FCC Test Report

APPLICANT	:	HMD global Oy
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	Nokia
MODEL NAME	:	TA-1184
FCC ID	:	2AJOTTA-1184
STANDARD	:	47 CFR Part 15 Subpart B
CLASSIFICATION	:	Certification

The product was received on Mar. 05, 2019 and testing was completed on Apr. 03, 2019. 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

Approved by: James Huang / Manager

TESTING
NVLAP LAB CODE 600155-0

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
FC930509-01	Rev. 01	Initial issue of report	Apr. 16, 2019

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 3.84 dB at 0.152 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.09 dB at 480.080 MHz for Quasi-Peak

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	Mobile Phone
Brand Name	Nokia
Model Name	TA-1184
FCC ID	2AJOTTA-1184
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ DC-HSDPA/HSPA+/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth BR / EDR / LE FM Receiver/GNSS
IMEI Code	Conduction: 352916100002667/352916100002675 for Sample 1 352916100004168/352916100004176 for Sample 2 Radiation: 352916100002840/352916100002857 for Sample 1 352916100002386/352916100002394 for Sample 1 352916100004168/352916100004101 for Sample 2
HW Version	DVT_0.2
SW Version	00WW_0_095
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. According to the difference, choose sample 1 to perform full test, sample 2 to verify worst cases.

Object	Sample 1 with Dual SIMs(TA-1184)		Sample 2 with Dual SIMs(TA-1184)	
	Specifications	Supplier	Specifications	Supplier
Memory	3+32G	Kingston	3+32G	Foresee
TP+LCD	HQ23201454000	K&D	HQ23201454000	Holitech
Battery Cover	HQ20704757000	Goodmark-new	HQ20746201000	Zhiyin

Front Camera	HQ20207233000	Jinkang	HQ20207233000	Tianshi
Rear Camera	HQ20207234000	Tianshi	HQ20207234000	Guangzhen
Speaker	HQ20312058000	Xichun	HQ20312058000	Xinrongda
Receiver	HQ20321087000	Dongsheng	HQ20321087000	Xinrongda
MIC	HQ12030105000	Knowles	HQ12030105000	Minxinwei
Motor	HQ20400123000	Kunwang	HQ20400123000	Jinlangda

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 17 : 706.5 MHz ~ 713.5 MHz 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 : 2622.5 MHz ~ 2687.5 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz FM: 88 MHz - 108 MHz
Antenna Type	WWAN : Loop Antenna WLAN : IFA Antenna Bluetooth : IFA Antenna GNSS: IFA 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/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM DC-HSDPA : 64QAM LTE: QPSK / 16QAM / 64QAM 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

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:

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

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

2. Test Configuration of Equipment Under Test

2.1. Test Mode

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

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

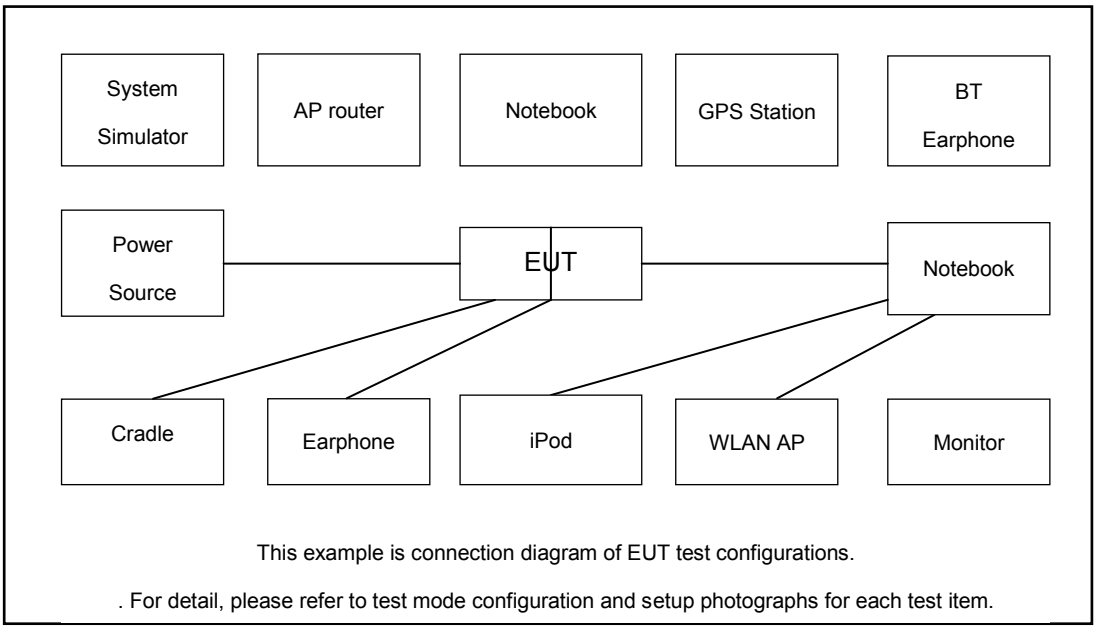
Test Items	Function Type
AC Conducted Emission	Mode 1: GSM850 Rx(Middle) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + Camera (Rear) + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 2: PCS1900 Rx + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + Camera (Front) + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 3: LTE Band 12 Rx(Middle) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + MPEG4 + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 4: LTE Band 17 Rx(High) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + FM Rx(98MHz) + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 5: WCDMA Band V Rx(High) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + USB Cable (Data Link with Notebook) + Battery 1 for Sample 1 Mode 6: GSM850 Rx(Middle) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + Camera (Rear) + USB Cable (Charging from Adapter) + Battery 2 for Sample 2 Mode 7: WCDMA Band V Rx(High) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + USB Cable (Data Link with Notebook) + Battery 2 for Sample 2

