FCC Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2345-2
FCC ID	:	IHDT56AK1
STANDARD	:	47 CFR Part 15 Subpart B
CLASSIFICATION	:	Certification
TEST DATE(S)	:	Oct. 28, 2022 ~ Oct. 29, 2022

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

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

Jason Jia

Approved by: Jason Jia

Sporton International Inc. (ShenZhen)

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
FC292306	Rev. 01	Initial issue of report	Nov. 21, 2022
FC292306	Rev. 02	Removed 64QAM of LTE Modulation information	Nov. 28, 2022

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 5.55 dB at 0.15 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.34 dB at 960.00 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	XT2345-2
FCC ID	IHDT56AK1
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20 WLAN 5GHz 802.11ac VHT20 Bluetooth BR/EDR/LE GNSS/FM Receiver
IMEI Code	Conduction: 351165140000706/351165140000707 for Sample 1 351165140010758/351165140010759 for Sample 2 Radiation: 355292980006096/355292980006104 for Sample 1 351165140010778/351165140010779 for Sample 2
HW Version	DVT2
SW Version	TLA33.30
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. For details, please refer to the XT2345-2_Operational Description of Product Equality Declaration exhibit separately. Based on the similarity between them, we choose sample 1 to full test and sample 2 to verify the differences.

1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850MHz ~ 1910MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV : 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2 : 1850 MHz ~ 1910 MHz LTE Band 4 : 1710 MHz ~ 1755 MHz LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 7 : 2500 MHz ~ 2570 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 26 : 814 MHz ~ 849 MHz LTE Band 38 : 2570 MHz ~ 2620 MHz LTE Band 66 : 1710 MHz ~ 1780 MHz 802.11b/g/n: 2400 MHz ~ 2483.5 MHz 802.11a/n/ac: 5150 MHz ~ 5250 MHz; 5250 MHz ~ 5350 MHz; 5470 MHz ~ 5725 MHz; 5725 MHz ~ 5850 MHz; Bluetooth: 2400 MHz ~ 2483.5 MHz
Rx Frequency	GSM850: 869 MHz ~ 894 MHz GSM1900: 1930 MHz ~ 1990 MHz WCDMA Band II: 1930 MHz ~ 1990 MHz WCDMA Band IV : 2110 MHz ~ 2155 MHz WCDMA Band V: 869 MHz ~ 894 MHz LTE Band 2 : 1930 MHz ~ 1990 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 7 : 2620 MHz ~ 2690 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 26 : 859 MHz ~ 894 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 66 : 2110 MHz~ 2180 MHz 802.11b/g/n: 2400 MHz ~ 2483.5 MHz 802.11a/n/ac: 5150 MHz ~ 5250 MHz; 5250 MHz ~ 5350 MHz; 5470 MHz ~ 5725 MHz; 5725 MHz ~ 5850 MHz; Bluetooth: 2400 MHz ~ 2483.5 MHz GNSS : 1559 MHz ~ 1610 MHz FM : 88 MHz ~ 108 MHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GNSS: PIFA Antenna FM : External Earphone Antenna
Type of Modulation	GSM/GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK HSPA : QPSK HSPA+ : 16QAM (uplink is not supported)

	DC-HSDPA : 64QAM LTE: QPSK / 16QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) :π/4-DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK FM

1.5. Specification of Accessory

Specification of Accessory				
AC Adapter 1 (US)	**Brand Name**	Motorola(aohai)	**Model Name**	MC-101
AC Adapter 1 (EU)	**Brand Name**	Motorola(aohai)	**Model Name**	MC-102
AC Adapter 1 (UK)	**Brand Name**	Motorola(aohai)	**Model Name**	MC-103
AC Adapter 1 (IN)	**Brand Name**	Motorola(aohai)	**Model Name**	MC-104
AC Adapter 1 (AU)	**Brand Name**	Motorola(aohai)	**Model Name**	MC-105
AC Adapter 1 (AR)	**Brand Name**	Motorola(aohai)	**Model Name**	MC-106
AC Adapter 2 (US)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-101
AC Adapter 2 (EU)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-102
AC Adapter 2 (UK)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-103
AC Adapter 2 (IN)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-104
AC Adapter 2 (AU)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-105
AC Adapter 2 (AR)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-106
AC Adapter 2 (BR)	**Brand Name**	Motorola(chenyang)	**Model Name**	MC-107
AC Adapter 3 (US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-101
AC Adapter 3 (EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-102
AC Adapter 3 (UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-103
AC Adapter 3 (AU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-105
AC Adapter 3 (AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-106
AC Adapter 3 (CHILE)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-109
Battery 1	**Brand Name**	Motorola(ATL)	**Model Name**	NH50
Battery 2	**Brand Name**	Motorola(SUNWODA)	**Model Name**	NH50
Earphone 1	**Brand Name**	Motorola(New leader)	**Model Name**	NLD-EM313A-20SF
Earphone 2	**Brand Name**	Motorola(JWELL)	**Model Name**	JWEP1205-L20H
USB Cable 1	**Brand Name**	Motorola (SAIBAO)	**Model Name**	SLQ-A214A
USB Cable 2	**Brand Name**	Motorola (JIEYE)	**Model Name**	JY-C03-410

