

# FCC Test Report

APPLICANT : Shenzhen Tinno Mobile Technology Corp.  
EQUIPMENT : Smartphone  
BRAND NAME : TINNO  
MODEL NAME : U705AA, U705AC  
FCC ID : XD6U705AA  
STANDARD : 47 CFR Part 15 Subpart B  
CLASSIFICATION : Certification

The product was received on Feb. 21, 2020 and testing was completed on Mar. 14, 2020. We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

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



Reviewed by: Derreck Chen / Supervisor



Approved by: Eric Shih / Manager



**Sporton International (ShenZhen) Inc.**

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen, 518055  
People's Republic of China



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC022101	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 3.08 dB at 0.170 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.38 dB at 257.950 MHz for Quasi-Peak

**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

**Shenzhen Tinno Mobile Technology Corp.**

4/F, H-3 Building, OCT Eastern Industrial Park. NO.1 XiangShan East Road, Nan Shan District, Shenzhen, P. R. China.

### 1.2. Manufacturer

**Shenzhen Tinno Mobile Technology Corp.**

4/F, H-3 Building, OCT Eastern Industrial Park. NO.1 XiangShan East Road, Nan Shan District, Shenzhen, P. R. China.

### 1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Brand Name	TINNO
Model Name	U705AA, U705AC
FCC ID	XD6U705AA
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC and GNSS
IMEI Code	Conduction: 865638040005622 for Sample 1 865638040004021 for Sample 2 Radiation: 865638040006968 for Sample 1 865638040004112 for Sample 2
HW Version	V1.0
SW Version	U705AA SW: U705AAV01.16.11 U705AC SW: U705ACV01.43.01
EUT Stage	Identical Prototype

**Remark:**

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT sample 1(Model Name: U705AA) and sample 2(Model Name: U705AC), the change note could be referred to the product equality declaration which is exhibit separately. According to the difference, we chose the sample 1 to perform all tests, sample 2 verify the worst of sample 1.

## 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 IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 30 : 2307.5 MHz ~ 2312.5 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5700 MHz 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 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 IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 14: 760.5 MHz ~ 765.5 MHz LTE Band 29 : 718.5 MHz ~ 726.5 MHz LTE Band 30 : 2352.5 MHz ~ 2357.5 MHz LTE Band 66 : 2110.7 MHz~ 2179.3 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5700 MHz 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz NFC : 13.56 MHz
<b>Antenna Type</b>	WWAN : LDS Antenna WLAN : LDS Antenna Bluetooth : LDS Antenna GNSS: LDS Antenna NFC : Loop Antenna
<b>Type of Modulation</b>	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK HSDPA/DC-HSDPA : QPSK

	HSUPA : QPSK HSPA+ : 16QAM DC-HSDPA : 64QAM LTE: QPSK / 16QAM / 64QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n/ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK NFC: ASK
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**Note:**

1. GNSS Rx = GPS
2. WLAN operation in 5600 MHz ~ 5650 MHz is notched.

## 1.5. Modification of EUT

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

## 1.6. Test Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

<b>Test Firm</b>	Sporton International (Shenzhen) Inc.		
<b>Test Site Location</b>	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Designation No.</b>	<b>FCC Test Firm Registration No.</b>
	CO01-SZ	CN1256	421272

<b>Test Firm</b>	Sporton International (Shenzhen) Inc.		
<b>Test Site Location</b>	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Designation No.</b>	<b>FCC Test Firm Registration No.</b>
	03CH01-SZ	CN1256	421272

