



FCC Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2135-1
FCC ID : IHDT56ZS3
STANDARD : 47 CFR Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Nov. 25, 2020 and testing was completed on Jan. 26, 2021. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

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

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
FC0N2517-01	Rev. 01	Initial issue of report	Feb. 18, 2021



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 5.12 dB at 11.317 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 6.69 dB at 532.460 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	XT2135-1
FCC ID	IHDT56ZS3
EUT supports Radios application	GSM/WCDMA/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR / EDR / LE FM Receiver / GNSS
IMEI Code	Conduction: 359218650004539/01 Radiation: 359218650004281/01
HW Version	DVT2
SW Version	RRI31.Q1-10
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 and sample 2, the differences between two samples are only for SIM slot, sample 1 is dual SIM slot and sample 2 is single SIM slot. According to the difference, we evaluate the sample 1 to perform full test.



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 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 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 66 : 2110 MHz~ 2200 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 NFC : 13.56 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 NFC : FPC Coil Antenna FM : External Earphone Antenna
Type of Modulation	GSM/GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK



	WCDMA : BPSK HSDPA/DC-HSDPA : QPSK HSUPA : QPSK HSPA+ : 16QAM (uplink is not supported) 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: GNSS = Galileo + GLONASS + GPS

1.5. Modification of EUT

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

1.6. Test Location

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

Test Firm	Sporton International (Kunshan) Inc.		
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

1.7. 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



1.8. 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.

1.9. Specification of Accessory

Specification of Accessory				
AC Adapter 2(US)	Brand Name	Motorola (Chenyang)	Model Name	MC-201
AC Adapter 2(IN)	Brand Name	Motorola (Chenyang)	Model Name	MC-204
AC Adapter 2(BR)	Brand Name	Motorola (Chenyang)	Model Name	MC-207
AC Adapter 1(US)	Brand Name	Motorola (Acbel)	Model Name	MC-201
AC Adapter 3 (BR Local build)	Brand Name	Motorola (Flex)	Model Name	MC-207
AC Adapter 4 (BR Local build)	Brand Name	Motorola (Salcomp)	Model Name	MC-207
Battery	Brand Name	Motorola (ATL)	Model Name	MC50
USB Cable 1	Brand Name	Motorola (Saibao)	Model Name	SC18C24367
USB Cable 2	Brand Name	Motorola(Luxshare)	Model Name	SC18C24368
USB Cable 3	Brand Name	Motorola (Cabletech)	Model Name	SC18C49697
USB Cable 4	Brand Name	Motorola (I SHENG)	Model Name	SC18C28955
Earphone 1	Brand Name	Motorola(LIANYUN)	Model Name	(MH191)SH38C81577
Earphone 2	Brand Name	Motorola(Lianchuang)	Model Name	(MH191) SH38C81576



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 + WLAN Idle(2.4G) + Earphone 1 + Camera(Rear) + USB Cable 1(Charging from Adapter 1) for Sample 1
	Mode 2: WCDMA Band II Rx + Bluetooth Idle + WLAN Idle(5G) + Earphone 2 + Camera(Front) + USB Cable 2(Charging from Adapter 2) for Sample 1
	Mode 3: LTE Band 5 Rx(High) + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 1 + MPEG4 + USB Cable 3(Charging from Adapter 3) for Sample 1
	Mode 4: LTE Band 12 Rx(Low) + Bluetooth Idle + WLAN Idle(5G) + Earphone 2 + NFC On + USB Cable 4(Charging form Adapter 4) for Sample 1
	Mode 5: LTE Band 17 Rx(Middle) + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 2 + FM Rx(98MHz) + USB Cable 4(Charging from Adapter 4) for Sample 1
	Mode 6: LTE Band 13 Rx(Low) + Bluetooth Idle + WLAN Idle(5G) + Earphone 2 + GNSS Rx + USB Cable 1(Data Link with Notebook) for Sample 1
	Mode 7: LTE Band 2 Rx + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 2 + GNSS Rx + USB Cable 2(Data Link with Notebook) for Sample 1
	Mode 8: LTE Band 4 Rx(Low) + Bluetooth Idle + WLAN Idle(5G) + Earphone 2 + GNSS Rx + USB Cable 3(Data Link with Notebook) for Sample 1
	Mode 9: LTE Band 7 Rx + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 2 + GNSS Rx + USB Cable 4(Data Link with Notebook) for Sample 1