1.6. Modification of EUT

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

1.7. Test Location

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

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	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		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH05-SZ	CN1256	421272

1.8. Test Software

Item	Site	Manufacturer	Name	Version
1.	CO01-SZ	AUDIX	E3	6.120613b
2.	03CH05-SZ	AUDIX	E3	6.2009-8-24al

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 frequency or to 40 GHz, whichever is lower).

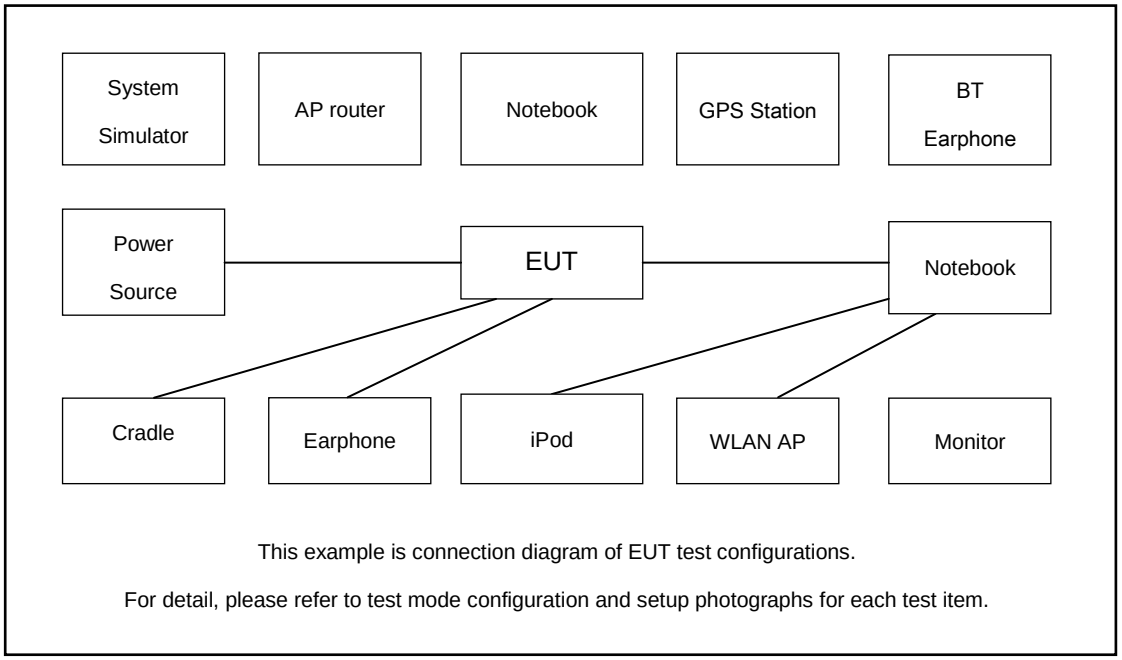
Test Items	Function Type
AC Conducted Emission	Mode 1: GSM 850 Rx(Middle CH) + Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + USB Cable 1(Charging from Adapter 1) + SIM 1 for Sample 1
	Mode 2: WCDMA 1900 Rx + Bluetooth Idle + WLAN (5G) Idle + Camera(Front) + Earphone 2 + Battery 1 + USB Cable 2(Charging from Adapter 2) + SIM 2 for Sample 1
	Mode 3: WCDMA 850 Rx(Low CH) + Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 1 + Battery 1 + USB Cable 1(Charging from Adapter 3) + SIM 1 for Sample 1
	Mode 4: LTE Band 13 Rx(High CH) + Bluetooth Idle + WLAN (5G) Idle + FM Rx(98MHz) + Earphone 1 + Battery 1 + USB Cable 1(Data Link with Notebook) + EUT (eMMC) USB Data Link to NB + SIM 2 for Sample 1
	Mode 5: LTE Band 26 Rx(High CH) + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 1 + Battery 1 + USB Cable 1(Data Link with Notebook) + NB USB Data Link to EUT (eMMC) + SIM 1 for Sample 1
	Mode 6: LTE Band 26 Rx(Low CH) + Bluetooth Idle + WLAN (5G) Idle + GNSS Rx + Earphone 1 + Battery 1 + USB Cable 1(Data Link with Notebook) + EUT (SD) USB Data Link to NB + SIM 2 for Sample 1
	Mode 7: LTE Band 5 Rx(Middle CH) + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 1 + Battery 1 + USB Cable 1(Data Link with Notebook) + NB USB Data Link to EUT (SD) + SIM 2 for Sample 1
	Mode 8: LTE Band 26 Rx(High CH) + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 1 + Battery 1 + USB Cable 2(Data Link with Notebook) + NB USB Data Link to EUT (eMMC) + SIM 1 for Sample 1
	Mode 9: LTE Band 26 Rx(High CH) + Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 2 + USB Cable 1(Data Link with Notebook) + NB USB Data Link to EUT (eMMC) + SIM 2 for Sample 2