Radiated Emissions	Mode 1 : GSM850 Rx(Middle) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + Camera (Rear) + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 2 : PCS1900 Rx + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + Camera (Front) + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 3 : LTE Band 12 Rx(Middle) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + MPEG4 + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 4 : LTE Band 17 Rx(High) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + FM Rx(88MHz) + USB Cable (Charging from Adapter) + Battery 1 for Sample 1 Mode 5 : WCDMA Band V Rx(High) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + USB Cable (Data Link with Notebook) + Battery 1 for Sample 1 Mode 6 : WCDMA Band V Rx(High) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + GNSS Rx + USB Cable (Data Link with Notebook) + Battery 2 for Sample 2 Mode 7 : GSM850 Rx(Middle) + Earphone + Bluetooth Idle + WLAN (2.4G) Idle + Camera (Rear) + USB Cable (Charging from Adapter) + Battery 2 for Sample 2

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 5; 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



2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Vector Signal Generator	R&S	SMBV100A	258305	N/A	N/A
3.	Signal Generator	R&S	GSS7000	NA	NA	Unshielded,1.8m
4.	WLAN AP	D-link	DIR-855	KA2DIR855A2	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	Lenevo	LYEJ02LM	N/A	N/A	N/A
8.	Notebook	Lenovo	G480	PRC4	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
9.	Notebook	DELL	MT320	N/A	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
10.	iPod	Apple	A1199	N/A	N/A	N/A
11.	SD Card	Kingston	8GB	N/A	N/A	N/A
12.	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 camera to capture images.
4. Turn on MPEG4 function.
5. Turn on FM receiver 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.

