



# FCC Test Report

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola  
**MODEL NAME** : XT2073-1  
**FCC ID** : IHDT56ZA2  
**STANDARD** : 47 CFR Part 15 Subpart B  
**CLASSIFICATION** : Certification

The product was received on Jan. 17, 2020 and testing was completed on Apr. 10, 2020. 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.

*Jason Jia*

Reviewed by: Jason Jia / Supervisor

*James Huang*

Approved by: James Huang / Manager



**Sporton International (Kunshan) Inc.**

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300  
People's Republic of China



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### REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC011708-01	Rev. 01	Initial issue of report	May 08, 2020



### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit 12.27 dB at 0.476 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 2.45 dB at 888.700 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.



# 1. General Description

## 1.1. Applicant

Motorola MOBILITY LLC  
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

## 1.2. Manufacturer

Motorola Mobility LLC  
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

## 1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2073-1
FCC ID	IHDT56ZA2
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth BR/EDR/LE FM Receiver and GNSS
IMEI Code	Conduction: 353598110124845/353598110164841 Radiation: 353598110006455/353598110006463
HW Version	DVT2
SW Version	QPL30.50
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



### 1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx Frequency</b>	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 38 : 2572.5 MHz ~ 2617.5 MHz LTE Band 41 : 2537.5 MHz ~ 2652.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
<b>Rx Frequency</b>	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5 MHz ~ 2687.5 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41 : 2537.5 MHz ~ 2652.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS: 1559 MHz ~ 1610 MHz FM: 88MHz~108MHz
<b>Antenna Type</b>	WWAN : Fixed Internal Antenna WLAN 2.4G: IPA Antenna Bluetooth : IPA Antenna GNSS: IPA Antenna FM : External Earphone Antenna
<b>Type of Modulation</b>	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK (Uplink) HSDPA/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM (uplink is not supported) DC-HSDPA : 64QAM LTE: QPSK / 16QAM / 64QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK FM

GNSS = BDS + Galileo + GLONASS + GPS



### 1.5. Modification of EUT

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

### 1.6. Specification of Accessory

Specification of Accessory			
AC Adapter 1(US)	Brand Name	Motorola(Acbel)	Model Name SC-41
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 1(EU)	Brand Name	Motorola(Acbel)	Model Name SC-42
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 1(AR)	Brand Name	Motorola(Acbel)	Model Name SC-46
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 2(US)	Brand Name	Motorola(Chenyang)	Model Name SC-41
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 2(EU)	Brand Name	Motorola(Chenyang)	Model Name SC-42
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 2(AR)	Brand Name	Motorola(Chenyang)	Model Name SC-46
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 2(UK)	Brand Name	Motorola(Chenyang)	Model Name SC-43
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 3(Chile)	Brand Name	Motorola(Salom)	Model Name SC-42
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 3 (BR) (Salom China build)	Brand Name	Motorola(Salom)	Model Name SC-47
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 3 (BR) (Flex Brazil local build)	Brand Name	Motorola(Flex)	Model Name SC-47
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
AC Adapter 4 (BR) (Cliptech Brazil local)	Brand Name	Motorola(Cliptech)	Model Name SC-47
	Power Rating	I/P: 100-240 Vac, 300mA , O/P: 5Vdc, 2000mA	
Battery	Brand Name	Motorola (ATL)	Model Name JK50
	Power Rating	3.8Vdc, 4000mAh	Type Li-ion, Polymer
Earphone 1	Brand Name	Motorola (NEW LEADER)	Model Name NLD-EM301K-01SF
	Signal Line Type	1.2 meter, non-shielded cable, without ferrite core	
Earphone 2	Brand Name	Motorola (Lianyun)	Model Name MI181 (SH38C37773)
	Signal Line Type	1.1 meter, non-shielded cable, without ferrite core	
Earphone 3	Brand Name	Motorola (Cosonic)	Model Name MI181 (SH38C44959)
	Signal Line Type	1.1 meter, non-shielded cable, without ferrite core	
USB Cable 1	Brand Name	Motorola (Saibao)	Model Name SC18C24367



