FCC Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2303-1, XT2303-2
FCC ID	:	IHDT56AL6
STANDARD	:	47 CFR Part 15 Subpart B
CLASSIFICATION	:	Certification
TEST DATE(S)	:	Mar. 06, 2023 ~ Mar. 08, 2023

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

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

Jason Jia

Approved by: Jason Jia

Sporton International Inc. (Kunshan)
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
FC320205	Rev. 01	Initial issue of report	Mar. 21, 2023

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 3.35 dB at 0.157 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.97 dB at 54.250 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	XT2303-1, XT2303-2
FCC ID	IHDT56AL6
EUT supports Radios application	GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 WLAN 5GHz 802.11ax HE20/HE40/HE80 Bluetooth BR/EDR/LE GNSS/NFC/WPT
IMEI Code	Conduction: 358543770018411/358543770018429 for Sample 1 357514340015758/357514340015766 for Sample 2 Radiation: 358543770018411/358543770018429 for Sample 1 357514340015758/357514340015766 for Sample 2
HW Version	DVT2
SW Version	TTL33.38
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. The two model names: XT2303-1 is USIM(DS/SS) sample and XT2303-2 is eSIM + USIM(SS) sample
3. There are two types of EUT, sample 1 support dual pSIM and sample 2 support single pSIM and eSIM. 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 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 17 : 704 MHz ~ 716 MHz LTE Band 26 : 814 MHz ~ 849 MHz LTE Band 38 : 2570 MHz ~ 2620 MHz LTE Band 41 : 2496 MHz ~ 2690 MHz LTE Band 42 : 3450 MHz ~ 3550 MHz LTE Band 66 : 1710 MHz ~ 1780 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n77 : 3700 MHz ~ 3980 MHz; 5G NR n78 : 3700 MHz ~ 3800 MHz; 802.11b/g/n/ax: 2400 MHz ~ 2483.5 MHz 802.11a/n/ac/ax: 5150 MHz ~ 5250 MHz; 5250 MHz ~ 5350 MHz; 5470 MHz ~ 5725 MHz 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 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 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 17 : 734 MHz ~ 746 MHz LTE Band 26 : 859 MHz ~ 894 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41 : 2496 MHz ~ 2690 MHz LTE Band 42 : 3450 MHz ~ 3550 MHz LTE Band 66 : 2110 MHz~ 2180 MHz 5G NR n2 : 1930 MHz ~ 1990 MHz

	5G NR n5 : 869 MHz ~ 894 MHz 5G NR n7 : 2620 MHz ~ 2690 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 2110 MHz~ 2200 MHz 5G NR n77 : 3700 MHz ~ 3980 MHz; 5G NR n78 : 3700 MHz ~ 3800 MHz; 802.11b/g/n/ax: 2400 MHz ~ 2483.5 MHz 802.11a/n/ac/ax: 5150 MHz ~ 5250 MHz; 5250 MHz ~ 5350 MHz; 5470 MHz ~ 5725 MHz 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 MHz GNSS : 1559 MHz ~ 1610 MHz, 1164 MHz ~ 1215 MHz WPT: 110kHz~ 148 kHz
Antenna Type	WWAN : IFA Antenna WLAN : IFA Antenna Bluetooth : IFA Antenna GNSS: IFA Antenna NFC: Coil Antenna WPT: Coil Antenna
Type of Modulation	GSM/GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK (Uplink) HSDPA/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM (16QAM uplink is not supported) DC-HSDPA : 64QAM LTE: QPSK / 16QAM / 64QAM 5G NR: DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM) 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11ax: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM /1024QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) :π/4-DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK NFC: ASK WPT: ASK

1.5. Modification of EUT

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

1.6. Specification of Accessory

Accessories Information				
AC Adapter 1 (US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-681N
AC Adapter 1 (EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-682N
AC Adapter 1 (UK)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-683N
AC Adapter 1 (AU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-685N
AC Adapter 1 (AR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-686N
AC Adapter 1 (BR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-687N
AC Adapter 1 (CHILE)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-689N
AC Adapter 1 (KR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-680N
AC Adapter 2 (US)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-681N
AC Adapter 2 (EU)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-682N
AC Adapter 2 (UK)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-683N
AC Adapter 2 (AU)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-685N
AC Adapter 2 (AR)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-686N
AC Adapter 2 (BR)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-687N
AC Adapter 3 (IN)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-684N
Battery	**Brand Name**	Motorola (ATL)	**Model Name**	NP44
Earphone	**Brand Name**	Motorola(Lyand)	**Model Name**	MI181C(SH38D62338)
USB Cable	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D71644

1.7. Test Location

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

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	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		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-KS 03CH02-KS	CN1257	314309

1.8. Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH02-KS	AUDIX	E3	6.2009-8-24a
2.	CO01-KS	AUDIX	E3	6.2009-8-24

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).