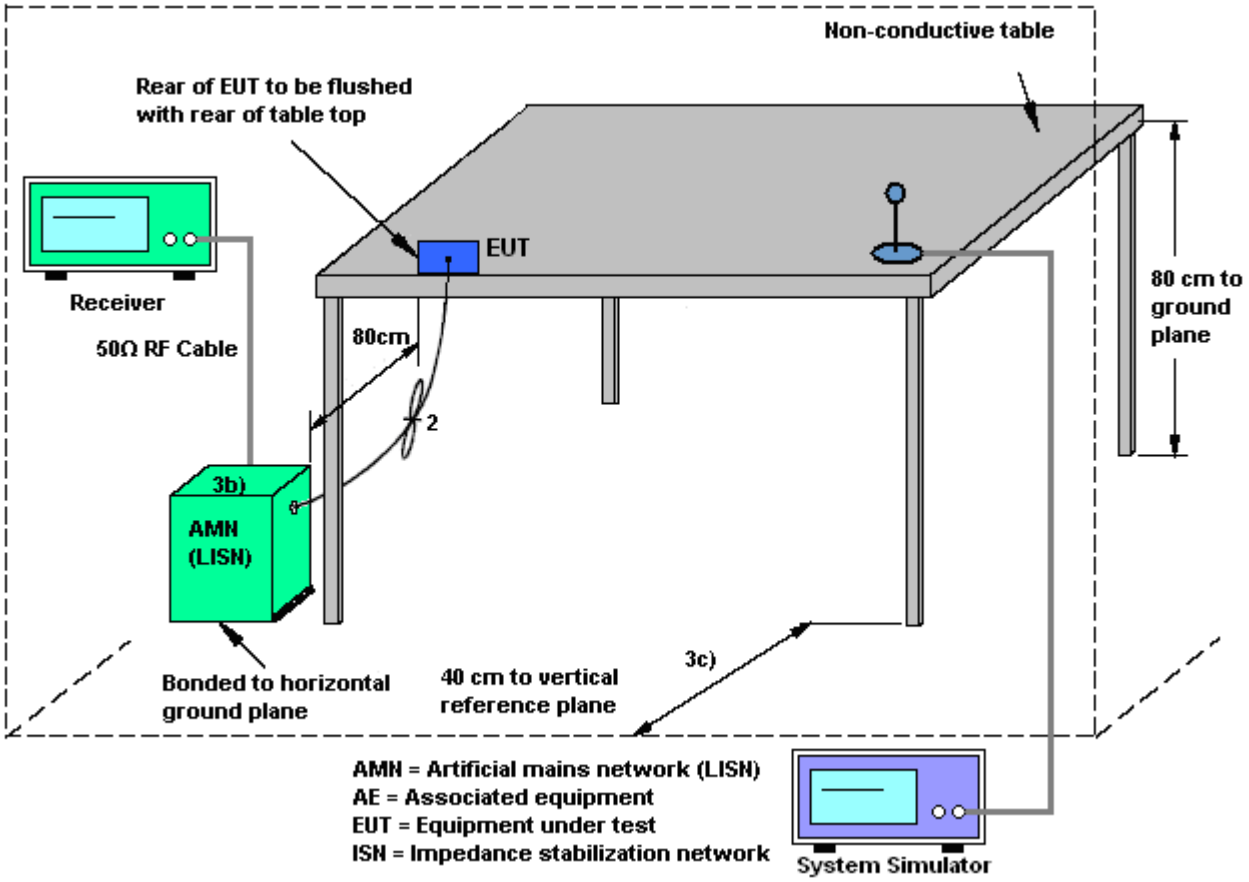
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

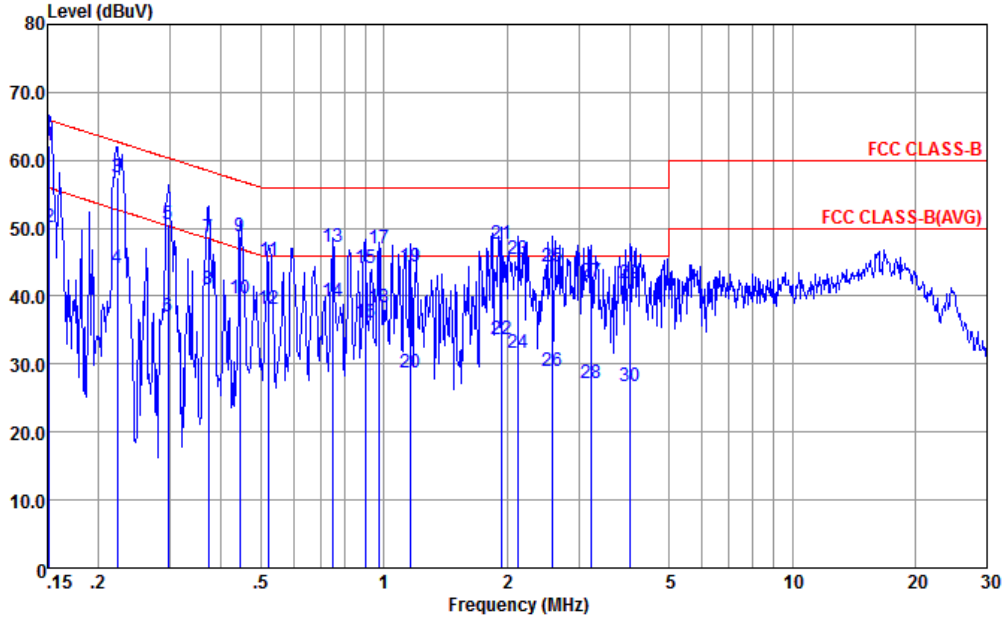
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