	<b>Signal Line Type</b>	1.0 meter, shielded cable, without ferrite core		
USB Cable 2	<b>Brand Name</b>	Motorola (Luxshare)	<b>Model Name</b>	SC18C24368
	<b>Signal Line Type</b>	1.0 meter, shielded cable, without ferrite core		
USB Cable 3	<b>Brand Name</b>	Motorola (Cabletech)	<b>Model Name</b>	SC18C49697
	<b>Signal Line Type</b>	1.0 meter, shielded cable, without ferrite core		
USB Cable 4	<b>Brand Name</b>	Motorola (I SHENG)	<b>Model Name</b>	SC18C28955
	<b>Signal Line Type</b>	1.0 meter, shielded cable, without ferrite core		

### 1.7. Test Location

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

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

SPORTON INTERNATIONAL INC. is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and under the FCC-recognized accredited testing laboratories by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.		
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist. Taoyuan City Taiwan Tel: 886-3-327-3456 FAX: +886-3-327-0978		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC designation No.</b>	<b>FCC Test Firm Registration No.</b>
	03CH06-HY	TW1190	553509

### 1.8. Test Software

Item	Site	Manufacture	Name	Version
1.	03CH06-HY	AUDIX	E3	6.2009-8-24(k5)





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2.	CO01-KS	AUDIX	E3	6.2009-8-24
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### 1.9. Applicable Standards