Radiated Emissions	Mode 1: GSM 850 Rx(Middle CH) + Bluetooth Idle + WLAN (2.4G) Idle + Camera(Rear) + Earphone 1 + Battery 1 + USB Cable 1(Charging from Adapter 1) + SIM 1 for Sample 1 Mode 2: WCDMA 1900 Rx + Bluetooth Idle + WLAN (5G) Idle + Camera(Front) + Earphone 2 + Battery 1 + USB Cable 2(Charging from Adapter 2) + SIM 2 for Sample 1 Mode 3: WCDMA 850 Rx(Low CH) + Bluetooth Idle + WLAN (2.4G) Idle + MPEG4(Run Color Bar) + Earphone 2 + Battery 1 + USB Cable 2(Charging from Adapter 3) + SIM 1 for Sample 1 Mode 4: LTE Band 13 Rx(High CH) + Bluetooth Idle + WLAN (5G) Idle + FM Rx(98MHz) + Earphone 2 + Battery 1 + USB Cable 1(Data Link with Notebook) + EUT (eMMC) USB Data Link to NB + SIM 2 for Sample 1 Mode 5: LTE Band 26 Rx(High CH) + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 2 + Battery 1 + USB Cable 1(Data Link with Notebook) + NB USB Data Link to EUT (eMMC) + SIM 1 for Sample 1 Mode 6: LTE Band 26 Rx(Low CH) + Bluetooth Idle + WLAN (5G) Idle + GNSS Rx + Earphone 2 + Battery 1 + USB Cable 1(Data Link with Notebook) + EUT (SD) USB Data Link to NB + SIM 2 for Sample 1 Mode 7: LTE Band 5 Rx(Middle CH) + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 2 + Battery 1 + USB Cable 1(Data Link with Notebook) + NB USB Data Link to EUT (SD) + SIM 2 for Sample 1 Mode 8: LTE Band 5 Rx(Middle CH) + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + Earphone 2 + Battery 1 + USB Cable 2(Data Link with Notebook) + NB USB Data Link to EUT (SD) + SIM 2 for Sample 1 Mode 9: LTE Band 5 Rx(Middle CH) + Bluetooth Idle + WLAN (2.4G) Idle + Camera(Front) + Earphone 2 + Battery 2 + USB Cable 1(Data Link with Notebook) + NB USB Data Link to EUT (SD) + SIM 2 for Sample 2

Remark:

1. The worst case of AC is mode 9; only the test data of this mode is reported.
2. The worst case of RE is mode 7; 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, the worst channel was recorded in this report.

2.2. Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

For detail, please refer to test mode configuration and setup photographs for each test item.

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	Anritus	MT8820C	N/A	N/A	Unshielded, 1.8m
2.	Vector Signal Generator (BS)	R&S	SMBV100A	N/A	N/A	Unshielded, 1.8m
3.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8m
4.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 2.7m with Core
5.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
6.	Notebook	DELL	Inspiron 15-7570	Fcc DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
7.	Notebook	DELL	Latitude 3400	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
8.	IPod	Apple	MC525 ZP/A	Fcc DoC	Shielded, 1.0m	N/A
9.	SD Card	N/A	MicroSD HC	FCC DoC	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.