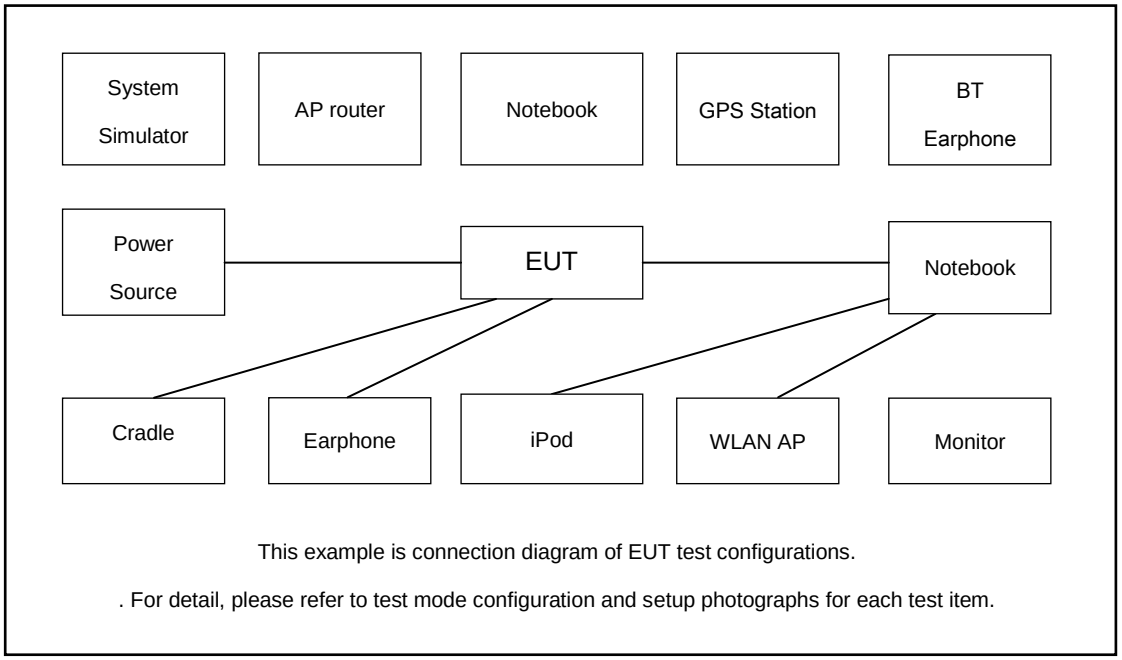
Test Items	Function Type
AC Conducted Emission	Mode 1 : GSM 850 Rx(Middle)+ Bluetooth Idle+ WLAN (2.4G) Idle+ Camera(Rear)+ Battery+ USB Cable(Charging from Adapter1)+ SIM 1 for Sample 1 Mode 2 : WCDMA Band V Rx(Middle)+ Bluetooth Idle+ WLAN(5G)Idle+ Camera(Front)+ Battery+ USB Cable(Charging from Adapter2)+ SIM 2 for Sample 1 Mode 3 : LTE Band 17 Rx(Middle)+ Bluetooth Idle+ WLAN(2.4G)Idle+ NFC On+ Battery+ USB Cable(Charging from Adapter3)+ SIM 1 for Sample 1 Mode 4 : LTE Band 12 Rx(Low)+ Bluetooth Idle+ WLAN(5G)Idle+ MPEG4(Run Color Bar)+ Battery+ USB Cable(Charging from Adapter1)+ SIM 1 for Sample 1 Mode 5 : LTE Band 13 Rx(High)+ Bluetooth Idle+ WLAN(2.4G)Idle+ GNSS Rx+ USB Cable(Data Link with Notebook) + EUT(eMMC)USB Data Link to NB+ Battery+ SIM 1 for Sample 1 Mode 6 : LTE Band 26 Rx(Middle)+ Bluetooth Idle+ WLAN(5G)Idle+ Camera(Rear)+ Battery+ USB Cable(Data Link with Notebook) + NB USB Data Link to EUT(eMMC)+ SIM 1 for Sample 1 Mode 7 : n5 Rx(Low)+ Bluetooth Idle+ WLAN(2.4G)Idle+ Camera(Rear)+ Battery+ USB Cable(EUT Charging from Wireless charger) + AdapterConnect to Wireless charger for Sample 1 Mode 8 : LTE Band 12 Rx(Low)+ Bluetooth Idle+ WLAN(5G)Idle+ MPEG4(Run Color Bar)+ Battery+ USB Cable(Charging from Adapter1)+ SIM 1 for Sample 2

