FCC Test Report

APPLICANT	:	OnePlus Technology (Shenzhen) Co., Ltd.
EQUIPMENT	:	Smart Phone
BRAND NAME	:	ONEPLUS
MODEL NAME	:	KB2007
FCC ID	:	2ABZ2-EF009
STANDARD	:	47 CFR Part 15 Subpart B
CLASSIFICATION	:	Certification

The product was received on Jun. 15, 2020 and testing was completed on Jul. 04, 2020. We, Sporton International (ShenZhen) 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 (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager

ACCREDITED Cert #5145.01

Sporton International (ShenZhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen, 518055 People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC061509	Rev. 01	Initial issue of report	Aug. 24, 2020

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 11.43 dB at 0.160 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 10.29 dB at 90.140 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

OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04,18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen,Guangdong,China

1.2. Manufacturer

OnePlus Technology (Shenzhen) Co., Ltd.
18C02, 18C03, 18C04,18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen,Guangdong,China

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	ONEPLUS
Model Name	KB2007
FCC ID	2ABZ2-EF009
EUT supports Radios application	CDMA/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 / ANT+ GNSS/NFC
IMEI Code	Conduction: 990016770041901 Radiation: 990016770042016
HW Version	13
SW Version	11.1.0.1.KB09
EUT Stage	Production Unit

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 25 : 1850.7 MHz ~ 1914.3 MHz LTE Band 26 : 814.7 MHz ~ 848.3 MHz LTE Band 30 : 2307.5 MHz ~ 2312.5 MHz LTE Band 38 : 2572.5 MHz ~ 2617.5 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 48 : 3552.5 MHz ~ 3697.5 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5MHz CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA2000 BC10: 817.9 MHz ~ 823.1 MHz 5G NR n2: 1852.5 MHz ~ 1907.5 MHz 5G NR n5: 826.5 MHz ~ 846.5 MHz 5G NR n25: 1852.5 MHz ~ 1912.5 MHz 5G NR n41: 2506 MHz ~ 2680 MHz 5G NR n66: 1712.5 MHz ~ 1777.5 MHz 5G NR n71: 665.5 MHz ~ 695.5MHz 802.11b/g/n/ax: 2412 MHz ~ 2462 MHz 802.11a/n/ac/ax: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5720 MHz 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz ANT+ : 2402 MHz ~ 2480 MHz NFC : 13.56 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 13 : 748.5 MHz ~ 753.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz LTE Band 25 : 1930.7 MHz ~ 1994.3 MHz

	LTE Band 26 : 859.7 MHz ~ 893.3 MHz LTE Band 29 : 718.5 MHz ~ 726.5 MHz LTE Band 30 : 2352.5 MHz ~ 2357.5 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 48 : 3552.5 MHz ~ 3697.5 MHz LTE Band 66 : 2110.7 MHz~ 2199.3 MHz LTE Band 71: 619.5 MHz ~ 649.5MHz CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz CDMA2000 BC10: 862.9 MHz ~ 868.1 MHz 5G NR n2: 1932.5 MHz ~ 1987.5 MHz 5G NR n5: 871.5 MHz ~ 891.5 MHz 5G NR n25: 1932.5 MHz ~ 1992.5 MHz 5G NR n41: 2506 MHz ~ 2680 MHz 5G NR n66: 1712.5 MHz ~ 1777.5 MHz 5G NR n71: 665.5 MHz ~ 695.5MHz 802.11b/g/n/ax: 2412 MHz ~ 2462 MHz 802.11a/n/ac/ax: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5720 MHz 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz ANT+ : 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz; 1164 MHz ~ 1215MHz NFC : 13.56 MHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GNSS: PIFA Antenna ANT+: PIFA Antenna NFC : Loop Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK HSDPA/DC-HSDPA : QPSK HSUPA : QPSK HSPA+ : 16QAM DC-HSDPA : 64QAM LTE: QPSK / 16QAM / 64QAM / 256QAM 5G NR: DFT-s-OFDM (Pi/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM) CDMA2000 1xRTT: QPSK CDMA2000 1xEV-DO: QPSK/8PSK 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n/ac/ax : 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 ANT+: GFSK

Note :
1. GNSS Rx (1559MHz ~ 1610MHz) = GLONASS + GPS + BDS + Galileo + SBAS
2. GNSS Rx (1164MHz ~ 1215MHz) = Galileo + GPS

1.5. Modification of EUT

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

1.6. Test Location

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

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH01-SZ	CN1256	421272

1.7. Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24
2.	CO01-SZ	AUDIX	E3	6.120613b

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.

