FCC Test Report

APPLICANT	**:**	**HMD Global Oy**
EQUIPMENT	**:**	**GSM/WCDMA/LTE Mobile Phone**
BRAND NAME	**:**	**Nokia**
MODEL NAME	**:**	**TA-1136**
FCC ID	**:**	**2AJOTTA-1136**
STANDARD	**:**	**FCC CFR Title 47 Part 15 Subpart B**
CLASSIFICATION	**:**	**Certification**

The product was received on Sep. 18, 2018 and testing was completed on Oct. 27, 2018. 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.

James Huang

NVLAP®
TESTING
NVLAP LAB CODE 600155-0

Approved by: James Huang / Manager

Sporton International (Kunshan) Inc.
No. 1098, Pengxi North Road, Kunshan Economic Development Zone,
Jiangsu Province 215335, China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC832115-23	Rev. 01	Initial issue of report	Nov. 01, 2018

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 7.48 dB at 0.176 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 7.12 dB at 43.580 MHz

1. General Description

1.1. Applicant

HMD Global Oy
Bertel Jungin aukio 9, 02600 Espoo, Finland

1.2. Manufacturer

HMD Global Oy
Bertel Jungin aukio 9, 02600 Espoo, Finland

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	GSM/WCDMA/LTE Mobile Phone
Brand Name	Nokia
Model Name	TA-1136
FCC ID	2AJOTTA-1136
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/HSPA+ (16QAM uplink is not supported)/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 Bluetooth BR / EDR / LE
HW Version	HW0141
SW Version	000C_0_040
EUT Stage	Identical Prototype

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

1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	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 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Rx Frequency	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 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz FM: 87.5 MHz ~ 108 MHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GNSS: PIFA Antenna FM: External Handset Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK (Uplink) HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+: (16QAM uplink is not supported) LTE: QPSK / 16QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : π/4-DQPSK

	Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK FM

Note: GNSS = GPS + Glonass

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 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0).

Test Site	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone, Jiangsu Province 215335, 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	CN5013	630927