Radiated Emissions	Mode 1: GSM 850 Rx(Middle)+ Bluetooth Idle+ WLAN (2.4G) Idle+ Camera(Rear)+ Battery+ USB Cable(Charging from Adapter1)+ SIM 1 for Sample 1 Mode 2: WCDMA Band V Rx(Middle)+ Bluetooth Idle+ WLAN(5G)Idle+ Camera(Front)+ Battery+ USB Cable(Charging from Adapter2)+ SIM 2 for Sample 1 Mode 3: LTE Band 17 Rx(Middle)+ Bluetooth Idle+ WLAN(2.4G)Idle+ NFC On+ Battery+ USB Cable(Charging from Adapter3)+ SIM 2 for Sample 1 Mode 4: LTE Band 12 Rx(Low)+ Bluetooth Idle+ WLAN(5G)Idle+ MPEG4(Run Color Bar)+ Battery+ Earphone+ SIM 2 for Sample 1 Mode 5: LTE Band 13 Rx(High)+ Bluetooth Idle+ WLAN(2.4G)Idle+ GNSS Rx+ USB Cable(Data Link with Notebook)+EUT(eMMC)USB Data Link to NB+ Battery+ SIM 2 for Sample 1 Mode 6: LTE Band 26 Rx(Middle)+ Bluetooth Idle+ WLAN(5G)Idle+ Camera(Front)+ Battery+ USB Cable(Data Link with Notebook) + NB USB Data Link to EUT(eMMC)+ SIM 2 for Sample 1 Mode 7: n5 Rx(Low)+ Bluetooth Idle+ WLAN(2.4G)Idle+ Camera(Rear)+ Battery+ USB Cable(EUT Charging from Wireless charger) + AdapterConnect to Wireless charger for Sample 1 Mode 8: WCDMA Band V Rx(Middle)+ Bluetooth Idle+ WLAN(5G)Idle+ Camera(Front)+ Battery+ USB Cable(Typec to Typec)(EUT Charging to other phones)+ SIM 2 for Sample 1 Mode 9: WCDMA Band V Rx(Middle)+ Bluetooth Idle+ WLAN(5G)Idle+ Camera(Front)+ Battery+ USB Cable(Charging from Adapter 2)+ eSIM for Sample 2

Remark:

1. The worst case of AC is mode 4; only the test data of this mode is reported.
2. The worst case of RE is mode 2; 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	MT8821C	N/A	N/A	Unshielded,1.8m
2.	System Simulator	Anritus	MT8820C	N/A	N/A	Unshielded,1.8m
3.	Vector Signal Generator	R&S	SMBV100A	258305	N/A	N/A
4.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
5.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded,1.8m
6.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
7.	Bluetooth Earphone	Xiaomi	LYEJ02LM	N/A	N/A	N/A
8.	Notebook	Lenovo	V130-15IKB005	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
9.	Notebook	Lenovo	V130-14IKB001	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
10.	SD Card	SanDisk	Uitra	N/A	N/A	N/A
11.	Hard Disk	Lenovo	F310	DoC	Shielded, 1.2m	N/A
12.	Hard disk	KINGSHARE	KSP6120G	N/A	N/A	N/A

13.	Adapter	N/A	N/A	N/A	N/A	N/A
14.	Type-c table	N/A	N/A	N/A	N/A	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE or 5G NR 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 NFC function
6. Turn on WPT function

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.