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).

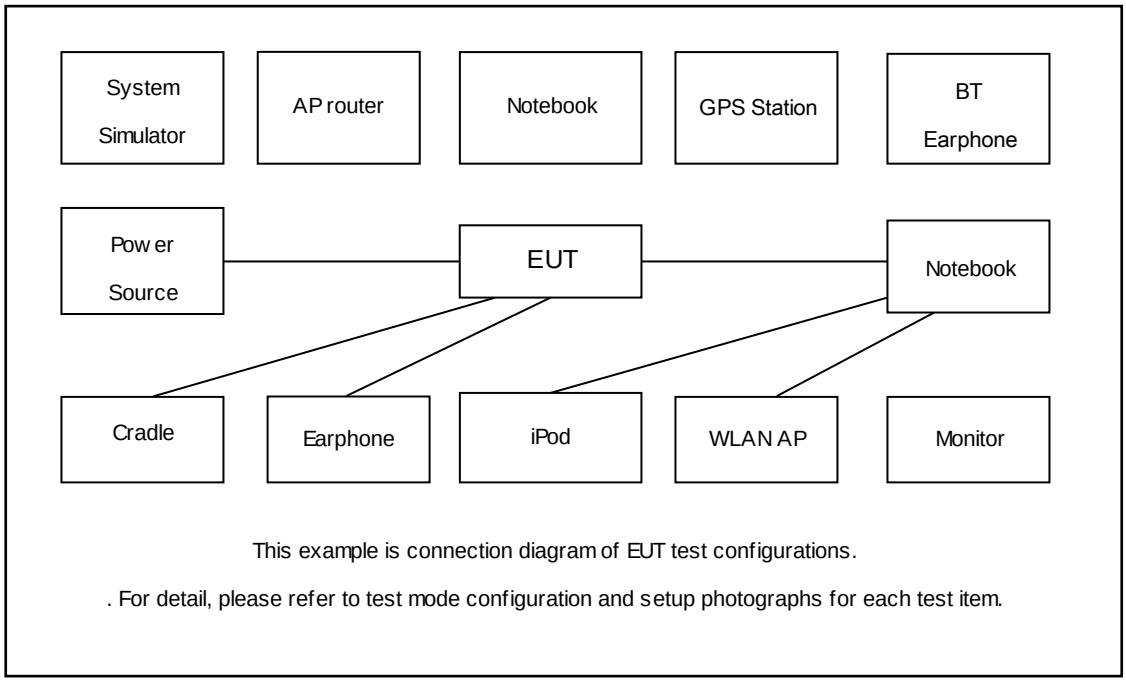
Test Items	Function Type
AC Conducted Emission	Mode 1 : GSM 850 Idle(Middle CH) + Camera(Rear) + USB Cable 1(Charging from Adapter) + Battery
	Mode 2 : CDMA BC10 Idle(High CH) + Camera(Front) + USB Cable 1(Charging from Adapter) + Battery
	Mode 3 : LTE Band 12 Idle(Low CH) + MPEG4(Colur bar) + USB Cable 1(Charging from Adapter) + Battery
	Mode 4 : LTE Band 7 Idle(High CH) + Camera(Rear) + USB Cable 2(Charging from Adapter 1) + Battery
	Mode 5 : NSA:2A_N5A Idle(Middle CH) + H-Pattern + USB Cable 1(Data Link with Notebook) + Battery
	Mode 6 : SA:N71 Idle(Middle CH) + H-Pattern + USB Cable 2(Data Link with Notebook) + Battery
	Mode 7 : GSM 850 Idle(Middle CH) + Camera(Rear) + USB Cable 1(Charging from Adapter) + Battery
	Mode 8 : GSM 850 Idle(Middle CH) + Camera(Rear) + USB Cable 1(Charging from Adapter) + Battery
	Mode 9 : GSM 850 Idle(Middle CH) + Camera(Rear) + USB Cable 1(Charging from Adapter) + Battery