## 1.7. Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24
2.	CO01-SZ	AUDIX	E3	6.120613b

## 1.8. 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

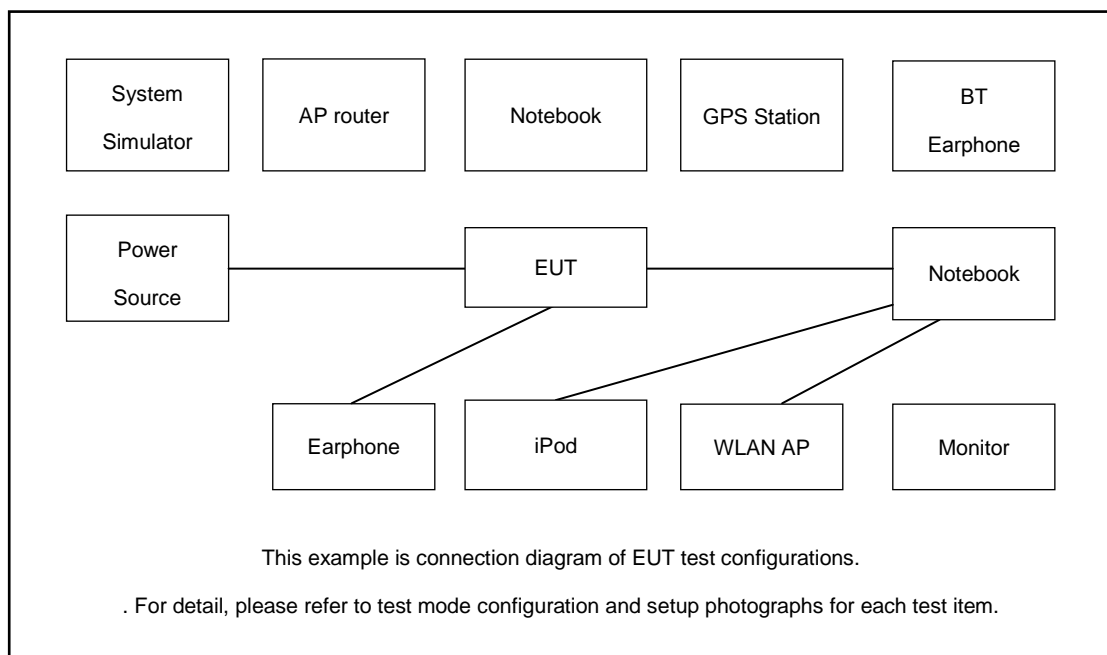
The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

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: GSM850 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 1
	Mode 2: GSM1900 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(5G) + Camera(Front) + SD Card load for Sample 1
	Mode 3: WCDMA Band V Idle(Low CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + MPEG4(Colour bar) + SD Card Link for Sample 1
	Mode 4: LTE Band 12 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(5G) + NFC On + SD Card load for Sample 1
	Mode 5: LTE Band 14 Idle(High CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 1
	Mode 6: LTE Band 29 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(5G) + H-Pattern + SD Card load for Sample 1
	Mode 7: LTE Band 66 Idle(Low CH) + USB Cable 1(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GNSS RX + SD Card Link for Sample 1
	Mode 8: GSM850 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 2
	Mode 9: GSM850 Idle(Middle CH) + USB Cable 2(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 1
	Mode 10 : LTE Band 66 Idle(Low CH) + USB Cable 2(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GNSS RX + SD Card Link for Sample 1

Radiated Emissions	<p>Mode 1: GSM850 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 1</p> <p>Mode 2: GSM1900 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(5G) + Camera(Front) + SD Card load for Sample 1</p> <p>Mode 3: WCDMA Band V Idle(Low CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + MPEG4(Colur bar) + SD Card Link for Sample 1</p> <p>Mode 4: LTE Band 12 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(5G) + NFC On + SD Card load for Sample 1</p> <p>Mode 5: LTE Band 14 Idle(High CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 1</p> <p>Mode 6: LTE Band 29 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(5G) + H-Pattern + SD Card load for Sample 1</p> <p>Mode 7: LTE Band 66 Idle(Low CH) + USB Cable 1(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GNSS RX + SD Card Link for Sample 1</p> <p>Mode 8: GSM850 Idle(Middle CH) + USB Cable 1(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 2</p> <p>Mode 9: GSM850 Idle(Middle CH) + USB Cable 2(Charging from Adapter) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + Camera(Rear) + SD Card load for Sample 2</p> <p>Mode 10 : LTE Band 66 Idle(Low CH) + USB Cable 2(Data Link with Notebook) + Earphone + Bluetooth Idle + WLAN Idle(2.4G) + GNSS RX + SD Card Link for Sample 2</p>
<p><b>Remark:</b></p> <ol style="list-style-type: none"> <li>1. The worst case of AC is mode 1; only the test data of this mode is reported.</li> <li>2. The worst case of RE is mode 8; only the test data of this mode is reported.</li> <li>3. Data Link with Notebook means data application transferred mode between EUT and Notebook.</li> <li>4. Pre-scanned Low/Middle/High channel for GSM850/WCDMA Band V/LTE Band 12/14/29/66, the worst channel was recorded in this report.</li> </ol>	