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

- ♦ 47 CFR Part 15 Subpart B
- ♦ ANSI C63.4-2014

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



## 2. 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).

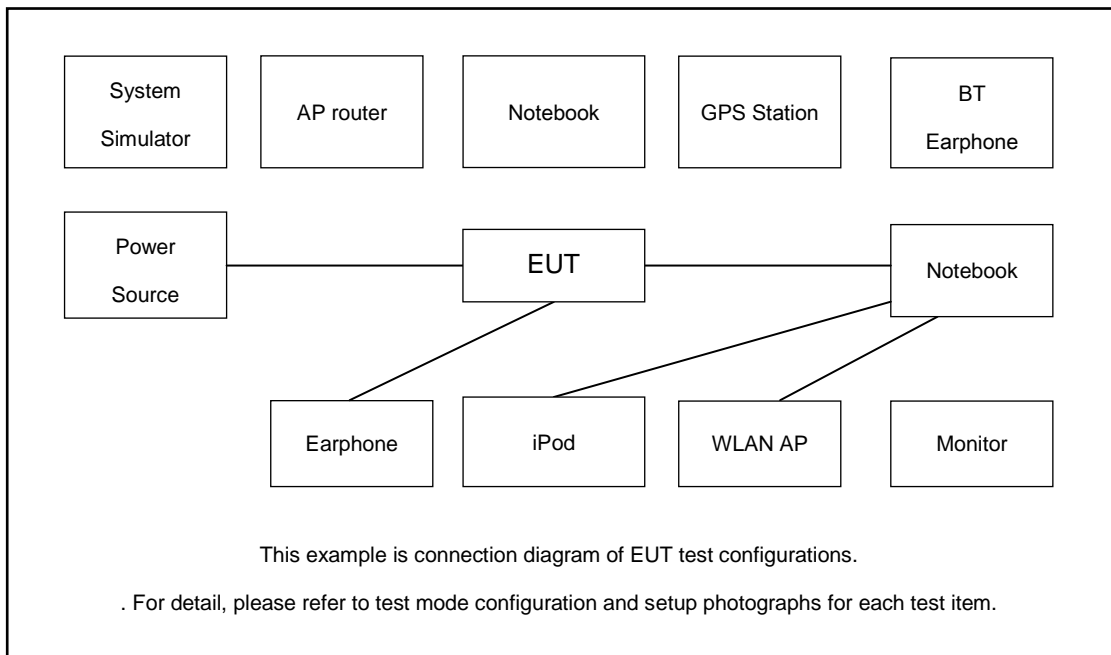
Test Items	Function Type
AC Conducted Emission	Mode 1: GSM 850 Rx(Middle) + Bluetooth Idle + Earphone1 + USB Cable 1(Charging from Adapter1) + WLAN Idle(2.4G) + Camera(Rear) + Battery + SIM 1
	Mode 2: WCDMA 1900 Rx + Bluetooth Idle + Earphone 2 + USB Cable2 (Charging from Adapter2) + WLAN Idle(2.4G) + Camera(Front) + Battery + SIM 2
	Mode 3: WCDMA Band V Rx(Low) + Bluetooth Idle + Earphone 3 + USB Cable 3(Charging from Adapter3) + WLAN Idle(2.4G) + MPEG4 + Battery + SIM 1
	Mode 4: WCDMA Band II Rx + Bluetooth Idle + Earphone 1 + USB Cable 4(Charging from Adapter4) + WLAN Idle(2.4G) + FM Rx(98Hz) + Battery + SIM 2
	Mode 5: LTE Band 5 Rx(High) + Bluetooth Idle + Earphone 1 + USB Cable 1(Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 1
	Mode 6: LTE Band 7 Rx + Bluetooth Idle + Earphone 1 + USB Cable 2(Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 2
	Mode 7: LTE Band 38 Rx + Bluetooth Idle + Earphone 1 + USB Cable2 (Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 1
	Mode 8: LTE Band 41 Rx + Bluetooth Idle + Earphone 1 + USB Cable4 (Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 2
Radiated Emissions	Mode 1: GSM 850 Rx(Middle) + Bluetooth Idle + Earphone1 + USB Cable 1(Charging from Adapter1) + WLAN Idle(2.4G) + Camera(Rear) + Battery + SIM 1
	Mode 2: PCS 1900 Rx + Bluetooth Idle + Earphone2 + USB Cable 2(Charging from Adapter2) + WLAN Idle(2.4G) + Camera(Front) + Battery + SIM 2
	Mode 3: WCDMA Band V Rx(Low) + Bluetooth Idle + Earphone 3 + USB Cable 3(Charging from Adapter3) + WLAN Idle(2.4G) + MPEG4 + Battery + SIM 1
	Mode 4: WCDMA Band II Rx + Bluetooth Idle + Earphone1 + USB Cable 4(Charging from Adapter4) + WLAN Idle(2.4G) + FM Rx(98Hz) + Battery + SIM 2
	Mode 5: LTE Band 5 Rx(High) + Bluetooth Idle + Earphone1 + USB Cable 1(Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 1

	<p>Mode 6: LTE Band 7 Rx + Bluetooth Idle + Earphone 1 + USB Cable 2(Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 2</p> <p>Mode 7: LTE Band 38 Rx + Bluetooth Idle + Earphone 1 + USB Cable3 (Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 1</p> <p>Mode 8: LTE Band 41 Rx + Bluetooth Idle + Earphone 1 + USB Cable4 (Data Link with Notebook) + WLAN Idle(2.4G) + GNSS Rx + Battery + SIM 2</p>
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**Remark:**

1. The worst case of AC is mode 8; only the test data of this mode is reported.
2. The worst case of RE is mode 5; only the test data of this mode is reported.
3. Data Link with Notebook means data application transferred mode between EUT and Notebook
4. Pre-scanned Low/Middle/High channel (GSM850/WCDMA Band V/LTE B5), the worst channel was recorded in this report.