Radiated Emissions	Mode 1 : GSM 850 Idle(Middle CH) + Camera(Rear) + USB Cable 1(Charging from Adapter) + Battery Mode 2 : CDMA BC10 Idle(High CH) + Camera(Front) + USB Cable 1(Charging from Adapter) + Battery Mode 3 : LTE Band 12 Idle(Low CH) + MPEG4(Colur bar) + USB Cable 1(Charging from Adapter) + Battery Mode 4 : LTE Band 7 Idle(High CH) + Camera(Front) + USB Cable 2(Charging from Adapter 1) + Battery Mode 5 : NSA:2A_N5A Idle(Middle CH) + H-Pattern + USB Cable 1(Data Link with Notebook) + Battery Mode 6 : SA:N71 Idle(Middle CH) + H-Pattern + USB Cable 2(Data Link with Notebook) + Battery Mode 7 : GSM 850 Idle(Middle CH) + MP3(Max volume) + Type C Earphone + Battery

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 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 all Low/Middle/High channel in the frequency bands bellow 1G, the worst frequency band and 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.	Base Station(LTE)	Anritsu	MT8820C	N/A	N/A	Unshielded,1.8m
2.	Base Station(5G NR)	Anritsu	MT8821C	N/A	N/A	Unshielded,1.8m
	Base Station	Keysight	UXM E7515B	Fcc DoC	N/A	Shielded, 1.5m
3.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded,1.8m
4.	WLAN AP	ASUSTek	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded,2.7m with Core
5.	Bluetooth Earphone	Samsung	EO-MG900	PYAHS-107W	N/A	N/A
6.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
7.	Notebook	DELL	Inspiron 15-7570	Fcc DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	Earphone	N/A	N/A	N/A	N/A	Unshielded,1.8m
9.	iPod	Apple	MC69029/A	N/A	N/A	N/A
10.	IPod	Apple	MC525 ZP/A	Fcc DoC	Shielded, 1.0m	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or LTE or 5G NR or CDMA2000 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 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.

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.

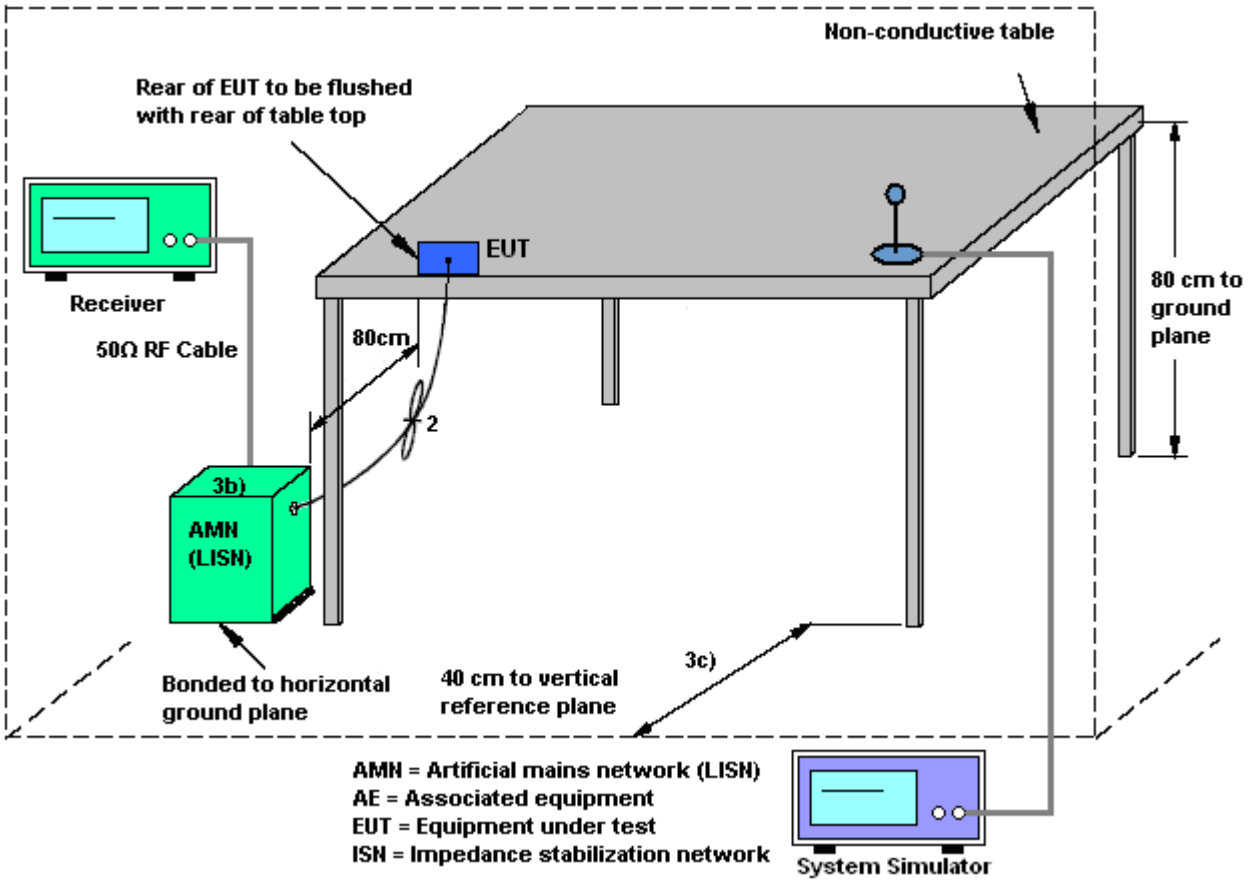
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