## 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.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Base Station(LTE)	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
3.	Labsat	RACELOGIC	18645	N/A	N/A	Unshielded,1.8m
4.	LABS ATGPS Simulator	RACELOGIC	RLLS03-2P	Fcc DoC	N/A	Unshielded,1.8m
5.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
6.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,1.8m
7.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
9.	Earphone	apple	DCAY1V-A9007ZJW3-000	N/A	N/A	N/A
10.	IPod	Apple	MC69029/A	N/A	N/A	N/A
11.	iPod	Apple	MC525 ZP/A	DoC	Shielded, 1.0m	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 NFC function.
5. Turn on GNSS function to make the EUT receive continuous signals from GNSS station.
6. Execute "H Pattern" to show H Pattern via HDMI Cable on the Monitor.

### 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.

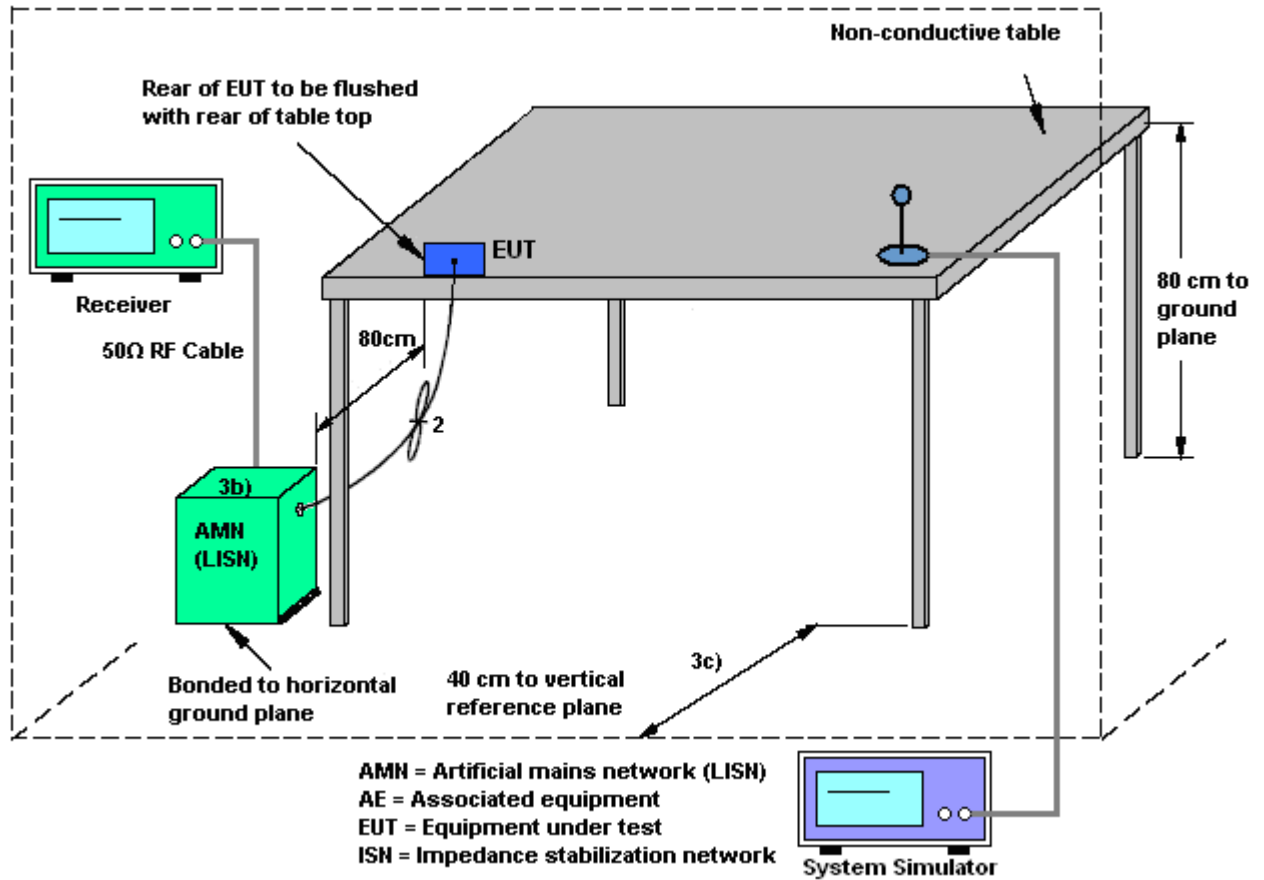
##### 3.1.2 Measuring Instruments

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

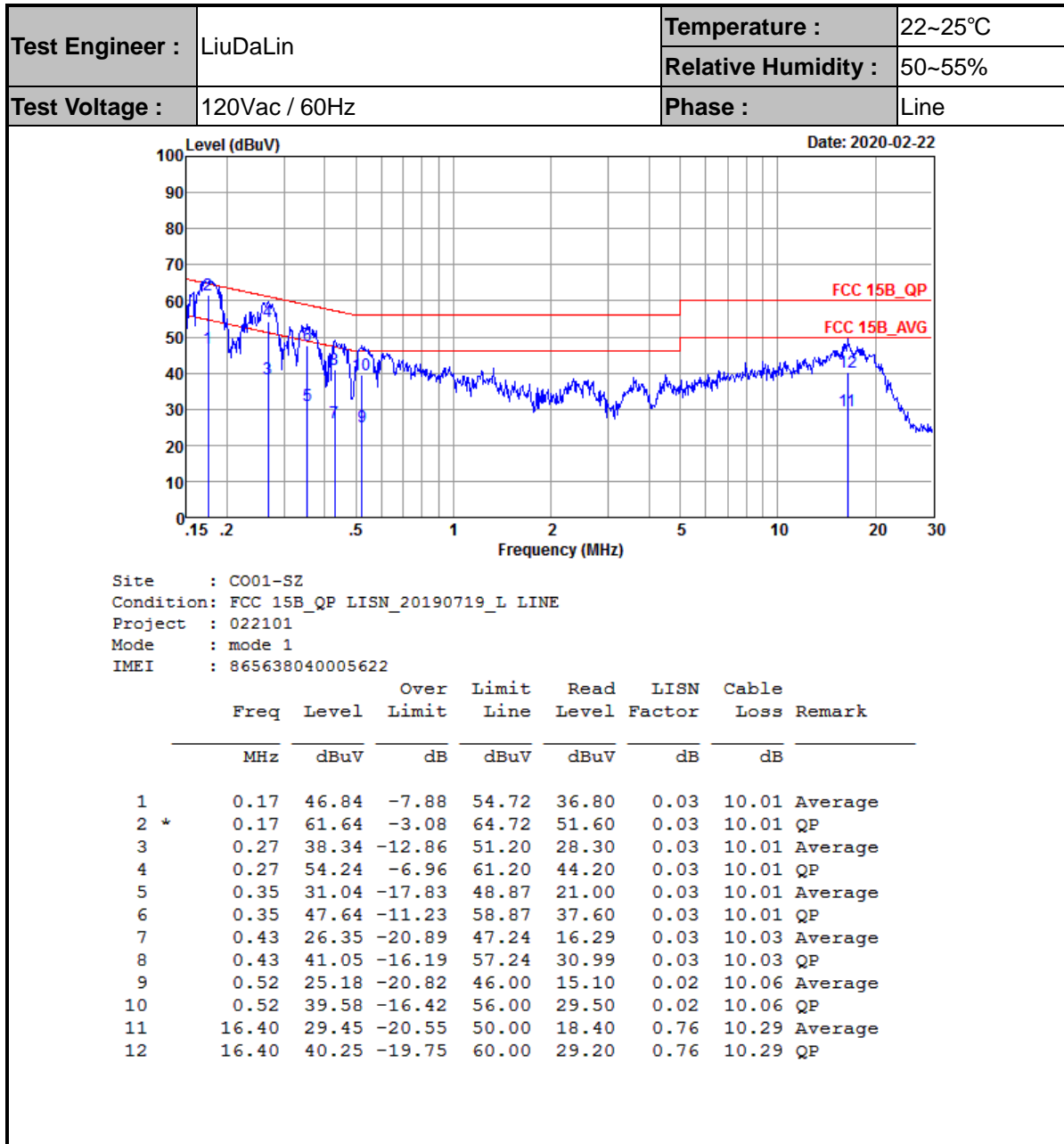
##### 3.1.3 Test Procedure

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.