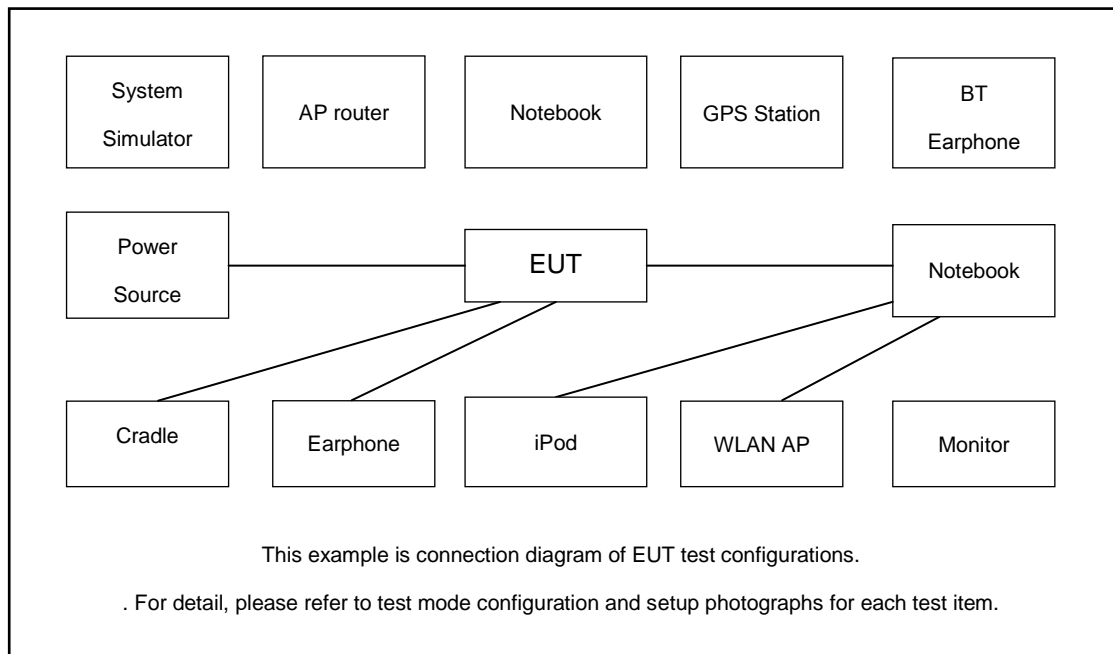


Radiated Emissions	Mode 1: GSM 850 Rx(Middle) + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 1 + Camera(Rear) + USB Cable 1(Charging from Adapter 1) for Sample 1 Mode 2: WCDMA Band II Rx + Bluetooth Idle + WLAN Idle(5G) + Earphone 2 + Camera(Front) + USB Cable 2(Charging from Adapter 2) for Sample 1 Mode 3: LTE Band 5 Rx(High) + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 1 + MPEG4 + USB Cable 3(Charging from Adapter 3) for Sample 1 Mode 4: LTE Band 12 Rx(Low) + Bluetooth Idle + WLAN Idle(5G) + Earphone 1 + NFC On + USB Cable 4(Charging from Adapter 4) for Sample 1 Mode 5: LTE Band 17 Rx(Middle) + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 2 + FM Rx(88MHz) + USB Cable 1(Charging from Adapter 1) for Sample 1 Mode 6: LTE Band 13 Rx(Low) + Bluetooth Idle + WLAN Idle(5G) + Earphone 1 + GNSS Rx + USB Cable 1(Data Link with Notebook) for Sample 1 Mode 7: LTE Band 2 Rx + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 1 + GNSS Rx + USB Cable 2(Data Link with Notebook) for Sample 1 Mode 8: LTE Band 4 Rx(Low) + Bluetooth Idle + WLAN Idle(5G) + Earphone 1 + GNSS Rx + USB Cable 3(Data Link with Notebook) for Sample 1 Mode 9: LTE Band 7 Rx + Bluetooth Idle + WLAN Idle(2.4G) + Earphone 1 + GNSS Rx + USB Cable 4(Data Link with Notebook) for Sample 1
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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 9; 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 for below 1GHz, 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.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded,1.8m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
3.	Base Station	R&S	CMU 200	N/A	N/A	Unshielded,1.8m
4.	Signal generator	R&S	SMBV100A	N/A	N/A	Unshielded,1.8m
5.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
6.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded,1.8m
7.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
8.	Bluetooth Earphone	Xiaomi	LYEJ02LM	N/A	N/A	N/A
9.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
10.	Notebook	Dell	Latitude3440	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
11.	SD Card	Kingston	8GB	N/A	N/A	N/A
12.	Hard Disk	Lenovo	F310	DoC	Shielded, 1.2m	N/A
13.	Hard disk	KINGSHARE	KSP6120G	Fcc DoC	Shielded, 1.2m	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 MPEG4 function.
3. Turn on NFC function
4. Turn on camera to capture images.
5. Turn on GNSS function to make the EUT receive continuous signals from GNSS station.
6. 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.