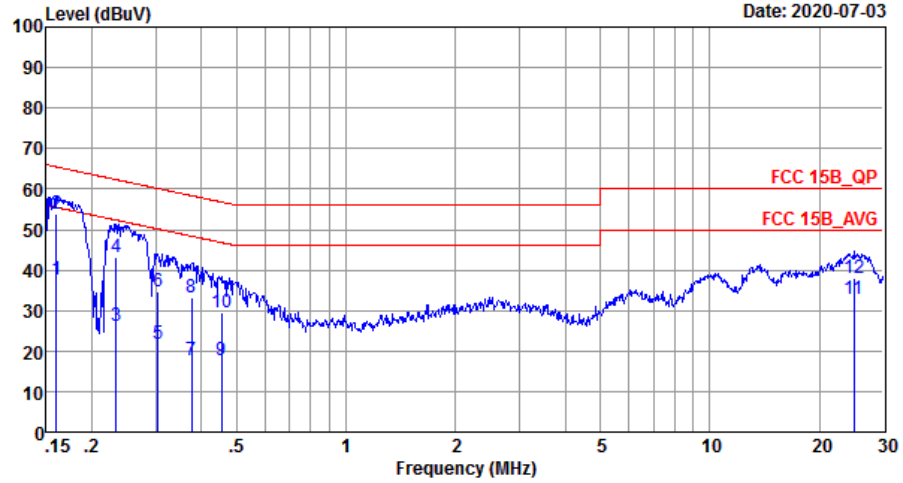
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