1.7. Applicable Standards

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

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

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

2. Test Configuration of Equipment Under Test

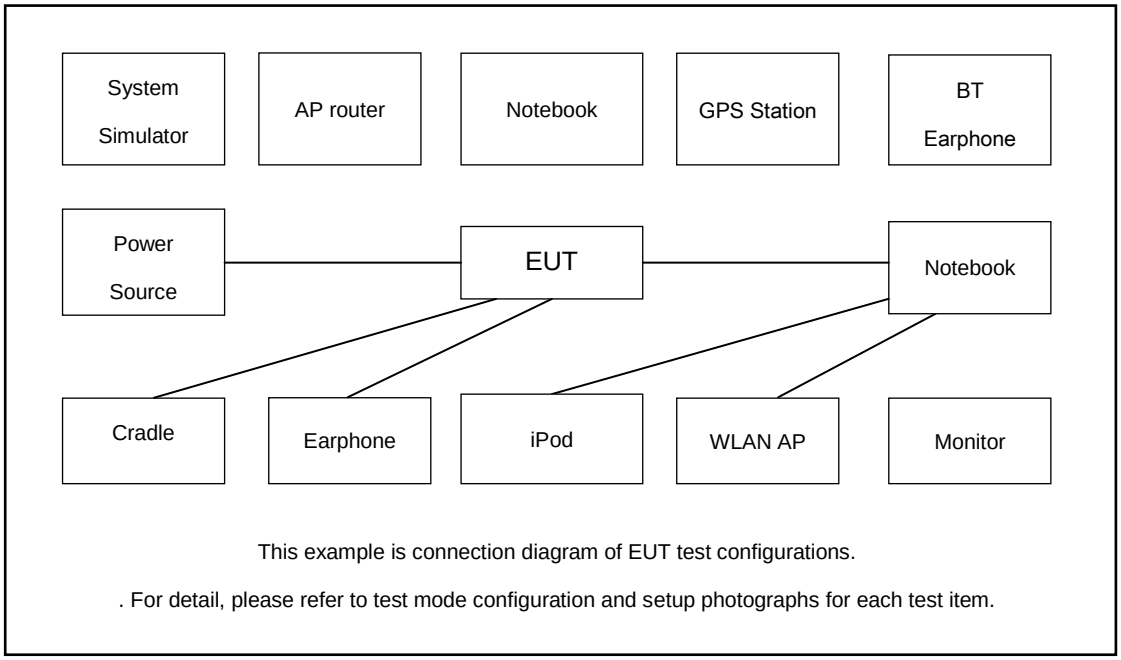
2.1. Test Mode

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

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1: GSM 850 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + Camera(Rear) Mode 2: GSM 1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + Camera(Front) Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + MPEG4 Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + FM RX Mode 5: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Data Link with Notebook) + Earphone + Battery + GNSS RX
Radiated Emissions	Mode 1: GSM 850 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + Camera(Rear) Mode 2: GSM 1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + Camera(Front) Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Battery + MPEG4 Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Charging from Adapter) + Earphone + Battery + FM RX Mode 5: LTE Band 4 Idle + Bluetooth Idle + WLAN Idle + USB Cable(Data Link with Notebook) + Earphone + Battery + GNSS RX
Remark: **1.** The worst case of AC is mode 1; only the test data of this mode is reported. **2.** The worst case of RE is mode 1; only the test data of this mode is reported. **3.** Data Link with Notebook means data application transferred mode between EUT and Notebook.	

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.

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	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	Vector Signal Generator	R&S	SMBV100A	258305	N/A	N/A
4.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
5.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded, 1.8 m
6.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
7.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
8.	SD Card	Kingston	8GB	N/A	N/A	N/A
9.	SD Card	SanDisk	Uitra	N/A	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 GNSS function to make the EUT receive continuous signals from GNSS station.
3. Turn on FM receiver function to make the EUT receive continuous signals from FM station.
4. Execute "Video Player" to play MPEG4 files.
5. Turn on camera to capture images.

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.

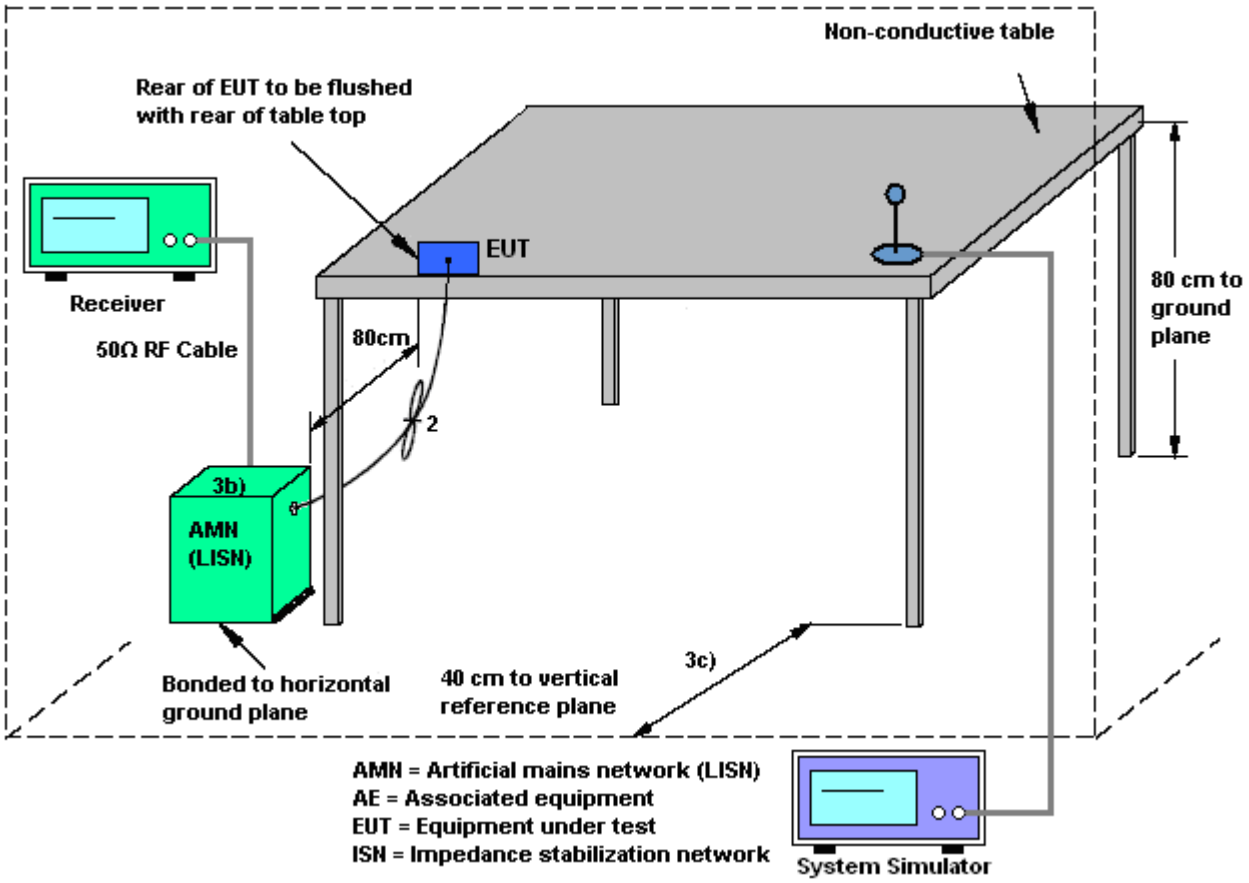
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