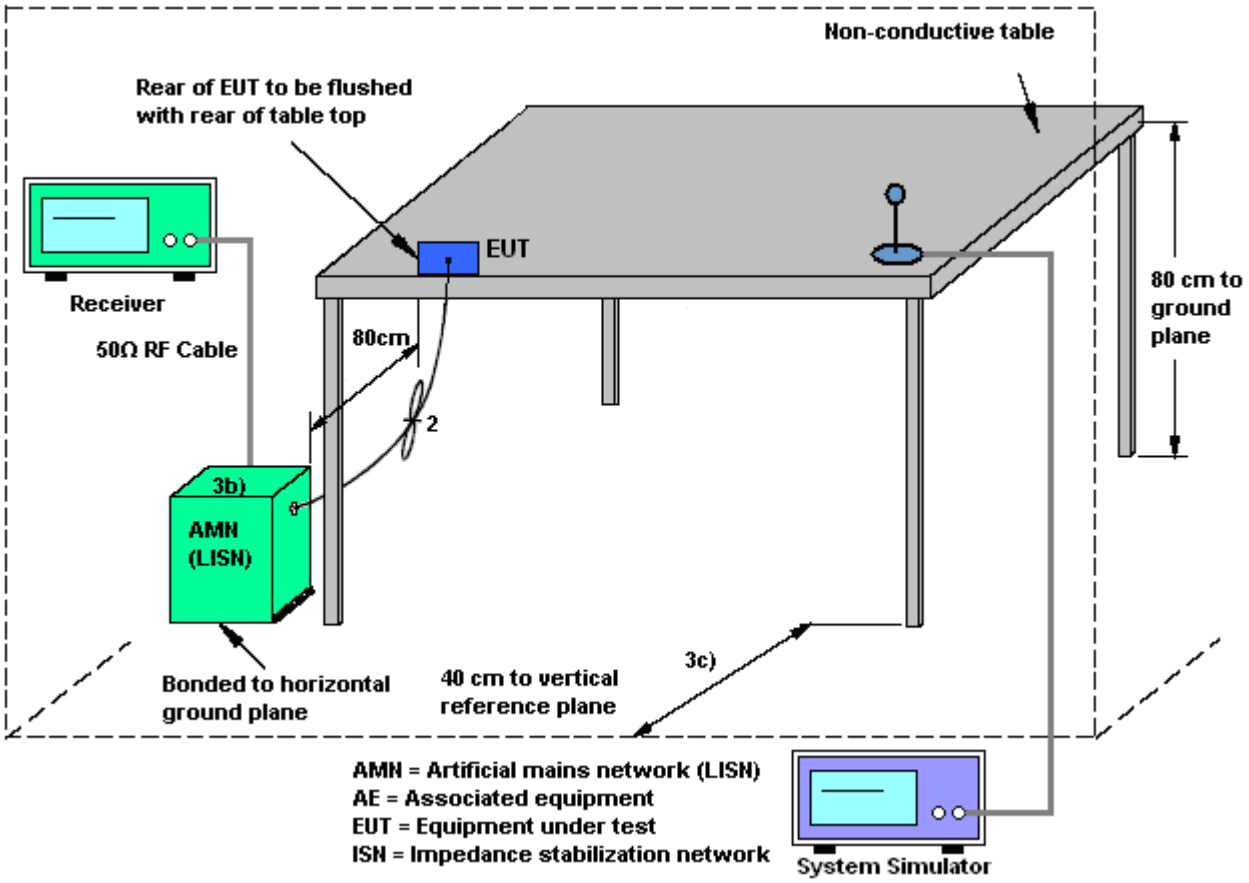
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

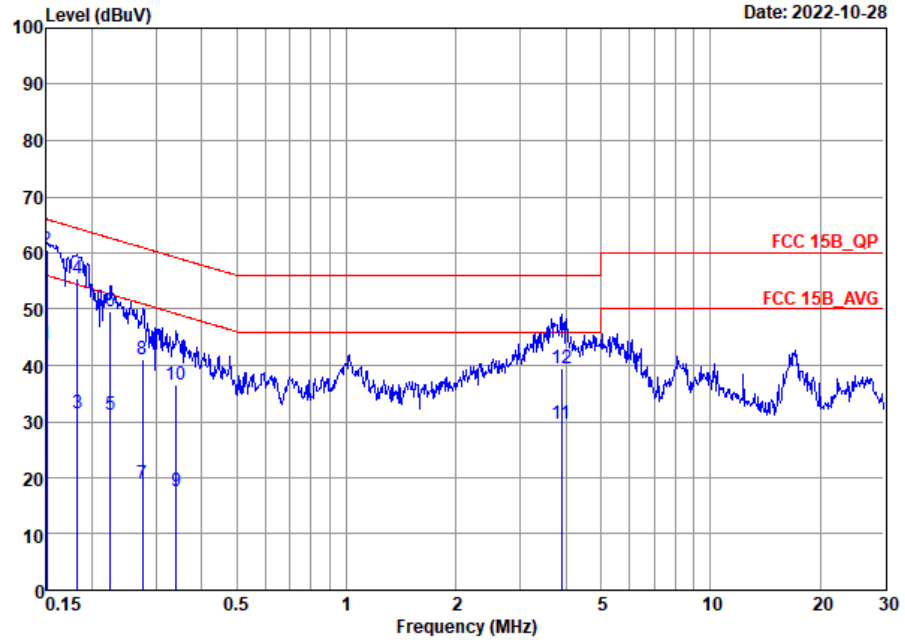
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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