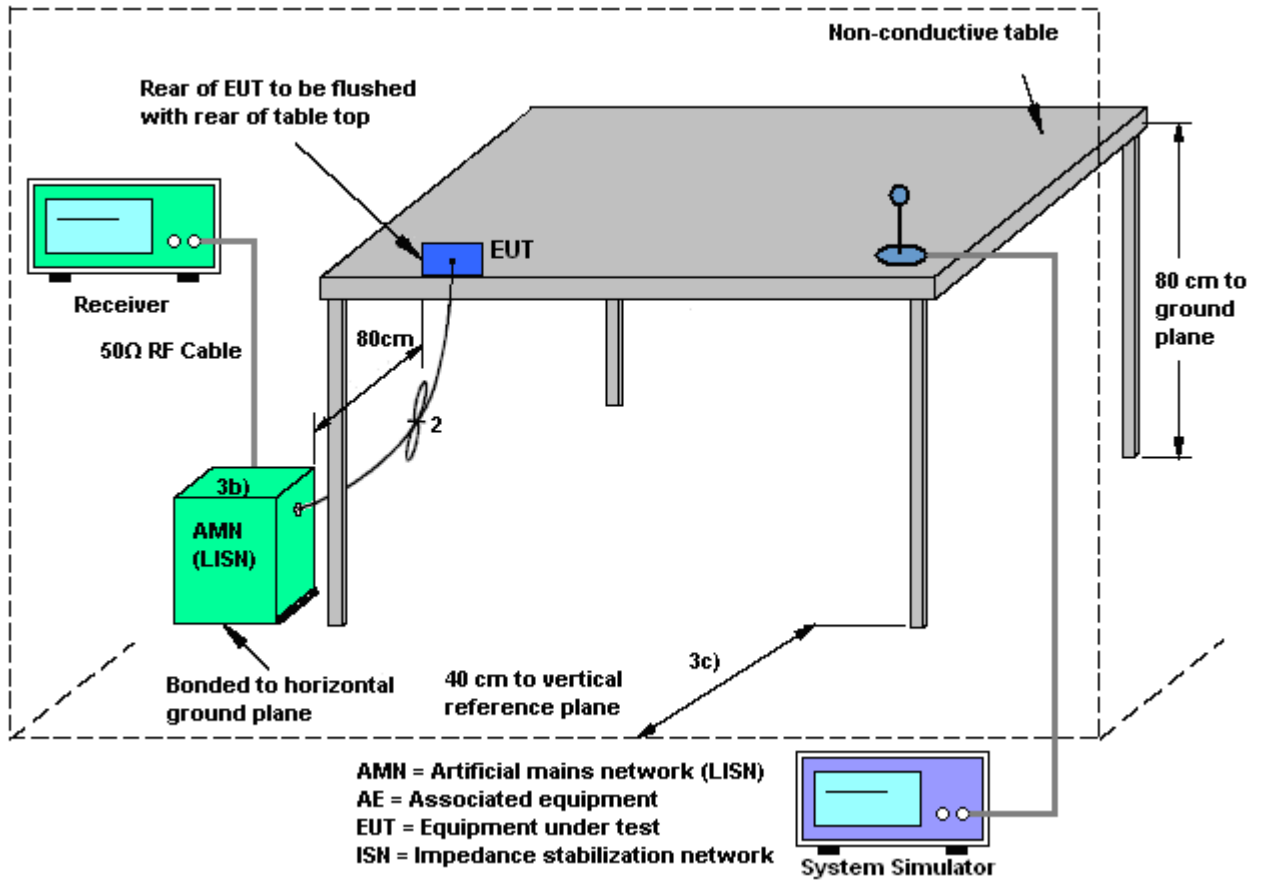
3.1.2 Measuring Instruments

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.