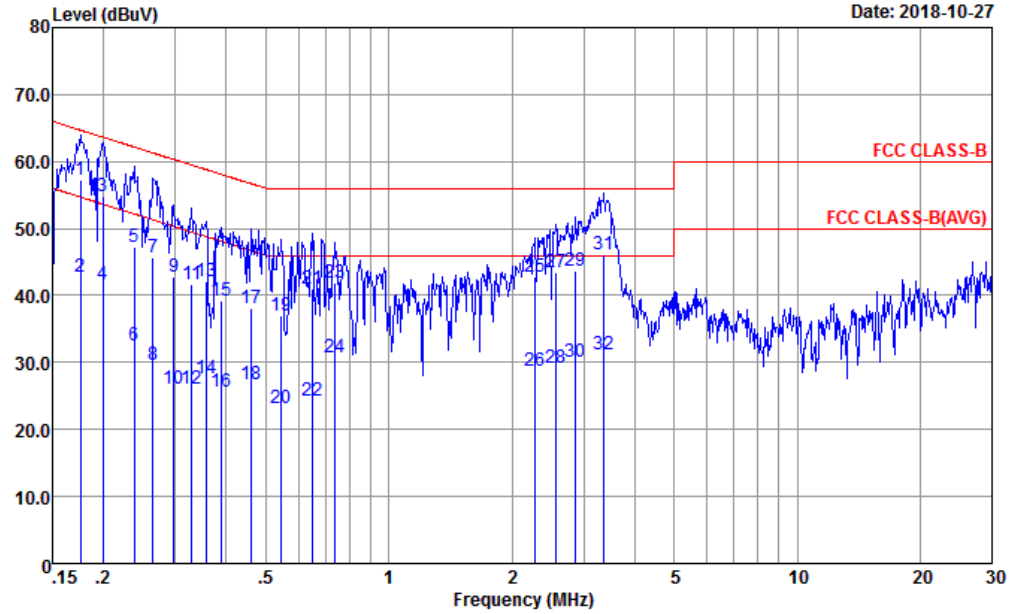
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

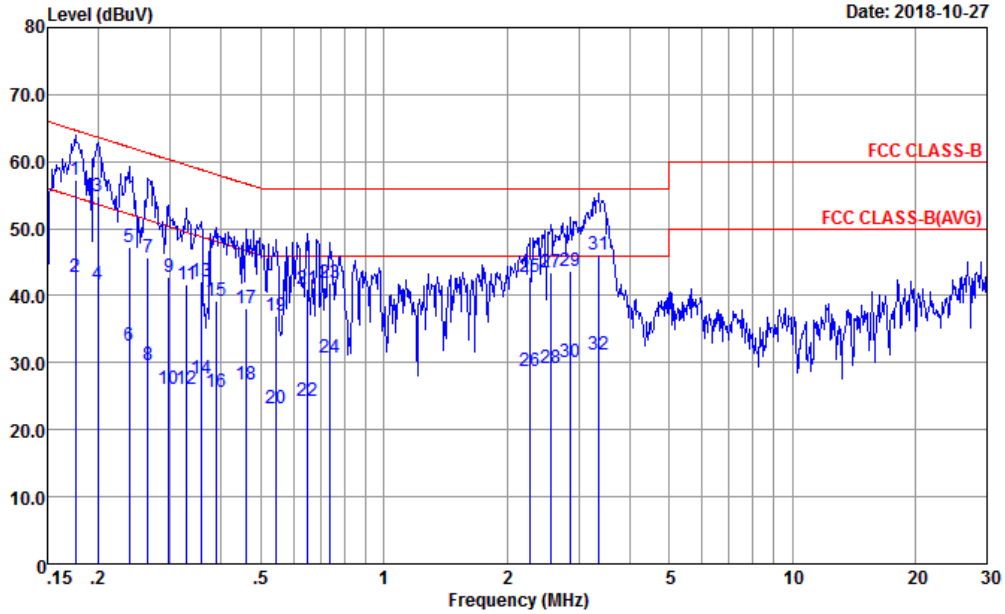
Test Engineer :	Aoms Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	48~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line