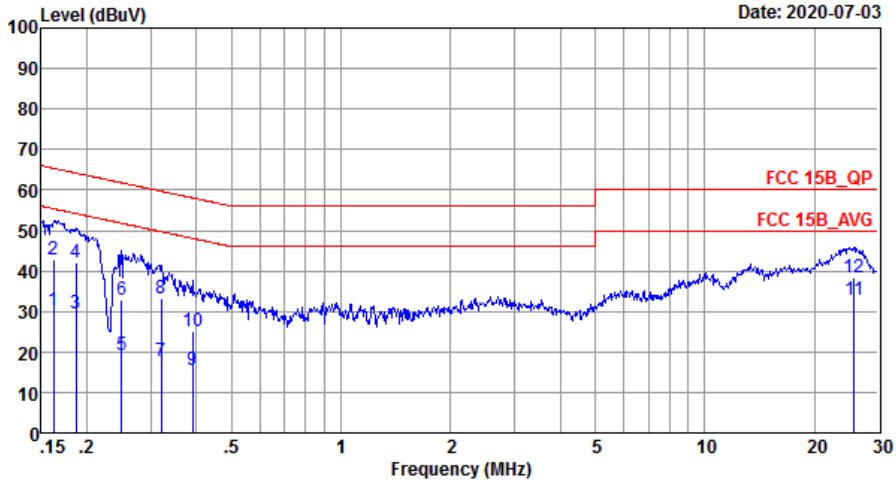
Test Engineer :	Doom Wu	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_20190719_L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.16	37.54	-17.93	55.47	27.50	0.03	10.01	Average
2	*	0.16	54.04	-11.43	65.47	44.00	0.03	10.01	QP
3		0.23	26.24	-26.11	52.35	16.20	0.03	10.01	Average
4		0.23	43.34	-19.01	62.35	33.30	0.03	10.01	QP
5		0.30	21.74	-28.41	50.15	11.70	0.03	10.01	Average
6		0.30	34.64	-25.51	60.15	24.60	0.03	10.01	QP
7		0.38	17.64	-30.70	48.34	7.60	0.03	10.01	Average
8		0.38	33.04	-25.30	58.34	23.00	0.03	10.01	QP
9		0.45	17.76	-29.04	46.80	7.70	0.02	10.04	Average
10		0.45	29.56	-27.24	56.80	19.50	0.02	10.04	QP
11		24.92	32.71	-17.29	50.00	21.01	1.36	10.34	Average
12		24.92	37.91	-22.09	60.00	26.21	1.36	10.34	QP

Test Engineer :	Doom Wu	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15B_QP LISN_20190719_N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.16	30.44	-24.90	55.34	20.40	0.03	10.01	Average
2		0.16	42.84	-22.50	65.34	32.80	0.03	10.01	QP
3		0.19	29.44	-24.76	54.20	19.40	0.03	10.01	Average
4		0.19	42.04	-22.16	64.20	32.00	0.03	10.01	QP
5		0.25	19.14	-32.64	51.78	9.10	0.03	10.01	Average
6		0.25	32.74	-29.04	61.78	22.70	0.03	10.01	QP
7		0.32	17.84	-31.87	49.71	7.80	0.03	10.01	Average
8		0.32	33.34	-26.37	59.71	23.30	0.03	10.01	QP
9		0.39	15.63	-32.40	48.03	5.60	0.02	10.01	Average
10		0.39	25.03	-33.00	58.03	15.00	0.02	10.01	QP
11	*	25.73	32.70	-17.30	50.00	21.30	1.05	10.35	Average
12		25.73	38.20	-21.80	60.00	26.80	1.05	10.35	QP

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.2.2. Measuring Instruments

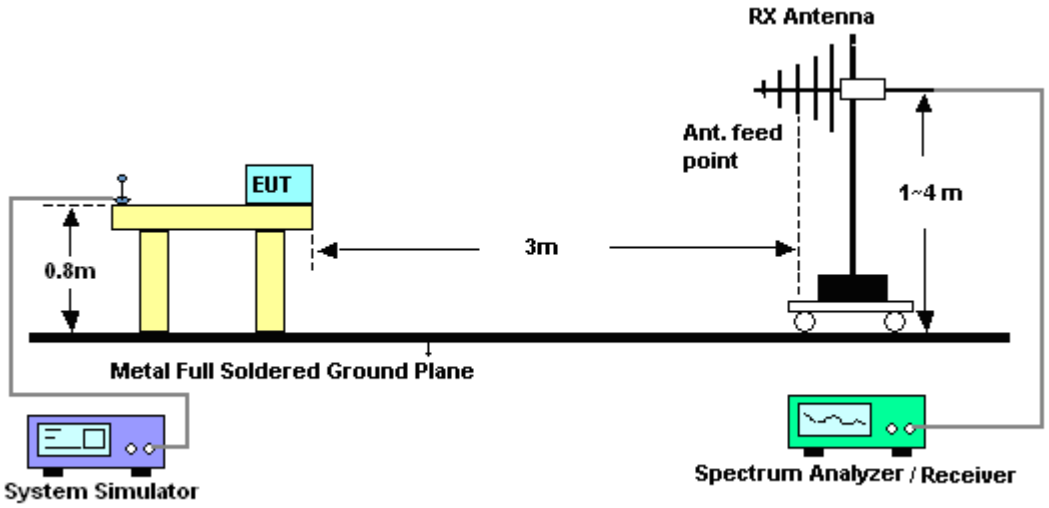
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