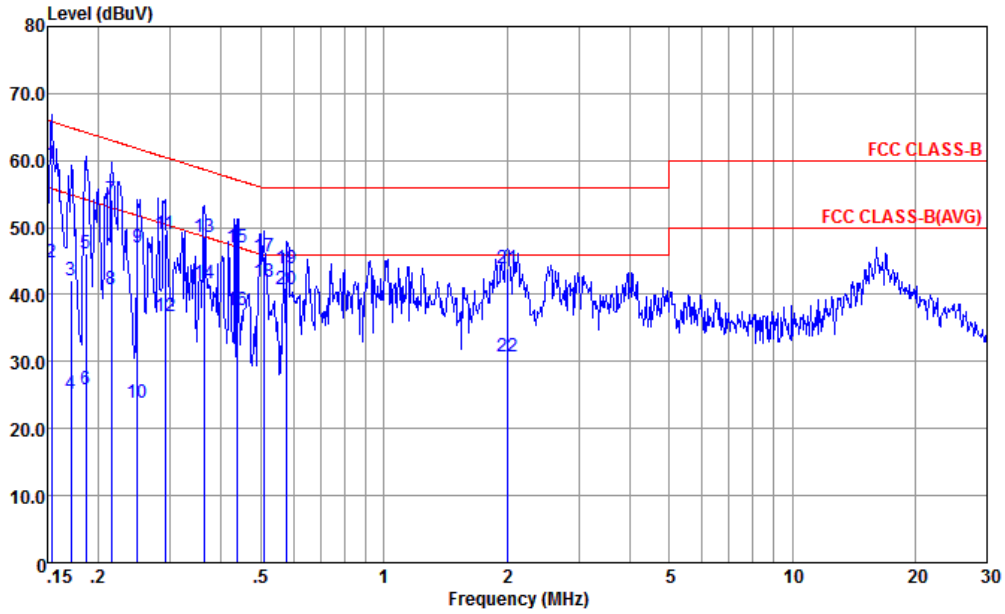
Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	28~30%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC CLASS-B LISN-L-181119-060105 LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.152	62.07	-3.84	65.91	51.50	0.09	10.48	QP
2		0.152	50.17	-5.74	55.91	39.60	0.09	10.48	Average
3		0.222	57.58	-5.16	62.74	47.10	0.13	10.35	QP
4		0.222	44.08	-8.66	52.74	33.60	0.13	10.35	Average
5		0.296	50.65	-9.72	60.37	40.20	0.14	10.31	QP
6		0.296	37.05	-13.32	50.37	26.60	0.14	10.31	Average
7		0.371	48.63	-9.84	58.47	38.20	0.15	10.28	QP
8		0.371	41.03	-7.44	48.47	30.60	0.15	10.28	Average
9		0.444	48.71	-8.27	56.98	38.30	0.16	10.25	QP
10		0.444	39.71	-7.27	46.98	29.30	0.16	10.25	Average
11		0.524	45.31	-10.69	56.00	34.90	0.17	10.24	QP
12		0.524	38.01	-7.99	46.00	27.60	0.17	10.24	Average
13		0.747	47.23	-8.77	56.00	36.80	0.19	10.24	QP
14		0.747	39.33	-6.67	46.00	28.90	0.19	10.24	Average
15		0.899	44.03	-11.97	56.00	33.59	0.20	10.24	QP
16		0.899	36.03	-9.97	46.00	25.59	0.20	10.24	Average
17		0.974	47.03	-8.97	56.00	36.60	0.20	10.23	QP

Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	28~30%
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 CLASS-B LISN-N-181119-060105 NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.153	59.55	-6.27	65.82	48.90	0.18	10.47	QP
2	0.153	44.85	-10.97	55.82	34.20	0.18	10.47	Average
3	0.171	42.20	-22.70	64.90	31.59	0.18	10.43	QP
4	0.171	25.10	-29.80	54.90	14.49	0.18	10.43	Average
5	0.186	46.07	-18.13	64.20	35.51	0.17	10.39	QP
6	0.186	25.77	-28.43	54.20	15.21	0.17	10.39	Average
7	0.215	54.13	-8.88	63.01	43.61	0.17	10.35	QP
8	0.215	40.83	-12.18	53.01	30.31	0.17	10.35	Average
9	0.249	47.10	-14.68	61.78	36.60	0.17	10.33	QP
10	0.249	23.80	-27.98	51.78	13.30	0.17	10.33	Average
11	0.291	49.07	-11.43	60.50	38.60	0.16	10.31	QP
12	0.291	36.67	-13.83	50.50	26.20	0.16	10.31	Average
13	0.363	48.64	-10.01	58.65	38.20	0.16	10.28	QP
14	0.363	41.74	-6.91	48.65	31.30	0.16	10.28	Average
15	0.437	47.01	-10.10	57.11	36.61	0.15	10.25	QP
16	0.437	37.61	-9.50	47.11	27.21	0.15	10.25	Average
17	0.507	45.58	-10.42	56.00	35.19	0.15	10.24	QP

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

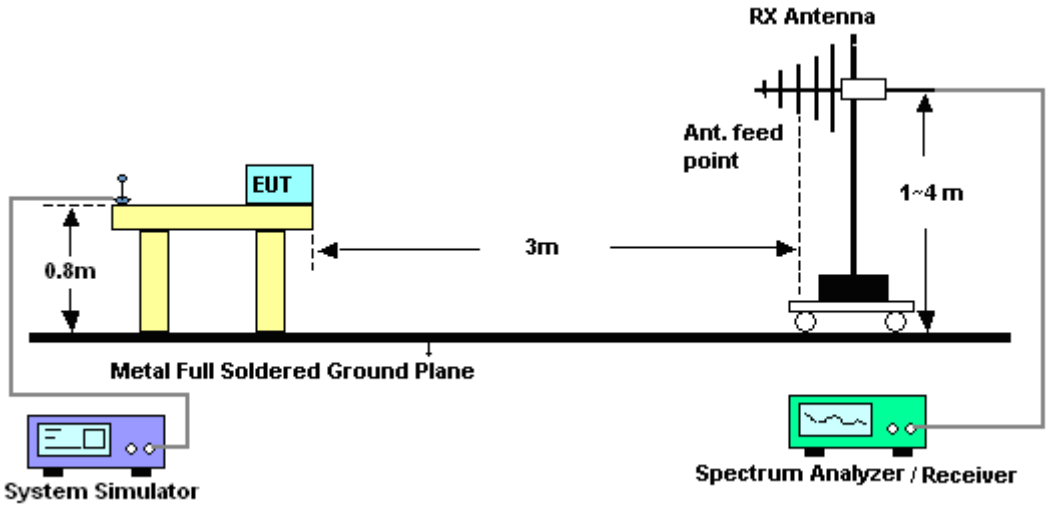
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

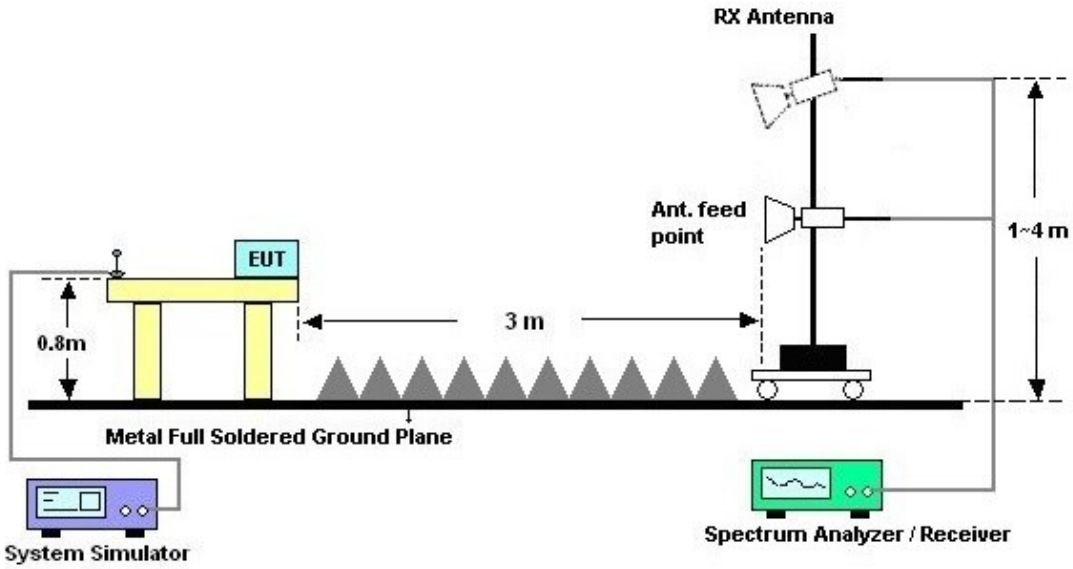
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