Site : CO01-KS
Condition : FCC CLASS-B LISN-L-171013-060103 LINE
Project : (FC) 832115-23
mode : Mode 1

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.176	57.20	-7.48	64.68	46.60	0.18	10.42	QP
2		0.176	42.80	-11.88	54.68	32.20	0.18	10.42	Average
3		0.200	54.76	-8.86	63.62	44.20	0.20	10.36	QP
4		0.200	41.67	-11.95	53.62	31.11	0.20	10.36	Average
5		0.238	47.35	-14.82	62.17	36.80	0.21	10.34	QP
6		0.238	32.45	-19.72	52.17	21.90	0.21	10.34	Average
7		0.264	45.74	-15.55	61.29	35.20	0.22	10.32	QP
8		0.264	29.74	-21.55	51.29	19.20	0.22	10.32	Average
9		0.297	42.73	-17.59	60.32	32.19	0.23	10.31	QP
10		0.297	26.13	-24.19	50.32	15.59	0.23	10.31	Average
11		0.329	41.73	-17.76	59.49	31.21	0.23	10.29	QP
12		0.329	26.03	-23.46	49.49	15.51	0.23	10.29	Average
13		0.356	42.02	-16.81	58.83	31.50	0.24	10.28	QP
14		0.356	27.72	-21.11	48.83	17.20	0.24	10.28	Average
15		0.387	39.31	-18.81	58.12	28.80	0.24	10.27	QP
16		0.387	25.71	-22.41	48.12	15.20	0.24	10.27	Average
17		0.461	38.00	-18.67	56.67	27.50	0.25	10.25	QP

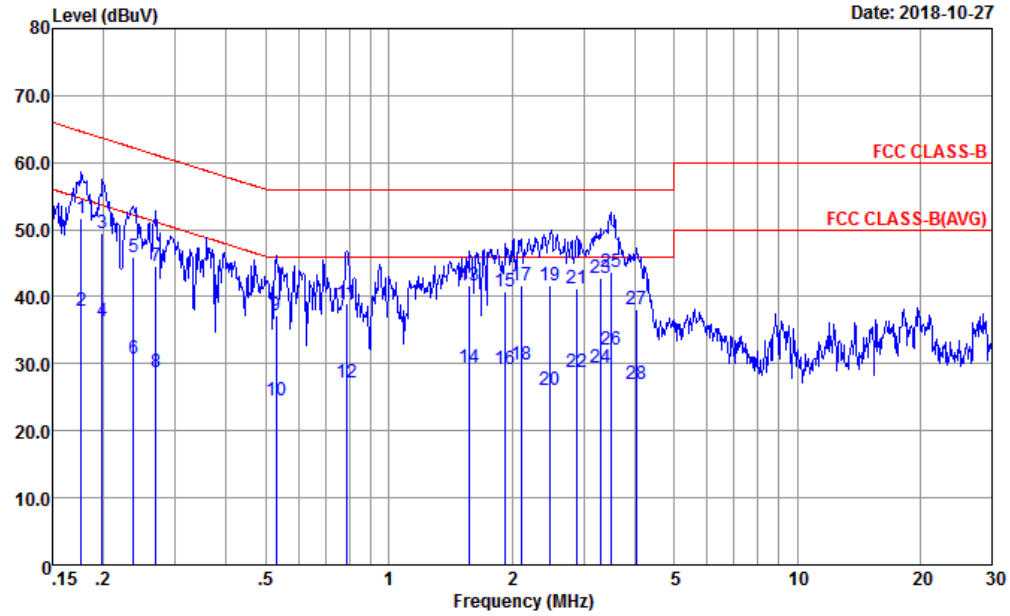
Test Engineer :	Aoms Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	48~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line