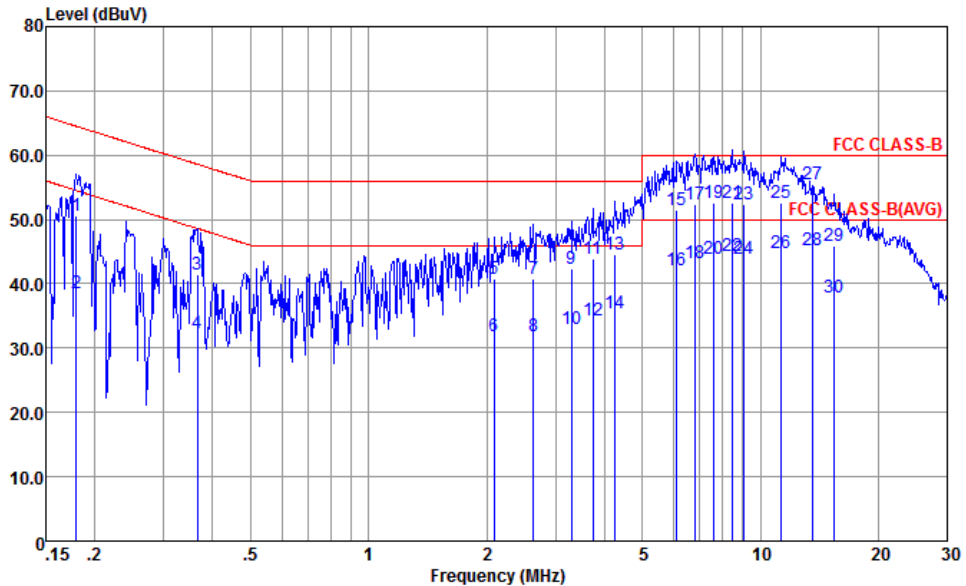
3.1.4 Test Setup





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 :	#27 & #28 are NFC signals which can be ignored.		