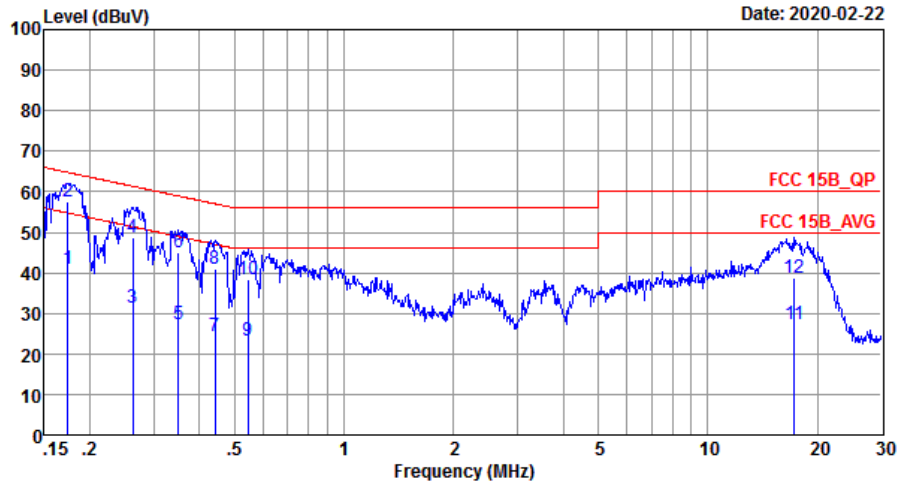
### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Conducted Emission



<b>Test Engineer :</b>	LiuDaLin	<b>Temperature :</b>	22~25°C
		<b>Relative Humidity :</b>	50~55%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral



Site : C001-SZ  
 Condition: FCC 15B\_QP LISN\_20190719\_N NEUTRAL  
 Project : 022101  
 Mode : mode 1  
 IMEI : 865638040005622

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.17	41.04	-13.73	54.77	31.00	0.03	10.01	Average
2 *	0.17	57.64	-7.13	64.77	47.60	0.03	10.01	QP
3	0.26	31.54	-19.80	51.34	21.50	0.03	10.01	Average
4	0.26	48.84	-12.50	61.34	38.80	0.03	10.01	QP
5	0.35	27.43	-21.53	48.96	17.40	0.02	10.01	Average
6	0.35	45.03	-13.93	58.96	35.00	0.02	10.01	QP
7	0.44	24.35	-22.67	47.02	14.30	0.02	10.03	Average
8	0.44	41.05	-15.97	57.02	31.00	0.02	10.03	QP
9	0.54	23.08	-22.92	46.00	13.00	0.02	10.06	Average
10	0.54	38.28	-17.72	56.00	28.20	0.02	10.06	QP
11	17.29	27.44	-22.56	50.00	16.70	0.45	10.29	Average
12	17.29	38.84	-21.16	60.00	28.10	0.45	10.29	QP

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. 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

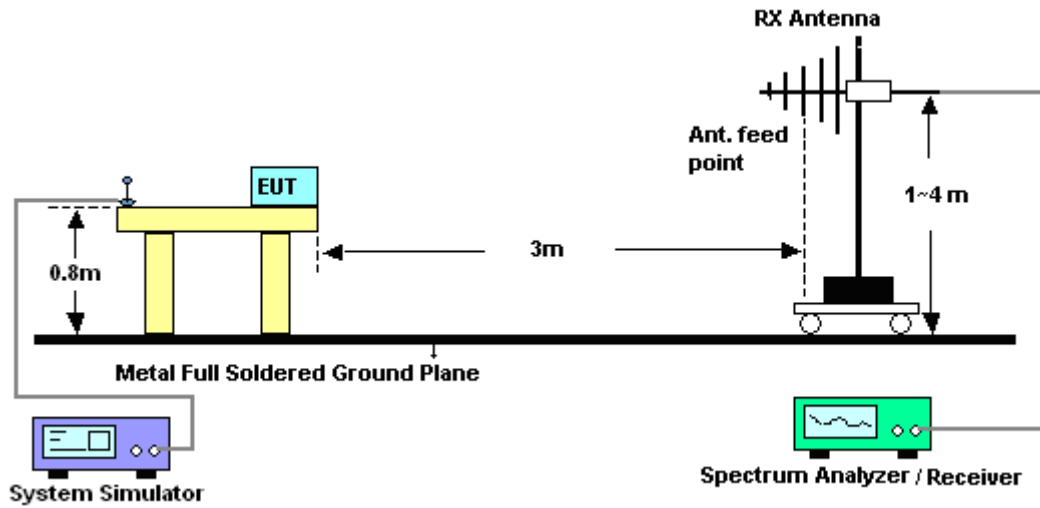
The measuring equipment is listed in the section 4 of this test report.