Site : CO01-KS
Condition : FCC CLASS-B LISN-L-171013-060103 LINE
Project : (FC) 832115-23
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	0.461	26.70	-19.97	46.67	16.20	0.25	10.25	Average
19	0.546	37.10	-18.90	56.00	26.60	0.26	10.24	QP
20	0.546	23.10	-22.90	46.00	12.60	0.26	10.24	Average
21	0.651	41.10	-14.90	56.00	30.60	0.26	10.24	QP
22	0.651	24.40	-21.60	46.00	13.90	0.26	10.24	Average
23	0.739	42.00	-14.00	56.00	31.50	0.26	10.24	QP
24	0.739	30.80	-15.20	46.00	20.30	0.26	10.24	Average
25	2.285	42.73	-13.27	56.00	32.21	0.29	10.23	QP
26	2.285	28.73	-17.27	46.00	18.21	0.29	10.23	Average
27	2.567	43.44	-12.56	56.00	32.90	0.30	10.24	QP
28	2.567	29.14	-16.86	46.00	18.60	0.30	10.24	Average
29	2.869	43.76	-12.24	56.00	33.20	0.32	10.24	QP
30	2.869	30.16	-15.84	46.00	19.60	0.32	10.24	Average
31	3.364	46.18	-9.82	56.00	35.60	0.33	10.25	QP
32	3.364	31.18	-14.82	46.00	20.60	0.33	10.25	Average

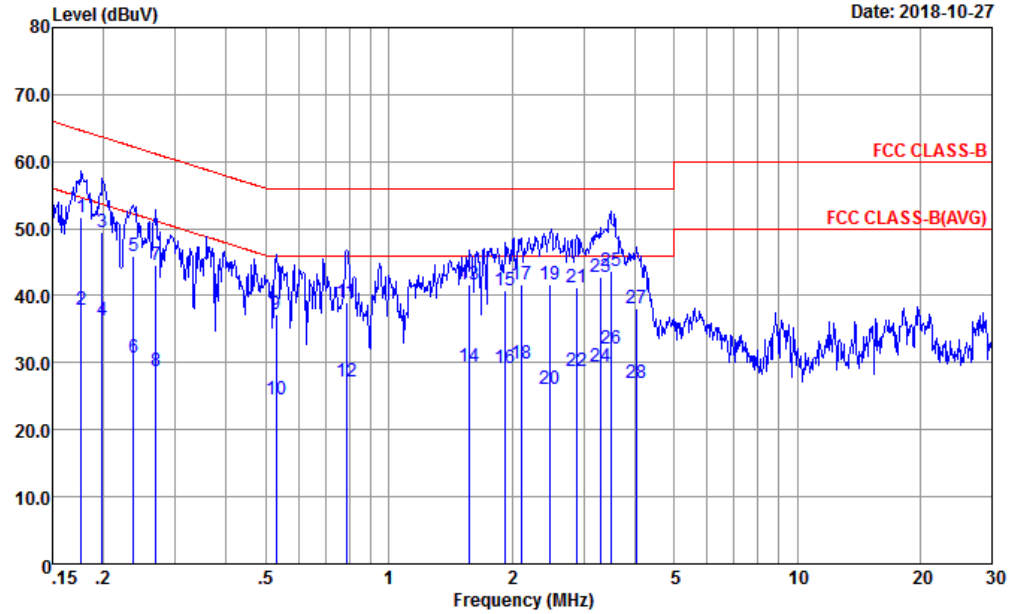
Test Engineer :	Aoms Zhang	Temperature :	25.3~26.2℃
		Relative Humidity :	48~50%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-KS
Condition : FCC CLASS-B LISN-N-171013-060103 NEUTRAL
Project : (FC) 832115-23
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.177	51.79	-12.85	64.64	41.10	0.28	10.41	QP
2	0.177	37.99	-16.65	54.64	27.30	0.28	10.41	Average
3	0.199	49.55	-14.12	63.67	38.90	0.28	10.37	QP
4	0.199	36.25	-17.42	53.67	25.60	0.28	10.37	Average
5	0.237	45.92	-16.30	62.22	35.30	0.28	10.34	QP
6	0.237	30.82	-21.40	52.22	20.20	0.28	10.34	Average
7	0.269	44.51	-16.65	61.16	33.91	0.28	10.32	QP
8	0.269	28.81	-22.35	51.16	18.21	0.28	10.32	Average
9	0.529	37.13	-18.87	56.00	26.60	0.29	10.24	QP
10	0.529	24.43	-21.57	46.00	13.90	0.29	10.24	Average
11	0.788	39.04	-16.96	56.00	28.50	0.30	10.24	QP
12	0.788	27.14	-18.86	46.00	16.60	0.30	10.24	Average
13	1.577	41.75	-14.25	56.00	31.20	0.32	10.23	QP
14	1.577	29.35	-16.65	46.00	18.80	0.32	10.23	Average
15	1.928	40.85	-15.15	56.00	30.30	0.32	10.23	QP
16	1.928	29.15	-16.85	46.00	18.60	0.32	10.23	Average
17	2.110	41.75	-14.25	56.00	31.20	0.32	10.23	QP