**2.2.Connection Diagram of Test System**



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

### 2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	SD Card	Kingston	8GB	N/A	N/A	N/A
2.	SD Card	Adata	MicroSD HC	FCC DoC	N/A	N/A
3.	Hard DISK	WD	C6B	N/A	N/A	N/A
4.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0m	N/A
5.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
6.	NOTE BOOK	ASUS	P2430U	FCC DoC	N/A	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 1.8m
7.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
8.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,1.8m
9.	Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded,1.8m
10.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
11.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded,1.8m
12.	Bluetooth Earphone	SonyEricsson	MW600	PY700A2029	N/A	N/A
13.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
14.	Vector Signal Generator	R&S	SMBV100A	258305	N/A	N/A



## **2.4. EUT Operation Test Setup**

The EUT was in GSM or WCDMA or LTE idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Data application is transferred between notebook and EUT via USB cable.
2. Turn on camera to capture images.
3. Turn on MPEG4 function.
4. Turn on GNSS function to make the EUT receive continuous signals from GNSS station.
5. Turn on FM function to make the EUT receive continuous signals from FM station.



### 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 Limit>

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedure

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

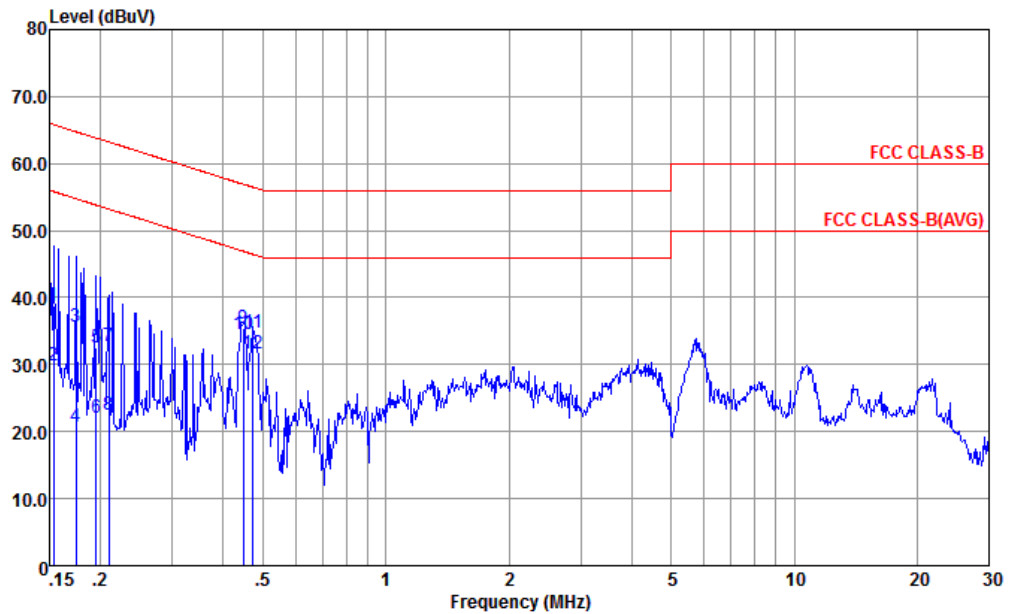
### 3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		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.		



