.00	43.54	41.76	23.14	61.22			Peak

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

1		
7	E	E

Mode:	Mode 5	Temperature :	21~22°C					
Test Engineer :	Yoke Si	Relative Humidity :	51~52%					
Test Distance :	3m	Polarization :	Vertical					
#2 is FM signal which can be ignored.  #8 is system simulator signal which can be ignored.  #10 is RF signals which come from Bluetooth/WLAN Access Point used to connect the EUT, and which can be ignored.								
Level	(dBuV/m)							



Site

: 03CH02-KS : FCC CLASS-B 3m LF 6111D SN44483 VERTICAL Condition

: (FC)101906 : 5 Project

Mode

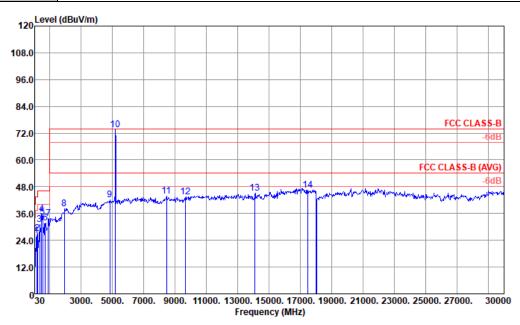
			0ver	Limit	Read/	Antenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	68.800	26.38	-13.62	40.00	44.97	12.44	1.15	32.18			Peak
2	88.000	39.26			55.47	14.56	1.45	32.22			Peak
3	166.770	25.34	-18.16	43.50	39.40	15.94	2.10	32.10			Peak
4	480.080	30.47	-15.53	46.00	35.58	23.64	3.57	32.32			Peak
5	530.520	32.89	-13.11	46.00	36.62	24.85	3.76	32.34			Peak
6	640.130	35.38	-10.62	46.00	37.12	26.36	4.12	32.22			Peak
7	713.850	37.49	-8.51	46.00	38.25	27.11	4.36	32.23			Peak
8	741.010	32.90			32.80	27.94	4.44	32.28			Peak
9	2112.000	37.94	-36.06	74.00	60.36	31.60	7.49	61.51			Peak
10	2416.000	70.73			93.00	32.18	7.44	61.89			Peak
11	5888.000	42.75	-31.25	74.00	56.04	35.40	12.94	61.63			Peak
12	8328.000	43.43	-30.57	74.00	53.98	36.03	15.54	62.12			Peak
13	9783.000	44.68	-29.32	74.00	52.97	37.05	16.69	62.03			Peak
14	13437.000	44.97	-29.03	74.00	47.91	38.94	19.77	61.65			Peak
15	17181.000	47.41	-26.59	74.00	43.75	42.27	22.88	61.49			Peak

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

Mode:	Mode 6	Temperature :	21~22°C
Test Engineer :	Yoke Si	Relative Humidity :	51~52%
Test Distance :	3m	Polarization :	Horizontal
	#7 is system simulator signal which can be	ignored	

#7 is system simulator signal which can be ignored.

Remark: #10 is RF signals which come from WLAN Access Point used to connect the EUT, and which can be ignored.



Site : 03CH02-KS

: FCC CLASS-B 3m LF 6111D SN44483 HORIZONTAL Condition

Project : (FC)101906

Mode

			0ver	Limit	ReadAntenna		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	167.740	26.07	-17.43	43.50	40.21	15.86	2.10	32.10			Peak
2	204.600	27.13	-16.37	43.50	41.74	15.15	2.35	32.11			Peak
3	351.070	30.99	-15.01	46.00	39.61	20.53	3.05	32.20			Peak
4	480.080	35.86	-10.14	46.00	40.97	23.64	3.57	32.32			Peak
5	530.520	34.48	-11.52	46.00	38.21	24.85	3.76	32.34			Peak
6	713.850	31.77	-14.23	46.00	32.53	27.11	4.36	32.23			Peak
7	889.420	33.81			32.04	29.14	4.87	32.24			Peak
8	1920.000	38.23	-35.77	74.00	61.98	31.00	7.18	61.93			Peak
9	4832.000	42.08	-31.92	74.00	58.18	34.31	11.59	62.00			Peak
10	5184.000	73.46			89.32	34.67	11.16	61.69			Peak
11	8448.000	43.75	-30.25	74.00	54.32	36.08	15.60	62.25			Peak
12	9675.000	43.52	-30.48	74.00	52.05	36.91	16.58	62.02			Peak
13	14103.000	45.09	-28.91	74.00	47.58	38.97	20.20	61.66			Peak
14	17478.000	46.60	-27.40	74.00	42.92	41.76	23.14	61.22			Peak

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

Mode :		Mod	le 6				Ten	Temperature :				21~22°C		
Test Enginee	r:	Yoke Si							Rela	Relative Humidity :				2%
Test Distance	e :	3m Polarization :								Vertical				
Remark :		#10 and	#7 is system simulator signal which can be ignored. #10 is RF signals which come from WLAN Access Point used to connect the El and which can be ignored.											
120	Level	(dBuV	//m)											
108.0														
96.0														
84.0														
72.0			10									F	CC CLAS	S-B IdB
60.0												FCC CL	ASS-B (A	VG)
48.0			9		11 1	2 Marty and arter	13	14 14 - <b>1</b> 4 - 14 - 14 - 14 - 14 - 14 - 14 - 14 -	infofolia abendustra	شمدايه المستحد والمحصال	dryway franch	والمراوية المامير	ا- معمر در بروسرواک	idB ~~~
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12.0														
0	30	300	0. 5000	. 7000.	9000. 1	1000. 13				). <b>210</b> 00.	23000.	25000. 2	7000. 3	30000
Site Condi Proje Mode		:	03CH02 FCC CL/ (FC)10:	ASS-B 3r	n LF 61	11D SN4		C <b>y (MHZ)</b> RTICAL	)					
				0ver	Limit				Preamp	A/Pos	T/Pos			
			Level		dBuV/m	dBuV	Factor dB/m	Loss	Factor dB		deg	Remark		
1	4				40.00				32.12		_	Peak		
2					43.50				32.10			Peak		
3 4					46.00 46.00				32.32 32.34			Peak Peak		
5	64	0.130	35.26	-10.74	46.00	37.00	26.36	4.12	32.22			Peak		
6 7			34.17 32.76		46.00		27.05 29.14		32.22 32.24			Peak Peak		
8					74.00				61.47			Peak		
9	483	2.000	42.60	-31.40	74.00	58.70	34.31					Peak		
10 11			72.38		74.00				62.16			Peak Peak		
					74.00							Peak		
					74.00							Peak		
14	1/00	1.000	46.71	-27.29	74.00	43.06	42.60	22.71	61.66			Peak		

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—THE END——

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