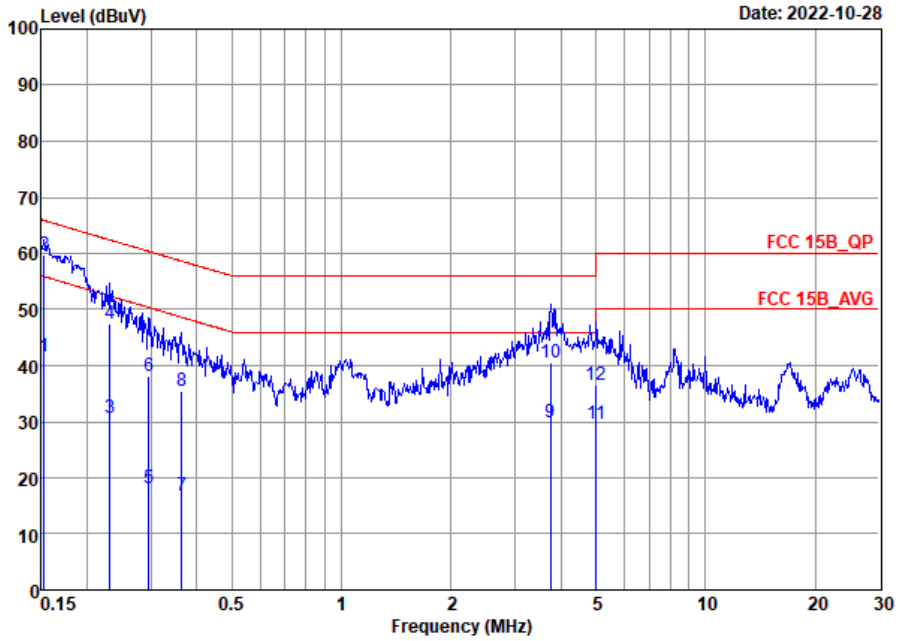
Test Engineer :	Yuki Tang	**Temperature :**	21~24℃
		Relative Humidity :	39~43%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_20220811_ L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	43.65	-12.35	56.00	22.60	10.20	10.85	Average
2	*	0.15	60.45	-5.55	66.00	39.40	10.20	10.85	QP
3		0.18	31.57	-22.80	54.37	11.00	10.20	10.37	Average
4		0.18	55.37	-9.00	64.37	34.80	10.20	10.37	QP
5		0.22	31.15	-21.51	52.66	10.60	10.19	10.36	Average
6		0.22	49.65	-13.01	62.66	29.10	10.19	10.36	QP
7		0.28	18.82	-32.12	50.94	-2.11	10.17	10.76	Average
8		0.28	41.02	-19.92	60.94	20.09	10.17	10.76	QP
9		0.34	17.54	-31.64	49.18	-3.70	10.09	11.15	Average
10		0.34	36.54	-22.64	59.18	15.30	10.09	11.15	QP
11		3.90	29.55	-16.45	46.00	9.30	10.01	10.24	Average
12		3.90	39.55	-16.45	56.00	19.30	10.01	10.24	QP

Test Engineer :	Yuki Tang	Temperature :	21~24℃
		Relative Humidity :	39~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_20220811_ N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	41.72	-14.15	55.87	20.60	10.31	10.81	Average
2	*	0.15	59.72	-6.15	65.87	38.60	10.31	10.81	QP
3		0.23	30.68	-21.71	52.39	10.00	10.26	10.42	Average
4		0.23	47.58	-14.81	62.39	26.90	10.26	10.42	QP
5		0.30	18.19	-32.18	50.37	-2.90	10.21	10.88	Average
6		0.30	38.19	-22.18	60.37	17.10	10.21	10.88	QP
7		0.36	16.85	-31.80	48.65	-4.60	10.18	11.27	Average
8		0.36	35.55	-23.10	58.65	14.10	10.18	11.27	QP
9		3.76	29.99	-16.01	46.00	9.60	10.15	10.24	Average
10		3.76	40.49	-15.51	56.00	20.10	10.15	10.24	QP
11		5.00	29.57	-20.43	50.00	9.20	10.13	10.24	Average
12		5.00	36.57	-23.43	60.00	16.20	10.13	10.24	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.