Test Engineer :	Aoms Zhang	Temperature :	25.3~26.2℃
		Relative Humidity :	48~50%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-KS
Condition : FCC CLASS-B LISN-N-171013-060103 NEUTRAL
Project : (FC) 832115-23
mode : Mode 1

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18		2.110	29.85	-16.15	46.00	19.30	0.32	10.23	Average
19		2.487	41.76	-14.24	56.00	31.21	0.32	10.23	QP
20		2.487	26.16	-19.84	46.00	15.61	0.32	10.23	Average
21		2.884	41.17	-14.83	56.00	30.60	0.33	10.24	QP
22		2.884	28.77	-17.23	46.00	18.20	0.33	10.24	Average
23		3.293	42.78	-13.22	56.00	32.20	0.33	10.25	QP
24		3.293	29.48	-16.52	46.00	18.90	0.33	10.25	Average
25	*	3.491	43.78	-12.22	56.00	33.20	0.33	10.25	QP
26		3.491	32.18	-13.82	46.00	21.60	0.33	10.25	Average
27		4.049	38.09	-17.91	56.00	27.50	0.34	10.25	QP
28		4.049	26.89	-19.11	46.00	16.30	0.34	10.25	Average

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

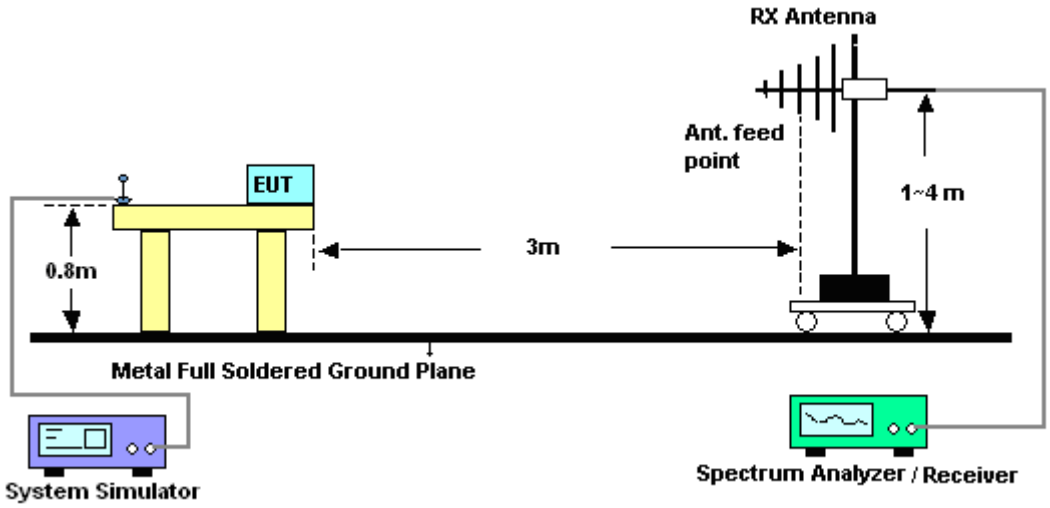
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

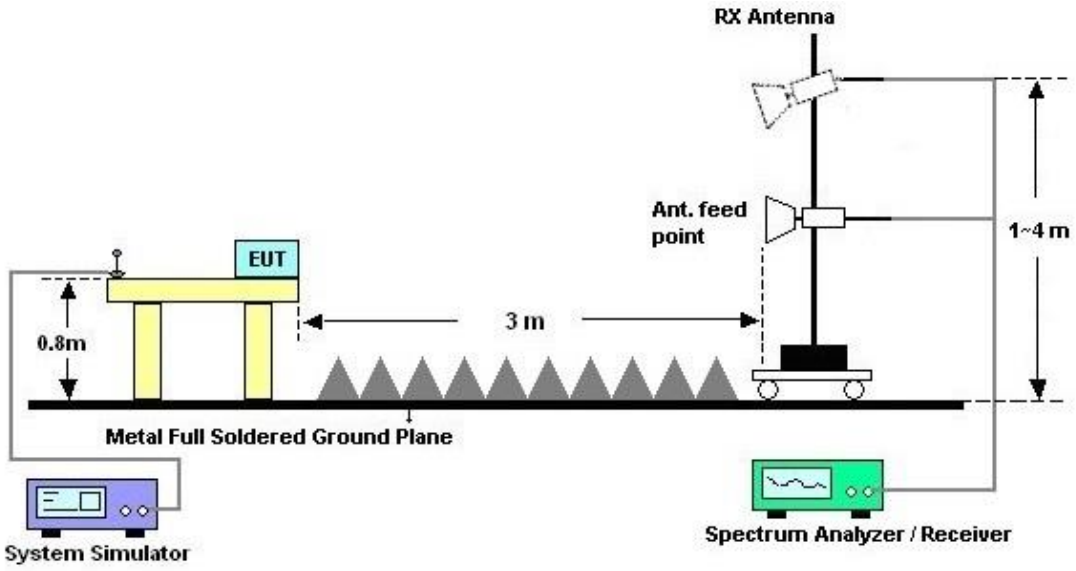
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