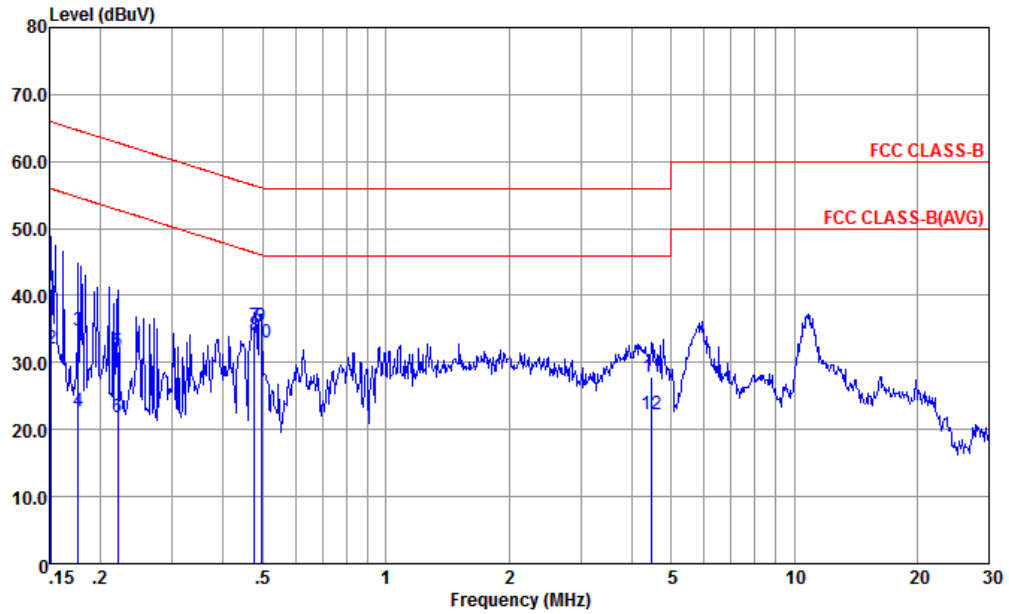
Site : CO01-KS  
 Condition : FCC CLASS-B LISN-L-191028-060105 LINE  
 Project : (FC) 011708-01  
 mode : Mode 8  
 : 353598110124845/353598110164841

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.153	38.70	-27.12	65.82	28.20	0.03	10.47	QP
2	0.153	29.80	-26.02	55.82	19.30	0.03	10.47	Average
3	0.174	35.56	-29.21	64.77	25.10	0.04	10.42	QP
4	0.174	20.76	-34.01	54.77	10.30	0.04	10.42	Average
5	0.195	32.61	-31.19	63.80	22.20	0.04	10.37	QP
6	0.195	22.01	-31.79	53.80	11.60	0.04	10.37	Average
7	0.209	32.70	-30.53	63.23	22.30	0.04	10.36	QP
8	0.209	22.60	-30.63	53.23	12.20	0.04	10.36	Average
9	0.447	35.41	-21.52	56.93	25.10	0.06	10.25	QP
10 *	0.447	34.61	-12.32	46.93	24.30	0.06	10.25	Average
11	0.474	34.80	-21.65	56.45	24.50	0.06	10.24	QP
12	0.474	31.60	-14.85	46.45	21.30	0.06	10.24	Average





Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		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-N-191028-060105 NEUTRAL  
 Project : (FC) 011708-01  
 mode : Mode 8  
 : 353598110124845/353598110164841

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.152	41.06	-24.85	65.91	30.50	0.08	10.48	QP
2	0.152	32.16	-23.75	55.91	21.60	0.08	10.48	Average
3	0.177	34.69	-29.95	64.64	24.20	0.08	10.41	QP
4	0.177	22.69	-31.95	54.64	12.20	0.08	10.41	Average
5	0.221	31.73	-31.06	62.79	21.30	0.08	10.35	QP
6	0.221	21.73	-31.06	52.79	11.30	0.08	10.35	Average
7	0.476	35.44	-20.97	56.41	25.10	0.10	10.24	QP
8 *	0.476	34.14	-12.27	46.41	23.80	0.10	10.24	Average
9	0.494	35.44	-20.66	56.10	25.10	0.10	10.24	QP
10	0.494	32.94	-13.16	46.10	22.60	0.10	10.24	Average
11	4.478	27.92	-28.08	56.00	17.50	0.16	10.26	QP
12	4.478	22.22	-23.78	46.00	11.80	0.16	10.26	Average