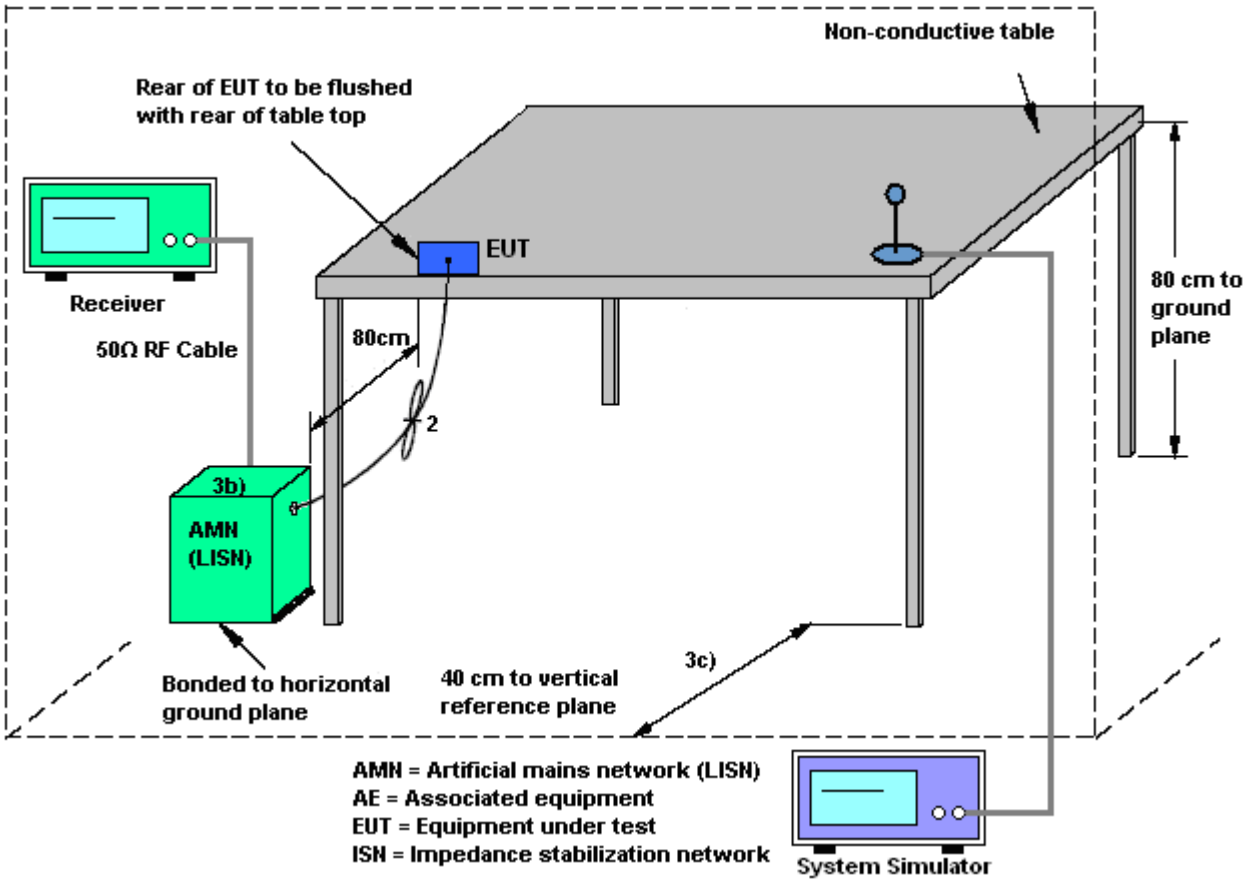
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

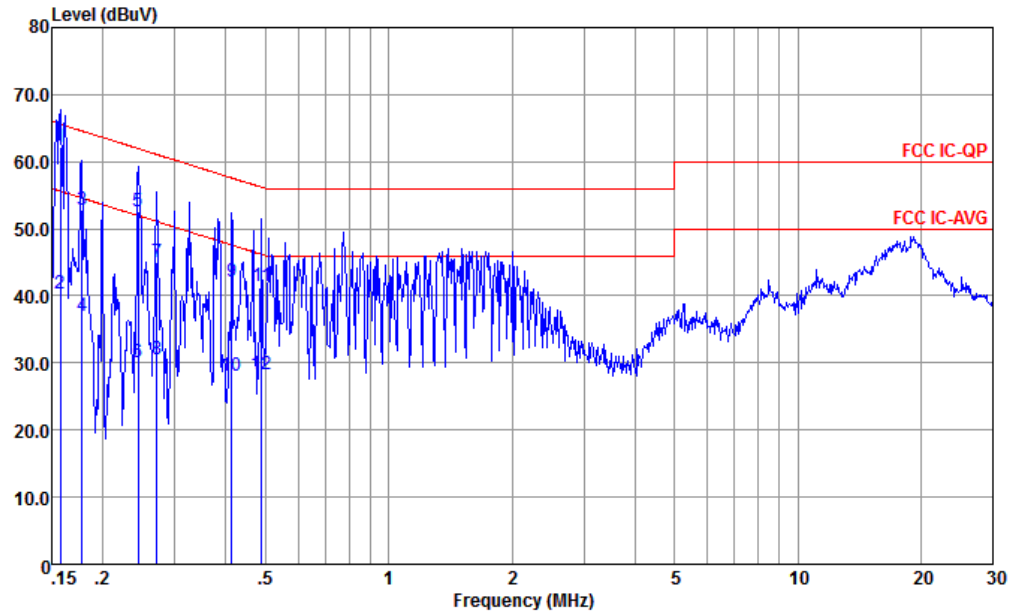
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