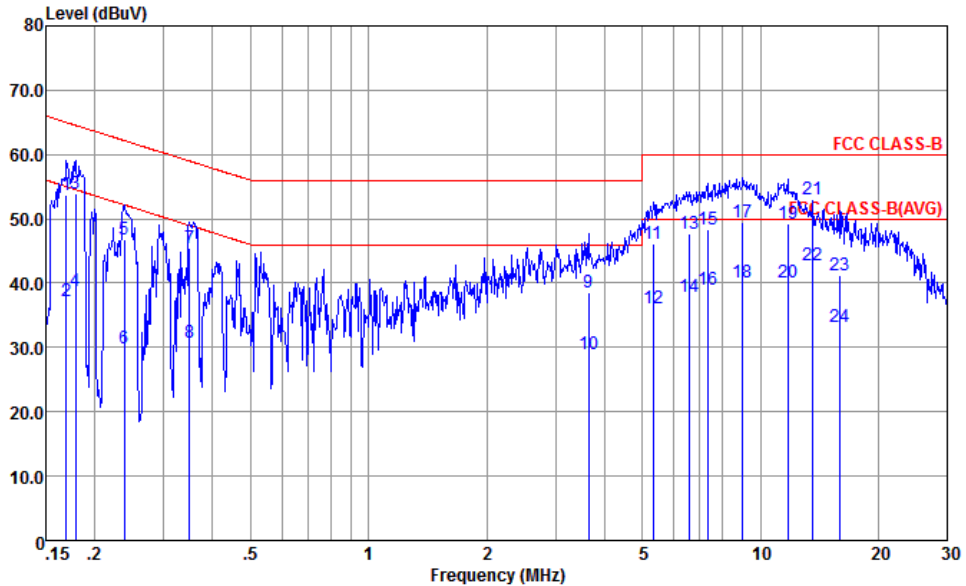


Site : CO01-KS
Condition : FCC CLASS-B TWO-LISN-CN02-L LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.180	50.65	-13.85	64.50	30.60	9.64	10.41	QP
2	0.180	38.55	-15.95	54.50	18.50	9.64	10.41	Average
3	0.365	41.52	-17.09	58.61	21.60	9.64	10.28	QP
4	0.365	32.22	-16.39	48.61	12.30	9.64	10.28	Average
5	2.088	40.68	-15.32	56.00	20.50	9.95	10.23	QP
6	2.088	31.78	-14.22	46.00	11.60	9.95	10.23	Average
7	2.636	40.86	-15.14	56.00	20.60	10.02	10.24	QP
8	2.636	31.76	-14.24	46.00	11.50	10.02	10.24	Average
9	3.293	42.24	-13.76	56.00	21.89	10.10	10.25	QP
10	3.293	32.94	-13.06	46.00	12.59	10.10	10.25	Average
11	3.740	43.99	-12.01	56.00	23.60	10.14	10.25	QP
12	3.740	34.29	-11.71	46.00	13.90	10.14	10.25	Average
13	4.247	44.64	-11.36	56.00	24.20	10.18	10.26	QP
14	4.247	35.34	-10.66	46.00	14.90	10.18	10.26	Average
15	6.121	51.52	-8.48	60.00	30.90	10.33	10.29	QP
16	6.121	42.22	-7.78	50.00	21.60	10.33	10.29	Average
17	6.805	52.27	-7.73	60.00	31.60	10.37	10.30	QP
18	6.805	43.27	-6.73	50.00	22.60	10.37	10.30	Average
19	7.606	52.63	-7.37	60.00	31.91	10.41	10.31	QP
20	7.606	43.93	-6.07	50.00	23.21	10.41	10.31	Average
21	8.456	52.67	-7.33	60.00	31.90	10.45	10.32	QP
22	8.456	44.37	-5.63	50.00	23.60	10.45	10.32	Average
23	9.107	52.40	-7.60	60.00	31.60	10.47	10.33	QP
24	9.107	44.00	-6.00	50.00	23.20	10.47	10.33	Average
25	11.317	52.58	-7.42	60.00	31.60	10.62	10.36	QP
26	11.317	44.88	-5.12	50.00	23.90	10.62	10.36	Average
27 *	13.560	55.38			34.20	10.80	10.38	QP
28	13.560	45.28			24.10	10.80	10.38	Average
29	15.470	45.83	-14.17	60.00	24.51	10.92	10.40	QP
30	15.470	37.93	-12.07	50.00	16.61	10.92	10.40	Average



Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	#21& #22 are NFC signals which can be ignored.		



Site : CO01-KS
 Condition : FCC CLASS-B TWO-LISN-CN02-N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.169	53.77	-11.22	64.99	33.50	9.84	10.43	QP
2	0.169	37.17	-17.82	54.99	16.90	9.84	10.43	Average
3	0.179	53.87	-10.68	64.55	33.61	9.85	10.41	QP
4	0.179	38.87	-15.68	54.55	18.61	9.85	10.41	Average
5	0.238	46.79	-15.38	62.17	26.60	9.85	10.34	QP
6	0.238	29.79	-22.38	52.17	9.60	9.85	10.34	Average
7	0.348	45.66	-13.44	59.00	25.50	9.77	10.29	QP
8	0.348	30.66	-18.34	49.00	10.60	9.77	10.29	Average
9	3.642	38.59	-17.41	56.00	18.20	10.14	10.25	QP
10	3.642	28.99	-17.01	46.00	8.60	10.14	10.25	Average
11	5.333	46.06	-13.94	60.00	25.50	10.28	10.28	QP
12	5.333	36.16	-13.84	50.00	15.60	10.28	10.28	Average
13	6.592	47.58	-12.42	60.00	26.89	10.39	10.30	QP
14	6.592	37.88	-12.12	50.00	17.19	10.39	10.30	Average
15	7.329	48.34	-11.66	60.00	27.60	10.43	10.31	QP
16	7.329	38.94	-11.06	50.00	18.20	10.43	10.31	Average
17	9.011	49.44	-10.56	60.00	28.60	10.51	10.33	QP
18	9.011	40.04	-9.96	50.00	19.20	10.51	10.33	Average
19	11.745	49.20	-10.80	60.00	28.10	10.74	10.36	QP
20	11.745	40.00	-10.00	50.00	18.90	10.74	10.36	Average
21 *	13.560	53.01	---	---	31.71	10.92	10.38	QP
22	13.560	42.71	---	---	21.41	10.92	10.38	Average
23	15.885	41.14	-18.86	60.00	19.59	11.13	10.42	QP
24	15.885	33.14	-16.86	50.00	11.59	11.13	10.42	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