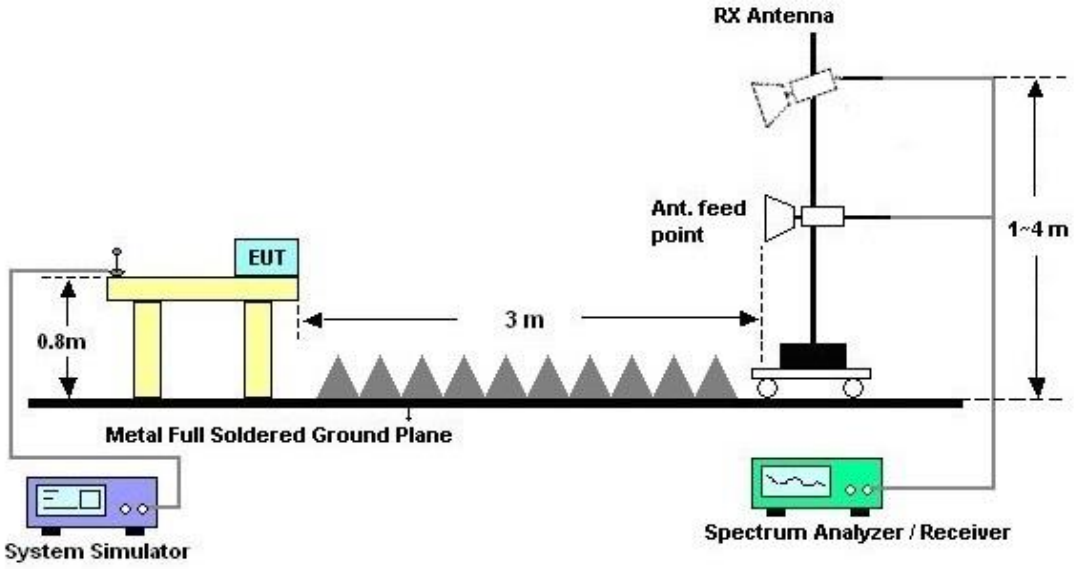
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBμV/m) = 20 log Emission level (μV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