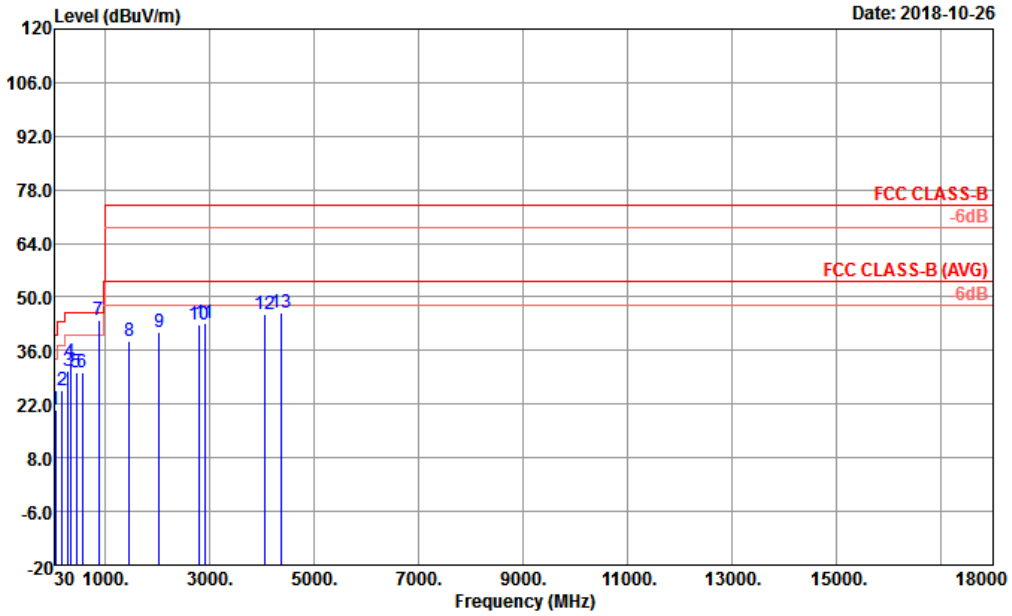


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

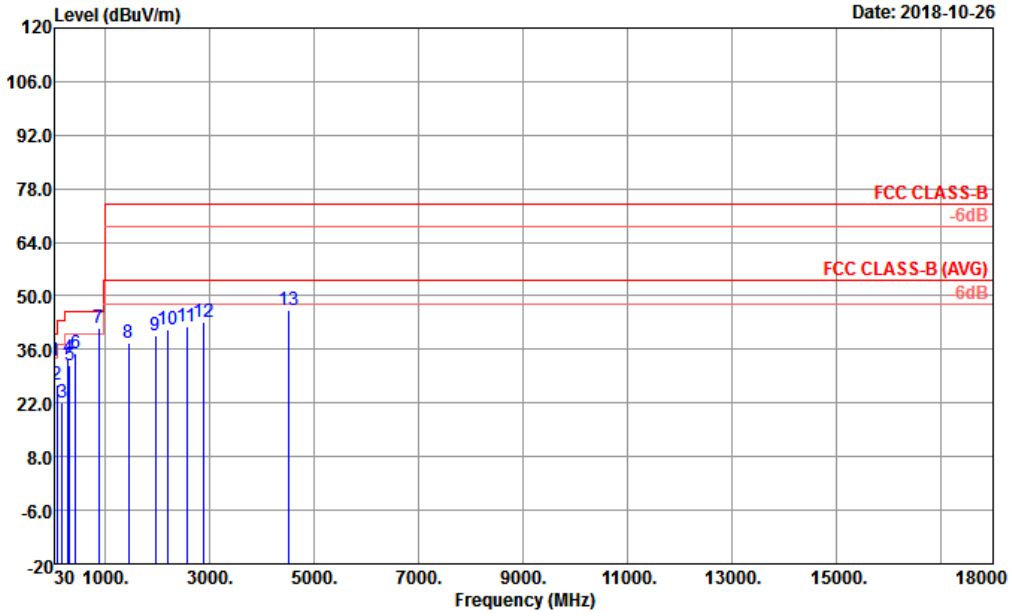
Test Engineer :	Level Zhao	**Temperature :**	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	**Polarization :**	Horizontal
Remark:	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS
Condition : FCC CLASS-B 3m LF 23182-3M HORIZONTAL
Project : (FC)832115-23