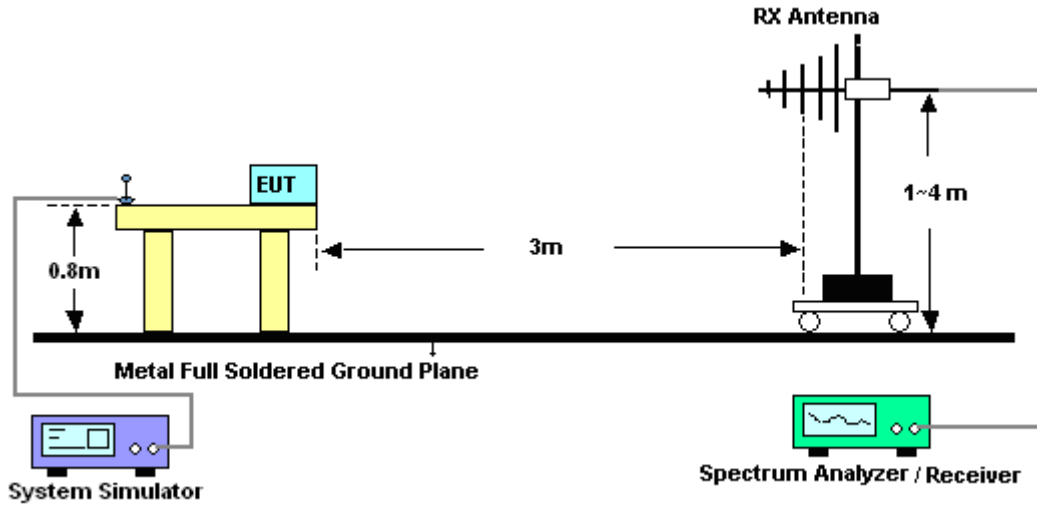
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

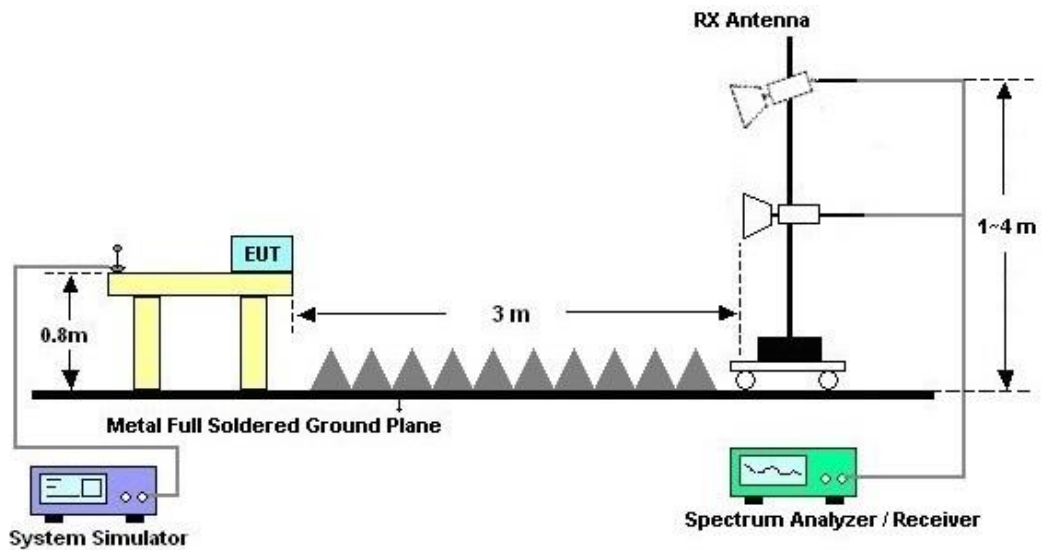
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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