### 3.2.3. Test Procedures

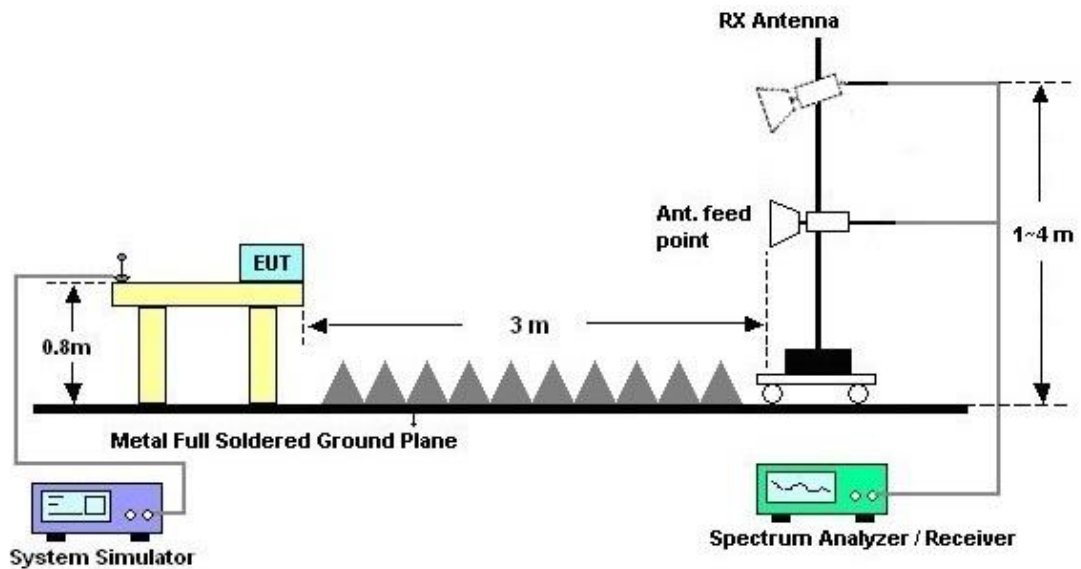
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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 (dBμV/m) = 20 log Emission level (μV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamplifier Factor = Level