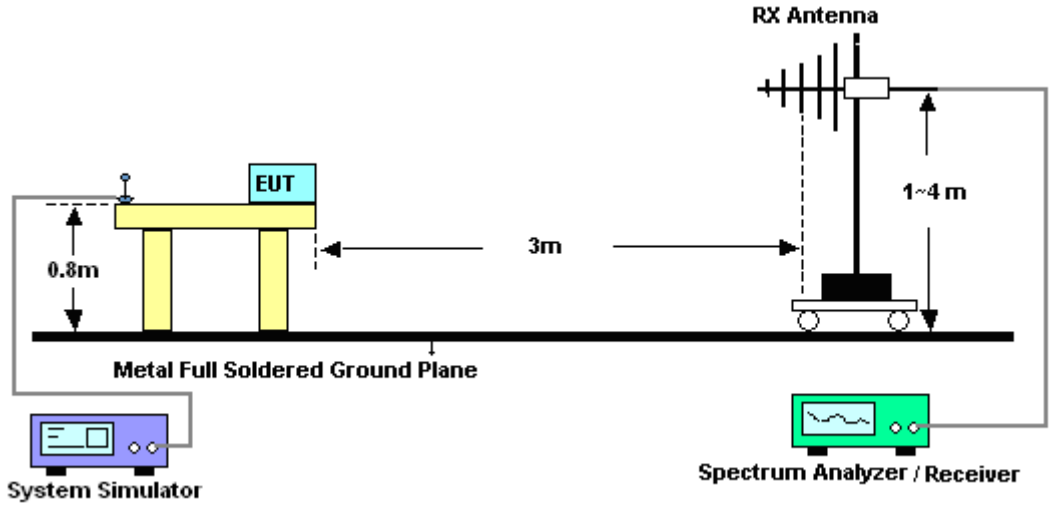
3.2.3. Test Procedures

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 - Preamp Factor = Level

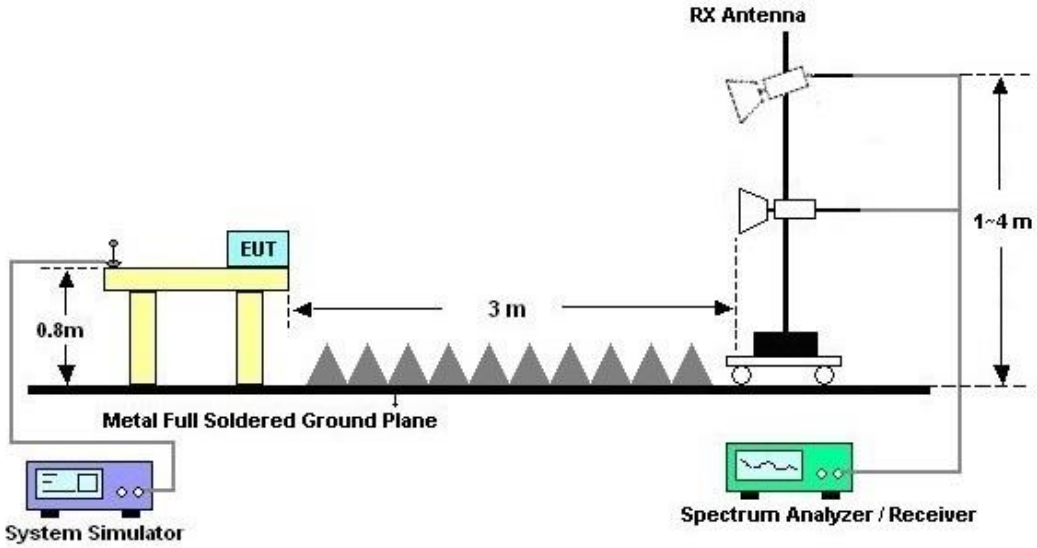
10. Exploratory radiated emissions testing of handheld and/or body-worn devices shall include rotation of the EUT through three orthogonal axes (X/Y/Z Plane) to determine the orientation (attitude) that maximizes the emissions.