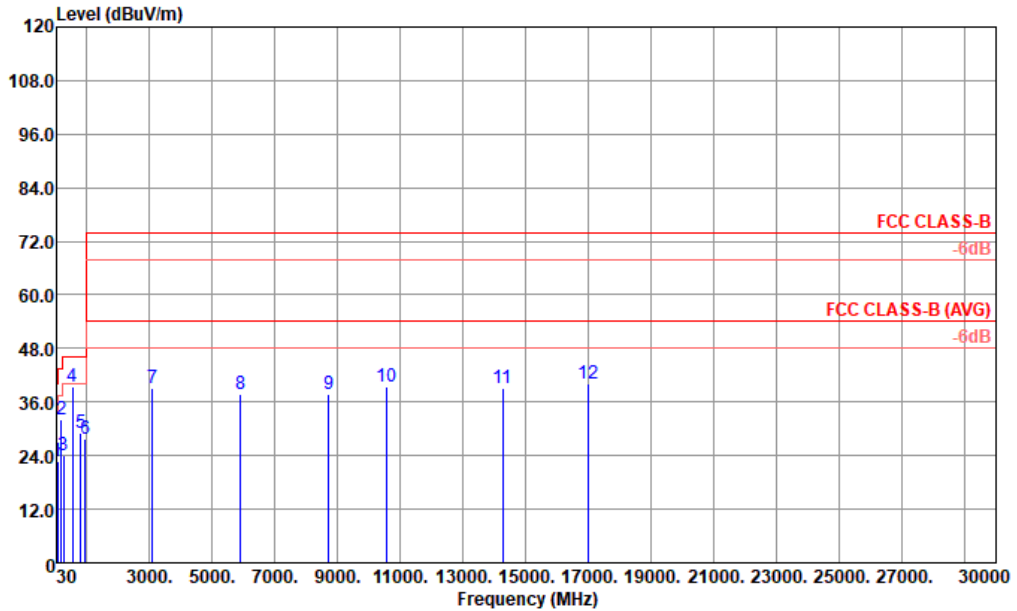
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Engineer :	Fang Li	Temperature :	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal