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



### 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:

<Class B Limit>

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

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



### **3.2.3. Test Procedures**

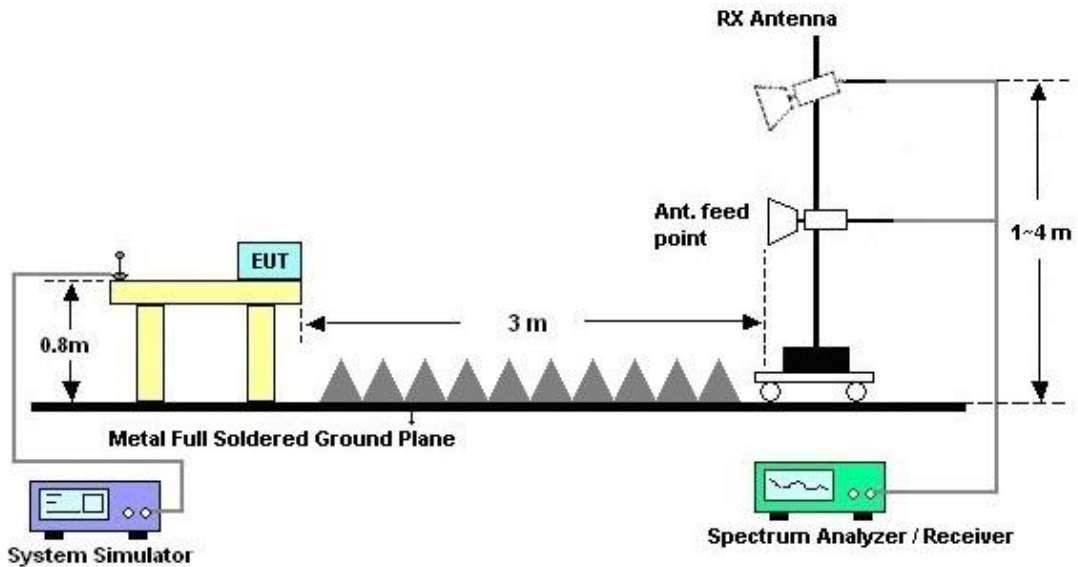
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



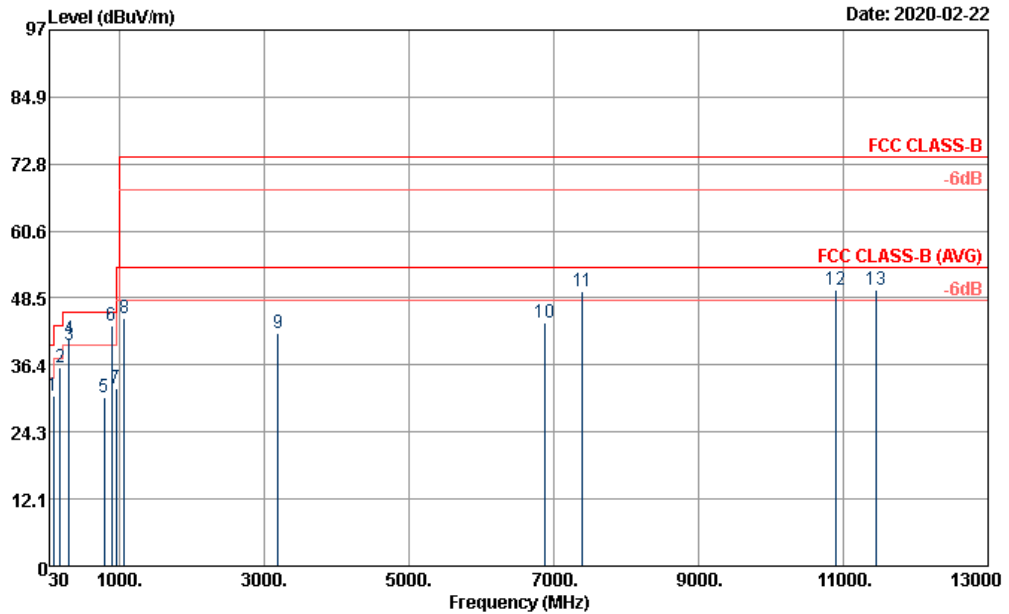
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Engineer :	Yuan Lee, YouXian Chen,	Temperature :	20~24°C
	Brad Liu	Relative Humidity :	40~47%
Test Distance :	3m	Polarization :	Horizontal