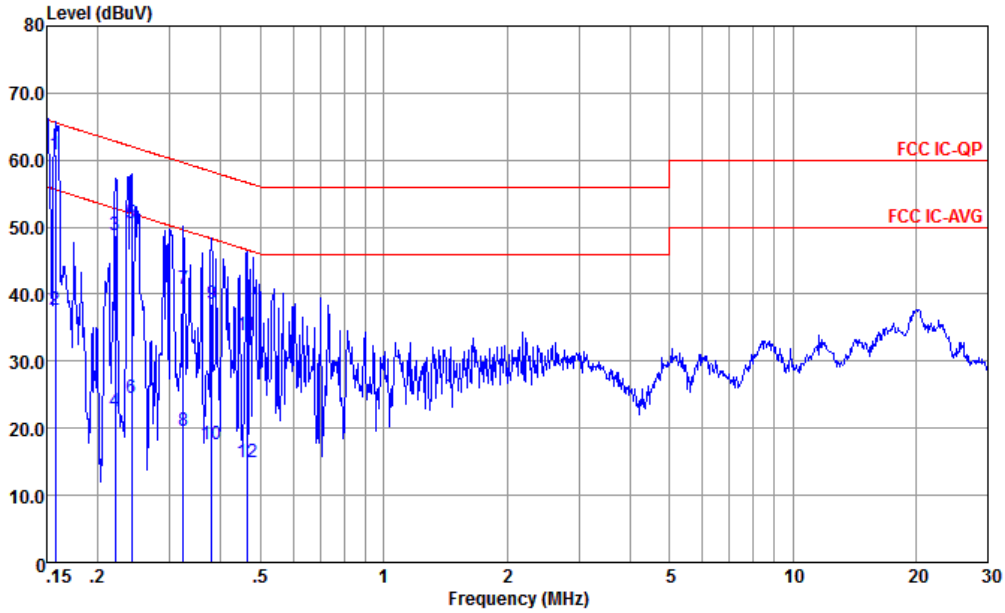
Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC IC-QP LISN-100334-LINE LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.157	62.25	-3.35	65.60	42.10	9.72	10.43	QP
2		0.157	40.35	-15.25	55.60	20.20	9.72	10.43	Average
3		0.178	52.80	-11.79	64.59	32.61	9.77	10.42	QP
4		0.178	37.00	-17.59	54.59	16.81	9.77	10.42	Average
5		0.244	52.49	-9.46	61.95	32.59	9.51	10.39	QP
6		0.244	30.09	-21.86	51.95	10.19	9.51	10.39	Average
7		0.272	45.12	-15.95	61.07	25.20	9.55	10.37	QP
8		0.272	30.52	-20.55	51.07	10.60	9.55	10.37	Average
9		0.413	42.18	-15.41	57.59	22.19	9.70	10.29	QP
10		0.413	28.08	-19.51	47.59	8.09	9.70	10.29	Average
11		0.489	41.45	-14.74	56.19	21.50	9.73	10.22	QP
12		0.489	28.25	-17.94	46.19	8.30	9.73	10.22	Average