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

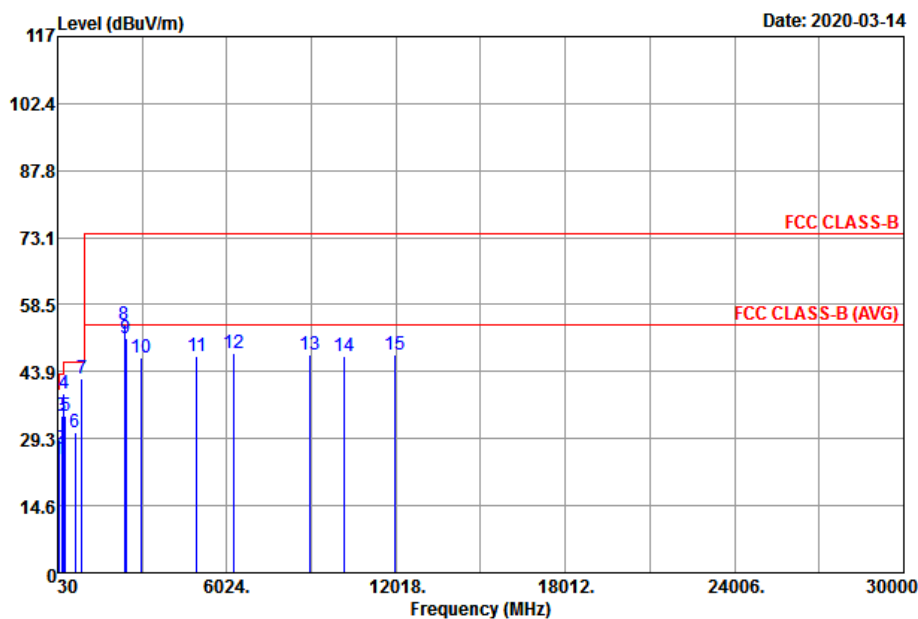


For radiated emissions above 1GHz



### 3.2.5. Test Result of Radiated Emission

<b>Test Engineer :</b>	Vikki	<b>Temperature :</b>	24~25°C
		<b>Relative Humidity :</b>	48~49%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	#7 is system simulator signal which can be ignored. #8 and #9 is RF signal which comes from Bluetooth and WLAN Access Point used to connect the EUT, and which can be ignored.		

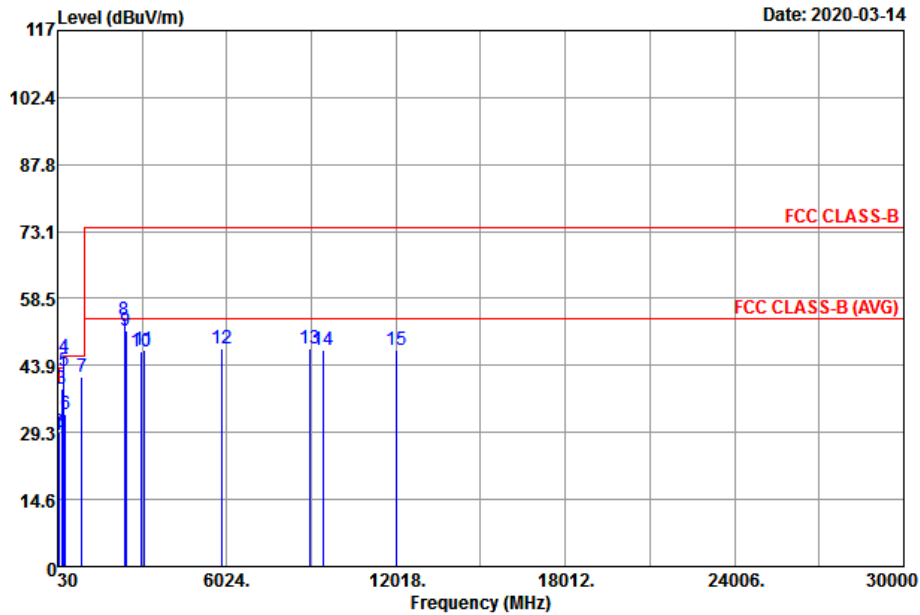


Site : 03CH01-SZ  
 Condition : FCC CLASS-B 3m LF\_ANT(35408)\_2019 HORIZONTAL  
 Project : 022101  
 Mode : Mode 8  
 IMEI : 865638040004112  
 Plane : Y

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	30.00	24.72	-15.28	40.00	30.11	24.90	1.01	31.30	---	Peak
2	101.78	27.07	-16.43	43.50	39.56	17.26	1.85	31.60	---	Peak
3	173.56	34.16	-9.34	43.50	47.40	15.72	2.39	31.35	---	Peak
4	260.86	38.97	-7.03	46.00	48.06	19.62	2.92	31.63	115	230 Peak
5	311.30	34.07	-11.93	46.00	42.65	19.62	3.18	31.38	---	Peak
6	648.86	30.79	-15.21	46.00	32.22	25.39	4.59	31.41	---	Peak
7	880.69	42.53			41.97	26.70	5.32	31.46	---	Peak
8	2402.00	53.94			69.93	32.90	8.84	57.73	---	Peak
9	2437.00	51.04			66.86	32.95	8.92	57.69	---	Peak
10	2992.00	46.99	-27.01	74.00	60.87	33.48	9.95	57.31	---	Peak
11	4958.00	47.27	-26.73	74.00	55.70	34.89	14.26	57.58	---	Peak
12	6262.00	47.81	-26.19	74.00	55.29	36.11	14.34	57.93	119	214 Peak
13	8942.00	47.66	-26.34	74.00	51.11	37.06	18.50	59.01	---	Peak
14	10182.00	47.21	-26.79	74.00	47.57	38.44	20.39	59.19	---	Peak
15	11977.50	47.60	-26.40	74.00	44.15	39.77	20.90	57.22	---	Peak