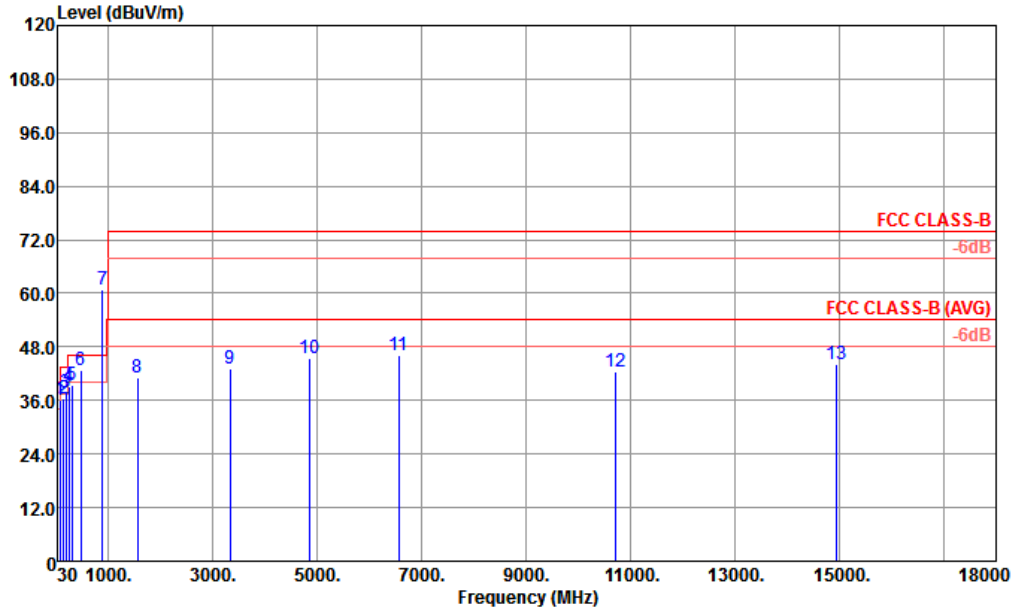


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

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

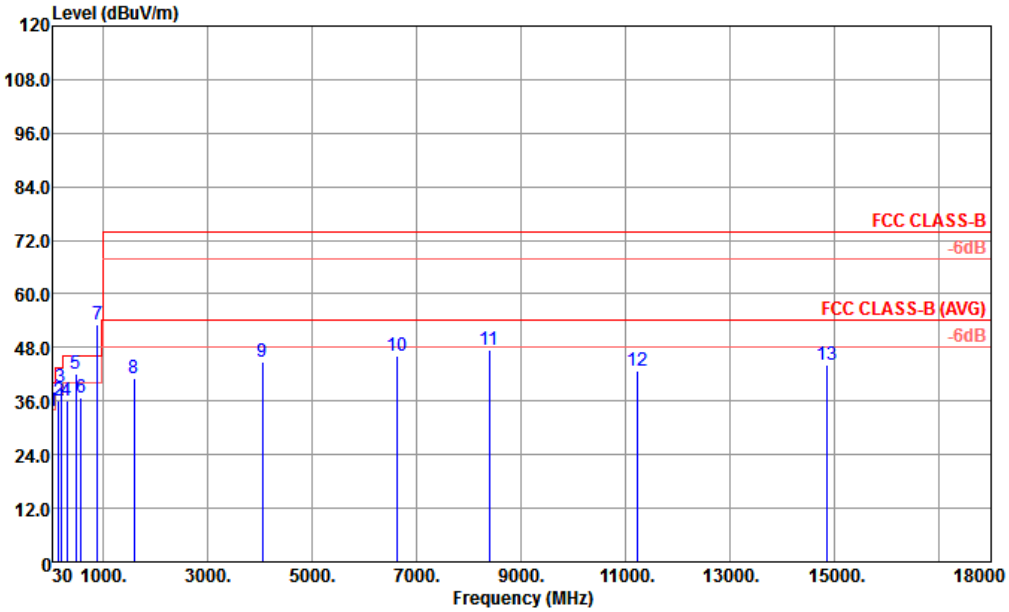


Site : 03CH02-KS
Condition : FCC CLASS-B 3m LF 23182-3M HORIZONTAL
Project : (FC)930509-01
Mode : 5