Test Engineer :	Amos Zhang	Temperature :	25.3~26.2℃
		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 IC-QP LISN-100334-NEUTRAL NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.157	60.93	-4.67	65.60	40.88	9.62	10.43	QP
2	0.157	37.73	-17.87	55.60	17.68	9.62	10.43	Average
3	0.221	48.90	-13.89	62.79	29.04	9.46	10.40	QP
4	0.221	22.60	-30.19	52.79	2.74	9.46	10.40	Average
5	0.242	50.59	-11.45	62.04	30.77	9.43	10.39	QP
6	0.242	24.59	-27.45	52.04	4.77	9.43	10.39	Average
7	0.323	40.84	-18.78	59.62	21.03	9.47	10.34	QP
8	0.323	19.64	-29.98	49.62	-0.17	9.47	10.34	Average
9	0.379	38.51	-19.79	58.30	18.67	9.53	10.31	QP
10	0.379	17.61	-30.69	48.30	-2.23	9.53	10.31	Average
11	0.464	33.84	-22.79	56.63	14.00	9.60	10.24	QP
12	0.464	14.84	-31.79	46.63	-5.00	9.60	10.24	Average

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

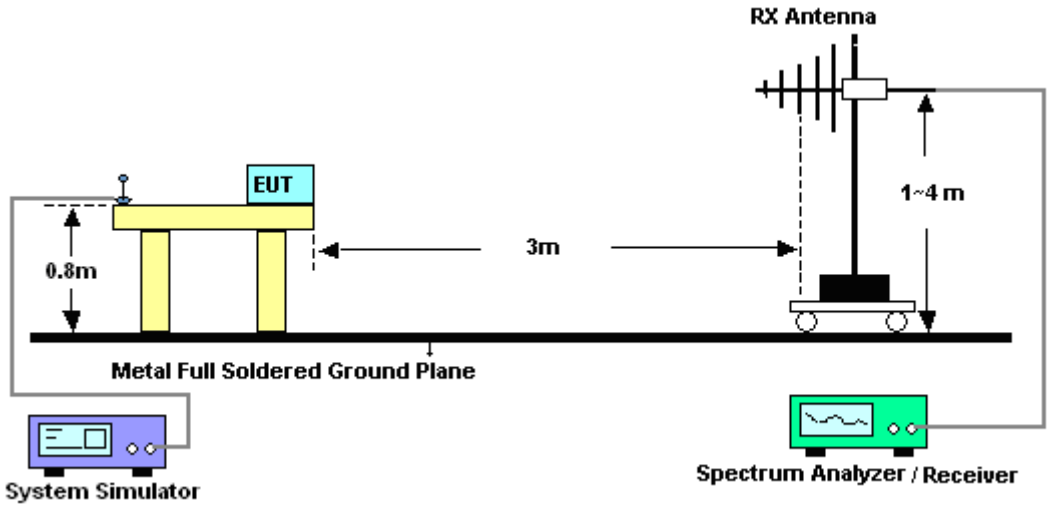
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

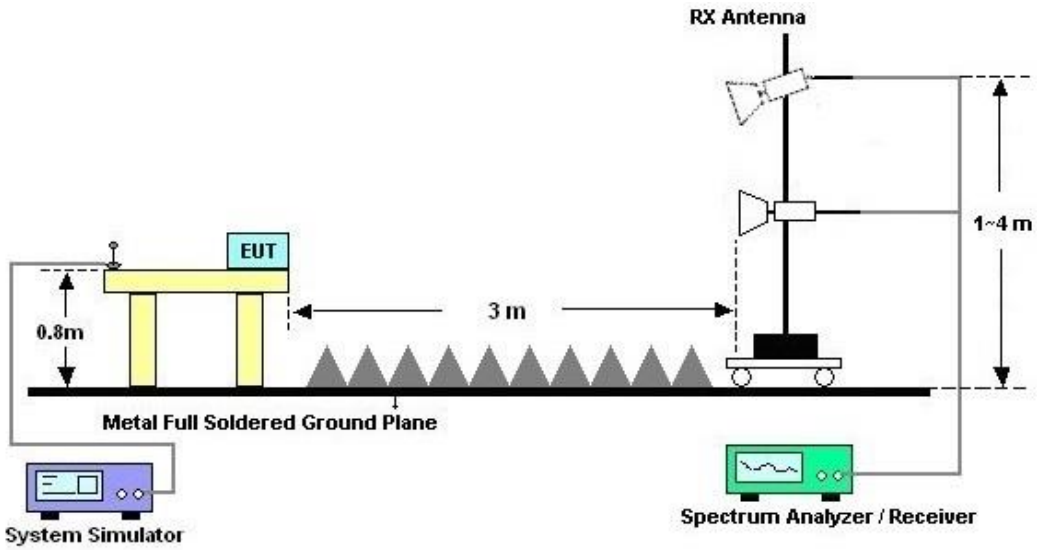
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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