Test Engineer :	Vikki	Temperature :	24~25°C
		Relative Humidity :	48~49%
Test Distance :	3m	Polarization :	Vertical
Remark :	#7 is system simulator signal which can be ignored. #8 and #9 is RF signal which comes from Bluetooth and WLAN Access Point used to connect the EUT, and which can be ignored.		



Site : 03CH01-SZ  
 Condition : FCC CLASS-B 3m LF\_ANT(35408)\_2019 VERTICAL  
 Project : 022101  
 Mode : Mode 8  
 IMEI : 865638040004112  
 Plane : Y

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	cm	deg
			dB	dBuV/m	dBuV	dB/m	dB	dB		
1	37.76	28.53	-11.47	40.00	37.90	20.90	1.13	31.40	---	Peak
2	60.07	29.45	-10.55	40.00	47.33	12.30	1.42	31.60	---	Peak
3	170.65	38.62	-4.88	43.50	51.76	15.85	2.37	31.36	---	Peak
4	257.95	45.74	-0.26	46.00	54.99	19.50	2.90	31.65	100	75 Peak
5	257.95	42.62	-3.38	46.00	51.87	19.50	2.90	31.65	100	75 QP
6	309.36	33.09	-12.91	46.00	41.73	19.57	3.17	31.38	---	Peak
7	880.69	41.36			40.80	26.70	5.32	31.46	---	Peak
8	2402.00	53.69			69.68	32.90	8.84	57.73	---	Peak
9	2437.00	51.54			67.36	32.95	8.92	57.69	---	Peak
10	2968.00	46.89	-27.11	74.00	60.85	33.47	9.89	57.32	---	Peak
11	3076.00	47.19	-26.81	74.00	60.87	33.50	10.09	57.27	---	Peak
12	5828.00	47.72	-26.28	74.00	55.63	35.56	14.13	57.60	120	280 Peak
13	8982.00	47.70	-26.30	74.00	50.87	37.09	18.74	59.00	---	Peak
14	9446.00	47.14	-26.86	74.00	48.50	37.46	20.36	59.18	---	Peak
15	12037.50	47.26	-26.74	74.00	43.74	39.81	20.93	57.22	---	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	ESR7	101630	9kHz~7GHz;	Dec. 26, 2019	Feb. 22, 2020	Dec. 25, 2020	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Oct. 17, 2019	Feb. 22, 2020	Oct. 16, 2020	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Dec. 26, 2019	Feb. 22, 2020	Dec. 25, 2020	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 23, 2019	Feb. 22, 2020	Jul. 22, 2020	Conduction (CO01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Jul. 22, 2019	Mar. 14, 2020	Jul. 21, 2020	Radiation (03CH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 16, 2019	Mar. 14, 2020	Apr. 15, 2020	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5GHz	Dec. 27, 2019	Mar. 14, 2020	Dec. 26, 2020	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Jul. 19, 2019	Mar. 14, 2020	Jul. 18, 2020	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Aug. 27, 2019	Mar. 14, 2020	Aug. 26, 2020	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 16, 2019	Mar. 14, 2020	Apr. 15, 2020	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2019	Mar. 14, 2020	Oct. 17, 2020	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-H G	1871923	18GHz~40GHz	Jul. 22, 2019	Mar. 14, 2020	Jul. 21, 2020	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz~40GHz	Apr. 16, 2019	Mar. 14, 2020	Apr. 15, 2020	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Mar. 14, 2020	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Mar. 14, 2020	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Mar. 14, 2020	NCR	Radiation (03CH01-SZ)

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% ( $U = 2Uc(y)$ )	2.6dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.8dB
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.0dB
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.3dB
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