: worse

		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	!	84.32	36.23	-3.77	40.00	53.54	13.54	1.08	31.93	---	---	Peak
2		150.28	36.44	-7.06	43.50	50.58	16.40	1.40	31.94	---	---	Peak
3	!	193.93	37.64	-5.86	43.50	52.50	15.43	1.61	31.90	---	---	Peak
4		249.22	39.16	-6.84	46.00	51.12	18.14	1.86	31.96	---	---	Peak
5		315.18	39.45	-6.55	46.00	49.92	19.54	2.02	32.03	---	---	Peak
6	!	480.08	42.91	-3.09	46.00	49.64	23.02	2.49	32.24	200	226	QP
7	*	891.36	60.71			62.05	26.75	3.43	31.52	---	---	Peak
8		1568.00	41.06	-32.94	74.00	45.13	28.88	4.49	37.44	---	---	Peak
9		3344.00	43.11	-30.89	74.00	40.37	33.00	6.77	37.03	---	---	Peak
10		4864.00	45.35	-28.65	74.00	38.84	34.91	8.17	36.57	---	---	Peak
11		6568.00	45.97	-28.03	74.00	38.01	35.01	9.66	36.71	---	---	Peak
12		10728.00	42.28	-31.72	74.00	28.82	37.48	13.16	37.18	---	---	Peak
13		14940.00	44.03	-29.97	74.00	23.92	40.42	15.61	35.92	---	---	Peak

Test Engineer :	Jack Guo	**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)930509-01
Mode : 5

		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		38.73	33.90	-6.10	40.00	46.49	18.66	0.71	31.96	---	---	Peak
2		152.22	36.10	-7.40	43.50	50.26	16.36	1.42	31.94	---	---	Peak
3	!	193.93	39.17	-4.33	43.50	54.03	15.43	1.61	31.90	100	0	Peak
4		314.21	36.15	-9.85	46.00	46.64	19.52	2.01	32.02	---	---	Peak
5	!	480.08	42.22	-3.78	46.00	48.95	23.02	2.49	32.24	---	---	Peak
6		576.11	36.77	-9.23	46.00	41.68	24.79	2.68	32.38	---	---	Peak
7	*	892.33	53.03			54.36	26.75	3.43	31.51	---	---	Peak
8		1592.00	41.20	-32.80	74.00	45.04	29.02	4.52	37.38	---	---	Peak
9		4056.00	44.75	-29.25	74.00	39.44	34.23	7.53	36.45	---	---	Peak
10		6640.00	46.08	-27.92	74.00	38.07	35.01	9.73	36.73	---	---	Peak
11		8400.00	47.31	-26.69	74.00	37.36	35.88	11.04	36.97	---	---	Peak
12		11241.00	42.68	-31.32	74.00	28.29	37.82	13.48	36.91	---	---	Peak
13		14868.00	43.97	-30.03	74.00	23.88	40.34	15.61	35.86	---	---	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	Mar. 30, 2019	Apr. 18, 2019	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 12, 2018	Mar. 30, 2019	Oct. 11, 2019	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Nov. 19, 2018	Mar. 30, 2019	Nov. 18, 2019	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2018	Mar. 30, 2019	Oct. 11, 2019	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Aug. 06, 2018	Apr. 03, 2019	Aug. 05, 2019	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150204	10Hz-44G,MAX 30dB	Apr. 17, 2018	Apr. 03, 2019	Apr. 16, 2019	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	30MHz-2GHz	Dec. 29, 2018	Apr. 03, 2019	Dec. 28, 2019	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 27, 2019	Apr. 03, 2019	Jan. 26, 2020	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2019	Apr. 03, 2019	Jan.04, 2020	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug. 06, 2018	Apr. 03, 2019	Aug. 05, 2019	Radiation (03CH02-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5GHz	Apr. 18, 2018	Apr. 03, 2019	Apr. 17, 2019	Radiation (03CH02-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18~40GHz	Jan. 14, 2019	Apr. 03, 2019	Jan. 13, 2020	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Apr. 03, 2019	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Apr. 03, 2019	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Apr. 03, 2019	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))	2.9 dB

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

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

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

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