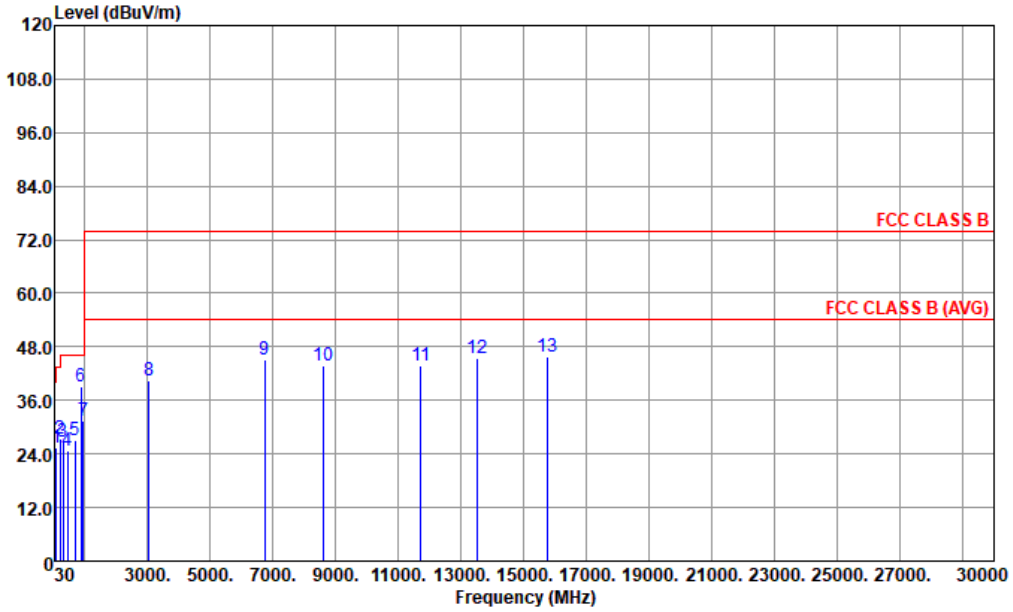


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

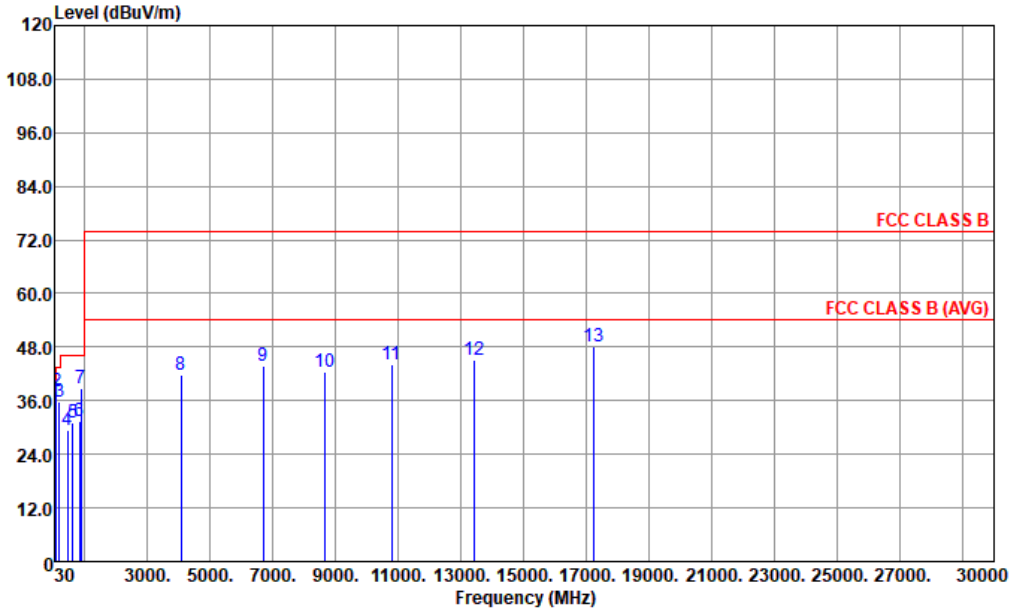
Test Engineer :	Feng	**Temperature :**	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	**Polarization :**	Horizontal
Remark :	#6 is system simulator signal which can be ignored.		