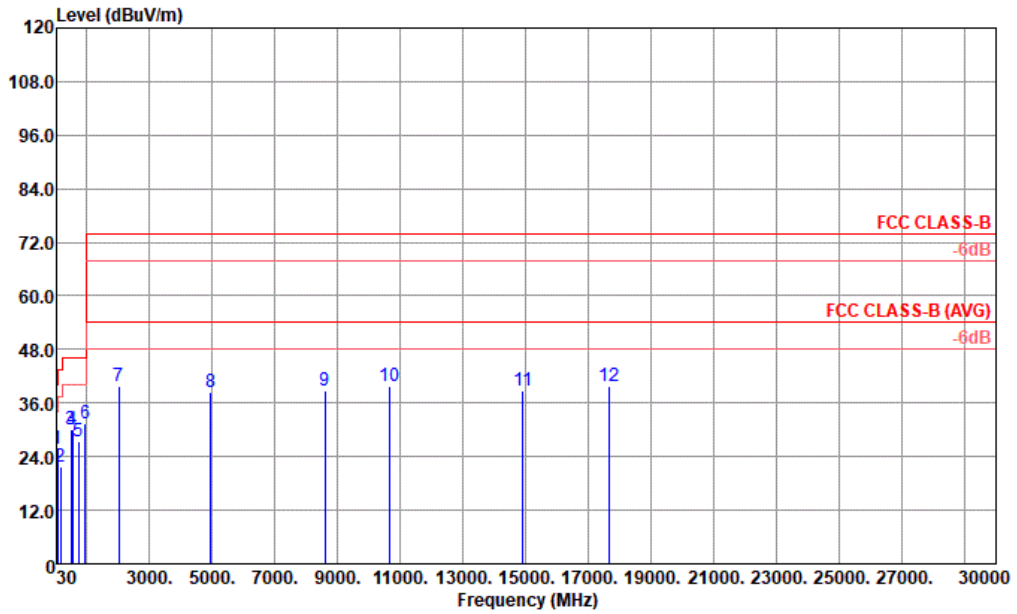


Site : 03CH02-KS
 Condition : FCC CLASS-B 3m LF 49921 HORIZONTAL

	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	71.71	22.74	-17.26	40.00	40.65	12.84	1.45	32.20	---	---	Peak
2	176.47	31.97	-11.53	43.50	45.63	16.13	2.31	32.10	---	---	Peak
3	265.71	24.13	-21.87	46.00	34.64	18.82	2.84	32.17	---	---	Peak
4	532.46	39.31	-6.69	46.00	42.75	24.88	4.02	32.34	100	0	Peak
5	797.27	29.21	-16.79	46.00	28.29	28.31	4.91	32.30	---	---	Peak
6	940.83	27.90	-18.10	46.00	24.94	29.83	5.33	32.20	---	---	Peak
7	3080.00	39.25	-34.75	74.00	29.76	33.51	9.73	33.75	---	---	Peak
8	5904.00	37.71	-36.29	74.00	20.26	36.13	13.54	32.22	---	---	Peak
9	8712.00	37.79	-36.21	74.00	17.15	38.11	16.70	34.17	---	---	Peak
10	10548.00	39.55	-34.45	74.00	16.94	39.32	18.40	35.11	---	---	Peak
11	14256.00	38.98	-35.02	74.00	11.82	40.84	21.47	35.15	---	---	Peak
12	16992.00	40.23	-33.77	74.00	8.46	43.20	23.58	35.01	---	---	Peak



Test Engineer :	Fang Li	Temperature :	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Vertical



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

	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	71.71	25.76	-14.24	40.00	43.67	12.84	1.45	32.20	100	0 Peak
2	167.74	21.88	-21.62	43.50	35.20	16.52	2.26	32.10	---	---
3	499.48	30.20	-15.80	46.00	34.62	24.08	3.90	32.40	---	---
4	533.43	29.98	-16.02	46.00	33.39	24.90	4.02	32.33	---	---
5	742.95	27.27	-18.73	46.00	26.65	28.17	4.74	32.29	---	---
6	947.62	31.30	-14.70	46.00	28.24	29.92	5.34	32.20	---	---
7	2024.00	39.89	-34.11	74.00	34.64	32.44	7.88	35.07	---	---
8	4952.00	38.51	-35.49	74.00	22.89	35.58	12.30	32.26	---	---
9	8584.00	38.77	-35.23	74.00	18.82	37.73	16.47	34.25	---	---
10	10638.00	39.77	-34.23	74.00	17.07	39.36	18.47	35.13	---	---
11	14904.00	38.65	-35.35	74.00	10.64	41.08	22.05	35.12	---	---
12	17676.00	39.74	-34.26	74.00	7.42	43.40	24.23	35.31	---	---

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 Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Oct. 17, 2020	Jan. 26, 2021	Oct. 16, 2021	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz~44G,MAX 30dB	Oct. 17, 2020	Jan. 26, 2021	Oct. 16, 2021	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Jan. 26, 2021	Jan. 26, 2021	Jan. 25, 2022	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 01, 2020	Jan. 26, 2021	Oct. 31, 2021	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 06, 2020	Jan. 26, 2021	Nov. 05, 2021	Radiation (03CH02-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 06, 2021	Jan. 26, 2021	Jan. 05, 2022	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Jan. 06, 2021	Jan. 26, 2021	Jan. 05, 2022	Radiation (03CH02-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 17, 2020	Jan. 26, 2021	Oct. 16, 2021	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Jan. 26, 2021	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Jan. 26, 2021	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Jan. 26, 2021	NCR	Radiation (03CH02-KS)
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz;	Apr. 14, 2020	Jan. 21, 2021	Apr. 13, 2021	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 17, 2020	Jan. 21, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Oct. 17, 2020	Jan. 21, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 17, 2020	Jan. 21, 2021	Oct. 16, 2021	Conduction (CO01-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% ($U = 2Uc(y)$)	2.9dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9dB
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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% ($U = 2Uc(y)$)	5.1dB
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