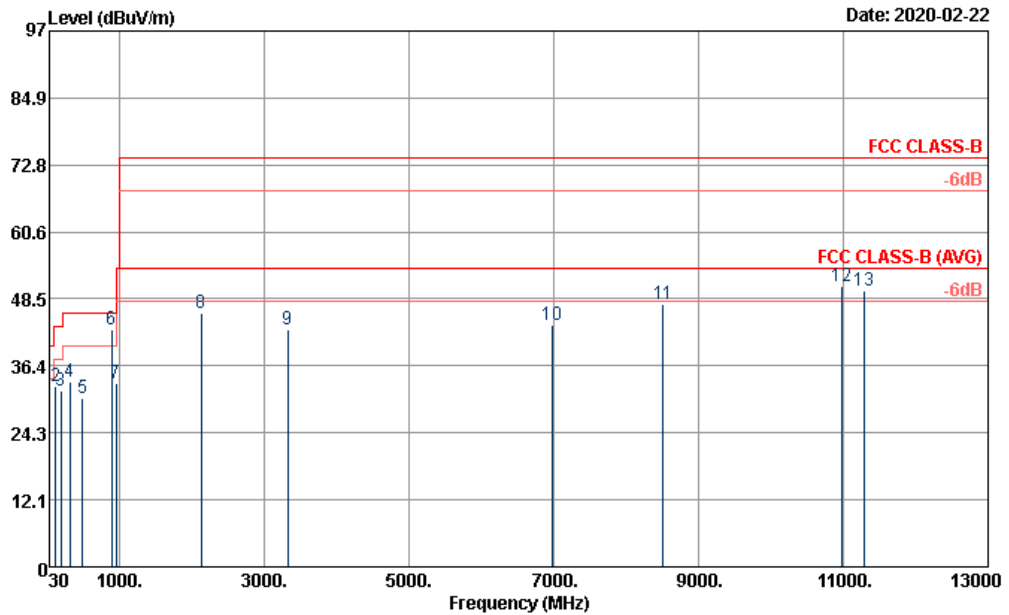


Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m 9120D\_1156 HORIZONTAL

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	84.27	30.77	-9.23	40.00	47.57	13.64	1.16	31.65	---	---	Peak
2	176.88	35.83	-7.67	43.50	50.68	14.99	1.68	31.58	---	---	Peak
3	298.65	39.91	-6.09	46.00	50.14	18.92	2.29	31.54	---	---	Peak
4	300.00	41.19	-4.81	46.00	51.39	18.95	2.29	31.54	100	0	Peak
5	792.10	30.63	-15.37	46.00	30.34	28.00	3.72	31.70	---	---	Peak
6	888.70	43.55	-2.45	46.00	41.62	29.01	3.95	31.37	---	---	Peak
7	953.80	32.04	-13.96	46.00	28.12	30.25	4.07	30.83	---	---	Peak
8	1062.00	44.86	-29.14	74.00	77.47	24.80	4.22	61.63	---	---	Peak
9	3194.00	42.11	-31.89	74.00	67.07	28.90	7.62	61.48	---	---	Peak
10	6876.00	44.12	-29.88	74.00	55.52	34.83	12.22	58.45	---	---	Peak
11	7398.00	49.76	-24.24	74.00	58.23	36.20	13.89	58.56	---	---	Peak
12	10894.00	50.05	-23.95	74.00	49.70	40.40	16.57	56.62	100	0	Peak
13	11454.00	49.95	-24.05	74.00	48.85	40.20	17.02	56.12	---	---	Peak



Test Engineer :	Yuan Lee, YouXian Chen,	Temperature :	20~24°C
	Brad Liu	Relative Humidity :	40~47%
Test Distance :	3m	Polarization :	Vertical



Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m 9120D\_1156 VERTICAL

	Freq	Level	Over Limit	Limit Line	Read Antenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.35	30.58	-9.42	40.00	37.70	23.85	0.66	31.64	100	0	Peak
2	118.83	32.76	-10.74	43.50	45.79	17.11	1.44	31.64	---	---	Peak
3	193.89	31.75	-11.75	43.50	46.91	14.54	1.80	31.57	---	---	Peak
4	311.90	33.58	-12.42	46.00	43.66	19.05	2.33	31.56	---	---	Peak
5	492.50	30.46	-15.54	46.00	35.68	23.57	2.89	31.81	---	---	Peak
6	888.70	43.09	-2.91	46.00	41.16	29.01	3.95	31.37	---	---	Peak
7	955.90	33.23	-12.77	46.00	29.10	30.42	4.07	30.81	---	---	Peak
8	2126.00	46.00	-28.00	74.00	73.51	27.30	6.26	61.07	---	---	Peak
9	3320.00	42.96	-31.04	74.00	68.47	28.27	7.75	61.53	---	---	Peak
10	6986.00	43.87	-30.13	74.00	54.34	35.30	12.64	58.41	---	---	Peak
11	8512.00	47.49	-26.51	74.00	53.31	37.00	14.40	57.22	---	---	Peak
12	10978.00	50.87	-23.13	74.00	50.27	40.40	16.63	56.43	100	0	Peak
13	11294.00	49.98	-24.02	74.00	49.40	39.90	16.90	56.22	---	---	Peak

Note:

- Level(dBμV/m) = Read Level(dBμV) + Antenna Factor(dB/m) + Cable Loss(dB) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)



### 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 16, 2019	Apr. 10, 2020	Apr. 15, 2020	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 18, 2019	Apr. 10, 2020	Oct. 17, 2020	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Oct. 28, 2019	Apr. 10, 2020	Oct. 27, 2020	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 18, 2019	Apr. 10, 2020	Oct. 17, 2020	Conduction (CO01-KS)
Amplifier	SONOMA	310N	186713	9kHz~1GHz	May. 01, 2019	Feb. 21, 2020~ Feb. 22, 2020	Apr. 30, 2020	Radiation (03CH06-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 12, 2019	Feb. 21, 2020~ Feb. 22, 2020	Oct. 11, 2020	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 10, 2020	Feb. 21, 2020~ Feb. 22, 2020	Jan. 09, 2021	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 30, 2019	Feb. 21, 2020~ Feb. 22, 2020	Aug. 29, 2020	Radiation (03CH06-HY)
Preamplifier	MITEQ	00101800-30-1 0P	1850117	1GHz~18GHz	May. 23, 2019	Feb. 21, 2020~ Feb. 22, 2020	May. 22, 2020	Radiation (03CH06-HY)
Controller	INN-CO	EM1000	060782	Control Turn table & Ant Mast	N/A	Feb. 21, 2020~ Feb. 22, 2020	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1m~4m	N/A	Feb. 21, 2020~ Feb. 22, 2020	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Feb. 21, 2020~ Feb. 22, 2020	N/A	Radiation (03CH06-HY)
Test Software	AUDIX	e3	6.2009-8-24(k 5)	N/A	N/A	Feb. 21, 2020~ Feb. 22, 2020	N/A	Radiation (03CH06-HY)
RF Cable	HUBER+SUH NER/WOKEN/ HARBOUR INDUSTRIES	SUCOFLEX 104 /STORM/LL14 2	MY24966/4/ 00100A1O2A 178T/ CA3601-3601 -1000	30MHz-26GHz	Nov. 21, 2019	Feb. 21, 2020~ Feb. 22, 2020	Nov. 20, 2020	Radiation (03CH06-HY)

NCR: No Calibration Required



## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.9 dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.9 dB
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.7 dB
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

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