Site : 03CH02-KS
Condition : FCC CLASS B 3m LF 49921 HORIZONTAL

	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	92.08	25.25	-18.25	43.50	41.59	15.08	1.35	32.77	---	---	Peak
2	198.78	27.42	-16.08	43.50	43.22	15.00	2.08	32.88	---	---	Peak
3	310.33	26.80	-19.20	46.00	37.46	19.60	2.59	32.85	---	---	Peak
4	438.37	24.71	-21.29	46.00	32.06	22.70	3.11	33.16	---	---	Peak
5	677.96	27.22	-18.78	46.00	30.31	26.60	3.86	33.55	---	---	Peak
6 p	880.69	39.24			38.61	28.92	4.40	32.69	---	---	Peak
7	950.53	31.34	-14.66	46.00	28.83	29.85	4.59	31.93	---	---	Peak
8	3040.00	40.59	-33.41	74.00	62.34	33.13	8.41	63.29	---	---	Peak
9	6746.00	44.99	-29.01	74.00	60.05	35.80	12.78	63.64	---	---	Peak
10	8616.00	43.72	-30.28	74.00	56.20	36.10	14.82	63.40	---	---	Peak
11	11727.00	43.90	-30.10	74.00	49.18	38.67	17.33	61.28	---	---	Peak
12	13512.00	45.57	-28.43	74.00	48.84	39.15	18.60	61.02	---	---	Peak
13	15739.00	45.68	-28.32	74.00	46.48	41.17	20.12	62.09	---	---	Peak

Test Engineer :	Feng	**Temperature :**	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	**Polarization :**	Vertical
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS
Condition : FCC CLASS B 3m LF 49921 VERTICAL

	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 p	54.25	36.03	-3.97	40.00	54.25	13.55	1.02	32.79	100	144	Peak
2	100.81	38.05	-5.45	43.50	53.31	16.11	1.48	32.85	---	---	Peak
3	189.08	35.61	-7.89	43.50	51.37	15.05	2.02	32.83	---	---	Peak
4	445.16	29.44	-16.56	46.00	36.60	22.85	3.13	33.14	---	---	Peak
5	607.15	31.24	-14.76	46.00	34.88	26.23	3.65	33.52	---	---	Peak
6	828.31	31.29	-14.71	46.00	31.60	28.45	4.24	33.00	---	---	Peak
7	880.69	38.93			38.30	28.92	4.40	32.69	---	---	Peak
8	4077.00	41.79	-32.21	74.00	62.21	33.40	9.81	63.63	---	---	Peak
9	6695.00	43.77	-30.23	74.00	58.90	35.80	12.74	63.67	---	---	Peak
10	8650.00	42.33	-31.67	74.00	54.69	36.10	14.80	63.26	---	---	Peak
11	10775.00	44.02	-29.98	74.00	51.73	37.80	16.46	61.97	---	---	Peak
12	13410.00	44.96	-29.04	74.00	48.09	39.37	18.51	61.01	---	---	Peak
13	17235.00	48.18	-25.82	74.00	48.36	41.67	21.10	62.95	---	---	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 Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 24, 2022	Mar. 08, 2023	May 23, 2023	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2022	Mar. 08, 2023	Oct. 12, 2023	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	May 24, 2022	Mar. 08, 2023	May 23, 2023	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2022	Mar. 08, 2023	Oct. 11, 2023	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Oct. 12, 2022	Mar. 06, 2023	Oct. 11, 2023	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct. 12, 2022	Mar. 06, 2023	Oct. 11, 2023	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 23, 2022	Mar. 06, 2023	Dec. 22, 2023	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 07, 2022	Mar. 06, 2023	Nov. 06, 2023	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 08, 2023	Mar. 06, 2023	Jan. 07, 2024	Radiation (03CH02-KS)
Amplifier	MITEQ	EM18G40GGA	060851	18~40GHz	Jan. 05, 2023	Mar. 06, 2023	Jan. 04, 2024	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	May 24, 2022	Mar. 06, 2023	May 23, 2023	Radiation (03CH02-KS)
Amplifier	EM	EM01G18G	060806	1GHz~18GHz	Oct. 12, 2022	Mar. 06, 2023	Oct. 11, 2023	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	6160100024733	N/A	NCR	Mar. 06, 2023	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Mar. 06, 2023	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Mar. 06, 2023	NCR	Radiation (03CH02-KS)

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))	**2.78dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.0dB**

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

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

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

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