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

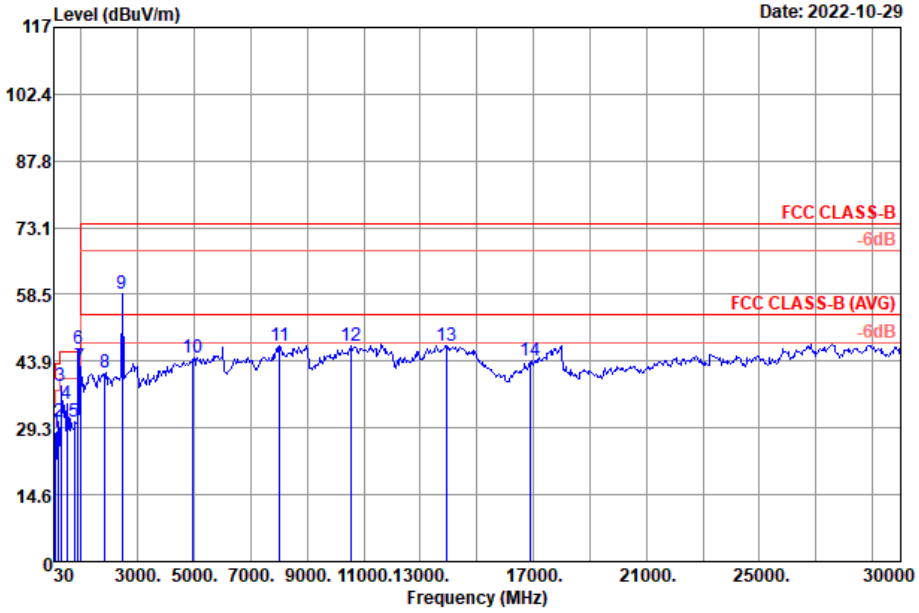


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

Test Engineer :	ZhanSheng Liu	**Temperature :**	24~25°C
		Relative Humidity :	48~49%
Test Distance :	3m	**Polarization :**	Horizontal
Remark :	#6 is system simulator signal which can be ignored. #9 is RF signal which comes from BT/WLAN Access Point used to connect the EUT, and which can be ignored.		

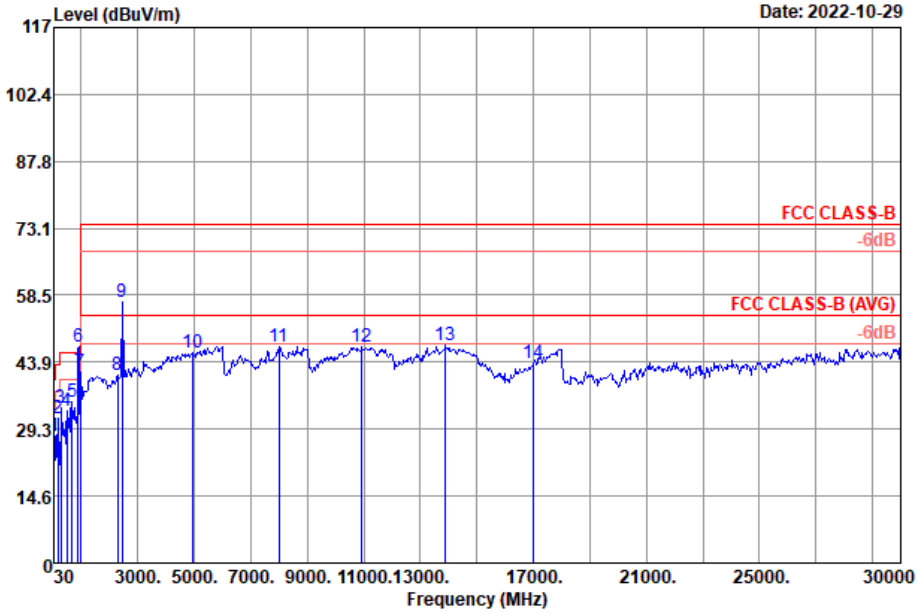


Site : 03CH05-SZ
Condition : FCC CLASS-B 3m VULB9168-01003 HORIZONTAL

Plane : Y
: NB TO SD

		Freq	Level	Over Limit	Limit Line	Read 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		90.14	28.52	-14.98	43.50	47.63	13.70	1.99	34.80	---	---	Peak
2		191.02	30.55	-12.95	43.50	46.09	16.52	2.64	34.70	---	---	Peak
3		278.32	38.43	-7.57	46.00	51.50	18.45	3.12	34.64	---	---	Peak
4		480.08	34.57	-11.43	46.00	42.54	23.11	3.42	34.50	---	---	Peak
5		757.50	30.55	-15.45	46.00	33.48	27.63	3.83	34.39	---	---	Peak
6	*	881.66	46.56			47.76	28.69	4.41	34.30	---	---	Peak
7		960.00	42.66	-3.34	46.00	42.59	29.82	4.53	34.28	---	---	Peak
8		1830.00	41.29	-32.71	74.00	59.33	25.56	6.53	50.13	---	---	Peak
9		2436.00	58.60			74.18	27.66	7.22	50.46	---	---	Peak
10		4968.00	44.53	-29.47	74.00	53.07	31.50	9.47	49.51	---	---	Peak
11		8016.00	47.15	-26.85	74.00	48.15	37.48	11.51	49.99	---	---	Peak
12		10524.00	47.33	-26.67	74.00	42.35	39.93	13.43	48.38	---	---	Peak
13		13920.00	47.40	-26.60	74.00	39.64	40.82	14.53	47.59	---	---	Peak
14		16908.00	44.03	-29.97	74.00	38.83	41.40	15.26	51.46	---	---	Peak

Test Engineer :	ZhanSheng Liu	**Temperature :**	24~25°C
		Relative Humidity :	48~49%
Test Distance :	3m	**Polarization :**	Vertical
Remark :	#6 is system simulator signal which can be ignored. #9 is RF signal which comes from BT/WLAN Access Point used to connect the EUT, and which can be ignored.		