		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		44.55	20.44	-19.56	40.00	35.10	16.53	0.72	31.91	---	---	Peak
2		186.17	25.44	-18.06	43.50	40.29	15.23	1.39	31.47	---	---	Peak
3		295.78	30.78	-15.22	46.00	41.02	18.94	1.82	31.00	---	---	Peak
4		333.61	32.92	-13.08	46.00	41.98	19.88	1.87	30.81	100	0	Peak
5		453.89	30.29	-15.71	46.00	35.86	22.46	2.14	30.17	---	---	Peak
6		571.26	30.29	-15.71	46.00	33.26	23.98	2.52	29.47	---	---	Peak
7	!	881.66	44.09			42.19	26.29	2.99	27.38	---	---	Peak
8		1468.00	38.32	-35.68	74.00	43.11	28.80	3.97	37.56	---	---	Peak
9		2042.00	40.84	-33.16	74.00	42.37	30.42	4.61	36.56	---	---	Peak
10		2788.00	42.79	-31.21	74.00	40.93	31.97	5.59	35.70	---	---	Peak
11		2914.00	43.22	-30.78	74.00	40.63	32.35	5.88	35.64	---	---	Peak
12		4044.00	45.33	-28.67	74.00	38.39	35.18	6.80	35.04	---	---	Peak
13		4374.00	45.94	-28.06	74.00	38.22	35.69	7.11	35.08	---	---	Peak

Test Engineer :	Level Zhao	**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 23182-3M VERTICAL
Project : (FC)832115-23

	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	43.58	32.88	-7.12	40.00	47.10	16.98	0.71	31.91	100	0	Peak
2	77.53	26.70	-13.30	40.00	44.72	12.89	0.92	31.83	---	---	Peak
3	180.35	22.07	-21.43	43.50	37.01	15.20	1.36	31.50	---	---	Peak
4	294.81	33.93	-12.07	46.00	44.20	18.92	1.81	31.00	---	---	Peak
5	323.91	31.72	-14.28	46.00	41.08	19.63	1.86	30.85	---	---	Peak
6	443.22	34.95	-11.05	46.00	40.78	22.29	2.11	30.23	---	---	Peak
7 !	881.66	41.79			39.89	26.29	2.99	27.38	---	---	Peak
8	1446.00	37.87	-36.13	74.00	42.83	28.75	3.92	37.63	---	---	Peak
9	1962.00	39.71	-34.29	74.00	41.77	30.07	4.51	36.64	---	---	Peak
10	2194.00	41.35	-32.65	74.00	41.89	30.94	4.82	36.30	---	---	Peak
11	2572.00	41.91	-32.09	74.00	41.03	31.59	5.21	35.92	---	---	Peak
12	2882.00	43.00	-31.00	74.00	40.61	32.25	5.79	35.65	---	---	Peak
13	4506.00	46.42	-27.58	74.00	38.19	35.90	7.53	35.20	---	---	Peak

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 19, 2018	Oct. 27, 2018	Apr. 18, 2019	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 12, 2018	Oct. 27, 2018	Oct. 11, 2019	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Nov. 23, 2017	Oct. 27, 2018	Nov. 22, 2018	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2018	Oct. 27, 2018	Oct. 11, 2019	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Aug. 06, 2018	Oct. 26, 2018	Aug. 05, 2019	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44G,MAX 30dB	Apr. 17, 2018	Oct. 26, 2018	Apr. 16, 2019	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	30MHz-2GHz	Jan. 29, 2018	Oct. 26, 2018	Jan. 28, 2019	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 21, 2018	Oct. 26, 2018	Jan. 20, 2019	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug. 06, 2018	Oct. 26, 2018	Aug. 05, 2019	Radiation (03CH02-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5GHz	Apr. 18, 2018	Oct. 26, 2018	Apr. 17, 2019	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Oct. 26, 2018	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Oct. 26, 2018	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Oct. 26, 2018	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))	**2.9dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.8dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.2dB**