Site : 03CH05-SZ
Condition : FCC CLASS-B 3m VULB9168-01003 VERTICAL

Plane : Y
: NB TO SD

		Freq	Level	Over Limit	Limit Line	Read 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		41.64	27.64	-12.36	40.00	41.71	19.41	1.44	34.92	---	---	Peak
2		164.83	31.58	-11.92	43.50	45.77	18.10	2.41	34.70	---	---	Peak
3		285.11	33.76	-12.24	46.00	46.58	18.66	3.15	34.63	---	---	Peak
4		480.08	33.09	-12.91	46.00	41.06	23.11	3.42	34.50	---	---	Peak
5		664.38	35.23	-10.77	46.00	39.51	26.50	3.69	34.47	---	---	Peak
6	*	881.66	47.17			48.37	28.69	4.41	34.30	---	---	Peak
7		960.00	41.70	-4.30	46.00	41.63	29.82	4.53	34.28	---	---	Peak
8		2294.00	41.21	-32.79	74.00	56.64	28.00	6.95	50.38	---	---	Peak
9		2436.00	56.97			72.55	27.66	7.22	50.46	---	---	Peak
10		4923.00	45.87	-28.13	74.00	54.54	31.39	9.46	49.52	---	---	Peak
11		7998.00	47.15	-26.85	74.00	48.10	37.50	11.55	50.00	---	---	Peak
12		10932.00	47.26	-26.74	74.00	41.47	40.50	13.34	48.05	---	---	Peak
13		13899.00	47.48	-26.52	74.00	39.73	40.78	14.53	47.56	---	---	Peak
14		17016.00	43.53	-30.47	74.00	37.88	41.85	15.23	51.43	---	---	Peak

Note:

1. Level(dBμV/m) = Read Level(dBμV) + Antenna Factor(dB/m) + Cable Loss(dB) - Preamp Factor(dB)
2. 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 Test Receiver	R&S	ESR7	102261	9kHz~7GHz	May 20, 2022	Oct. 29, 2022	May 19, 2023	Radiation (03CH05-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071191	10Hz~44GHz	Apr. 06, 2022	Oct. 29, 2022	Apr. 05, 2023	Radiation (03CH05-SZ)
Log-periodic Antenna	SCHWARZBECK	VULB 9168	01001	20MHz~1.5GHz	Mar. 24, 2022	Oct. 29, 2022	Mar. 23, 2023	Radiation (03CH05-SZ)
Amplifier	EM Electronics	EM330	060756	0.01Hz ~3000MHz	Apr. 06, 2022	Oct. 29, 2022	Apr. 05, 2023	Radiation (03CH05-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-2206	1GHz~18GHz	Apr. 10, 2022	Oct. 29, 2022	Apr. 09, 2023	Radiation (03CH05-SZ)
HF Amplifier	EM Electronics	EM01G18GA	060781	1GHz~18GHz	Apr. 06, 2022	Oct. 29, 2022	Apr. 05, 2023	Radiation (03CH05-SZ)
HF Amplifier	EM Electronics	EM18G40G	060778	18GHz~40GHz	Apr. 06, 2022	Oct. 29, 2022	Apr. 05, 2023	Radiation (03CH05SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	00983	15GHz~40GHz	Apr. 10, 2022	Oct. 29, 2022	Apr. 09, 2023	Radiation (03CH05-SZ)
AC Power Source	APC	AFV-S-600	F119050013	N/A	Nov. 11, 2021	Oct. 29, 2022	Nov. 10, 2022	Radiation (03CH05-SZ)
Turn Table	EMEC	T-200-S-1	060925-T	0~360 degree	NCR	Oct. 29, 2022	NCR	Radiation (03CH05-SZ)
Antenna Mast	EMEC	MBS-400-1	060927	1 m~4 m	NCR	Oct. 29, 2022	NCR	Radiation (03CH05-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jul. 07, 2022	Oct. 28, 2022	Jul. 06, 2023	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Sep. 15, 2022	Oct. 28, 2022	Sep. 14, 2023	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 17, 2022	Oct. 28, 2022	Oct. 16, 2023	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 07, 2022	Oct. 28, 2022	Jul. 06, 2023	Conduction (CO01-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))	**2.2dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.2dB**

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.1dB**