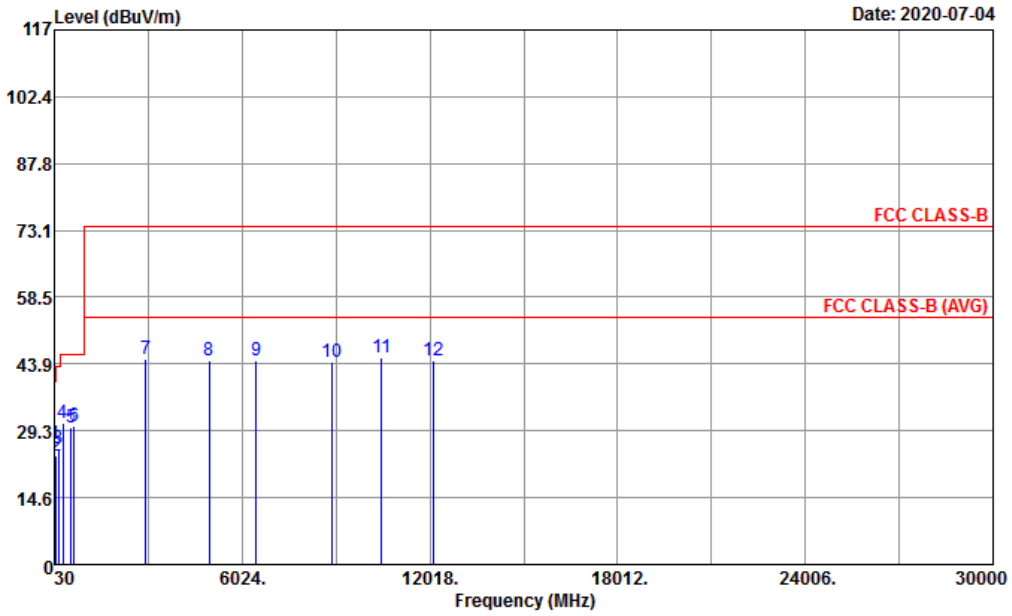


For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

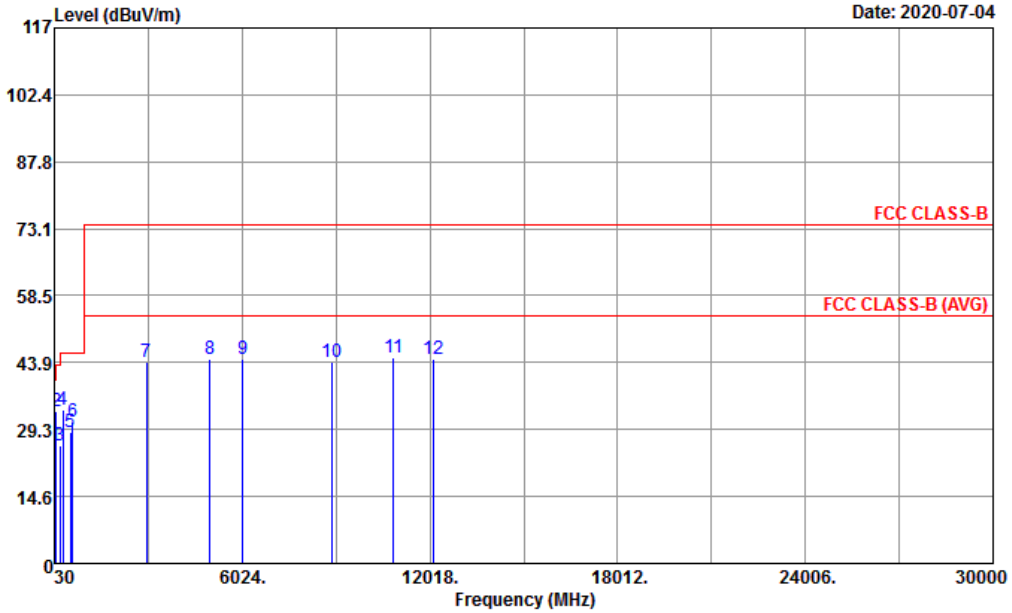
Test Engineer :	Xiaoshi Tan & Reid Huang	**Temperature :**	24~25°C
		Relative Humidity :	48~49%
Test Distance :	3m	**Polarization :**	Horizontal
Remark :	#6 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
Condition : FCC CLASS-B 3m LF_ANT(35408)_2019 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	30.00	26.40	-13.60	40.00	31.79	24.90	1.01	31.30	174	35	Peak
2	91.11	23.74	-19.76	43.50	38.15	15.40	1.74	31.55	---	---	Peak
3	160.95	25.34	-18.16	43.50	38.24	16.17	2.31	31.38	---	---	Peak
4	296.75	31.08	-14.92	46.00	40.13	19.27	3.10	31.42	---	---	Peak
5	554.77	30.01	-15.99	46.00	31.91	25.20	4.24	31.34	---	---	Peak
6	649.83	30.24	-15.76	46.00	31.65	25.40	4.59	31.40	---	---	Peak
7	2952.00	44.98	-29.02	74.00	58.98	33.45	9.89	57.34	---	---	Peak
8	4962.00	44.76	-29.24	74.00	52.99	34.89	14.46	57.58	---	---	Peak
9	6476.00	44.81	-29.19	74.00	52.56	36.27	14.15	58.17	---	---	Peak
10	8914.00	44.23	-29.77	74.00	47.93	37.05	18.27	59.02	---	---	Peak
11	10478.00	45.33	-28.67	74.00	45.21	38.50	20.48	58.86	---	---	Peak
12	12125.00	44.51	-29.49	74.00	40.98	39.85	20.96	57.28	---	---	Peak

Test Engineer :	Xiaoshi Tan & Reid Huang	**Temperature :**	24~25°C
		Relative Humidity :	48~49%
Test Distance :	3m	**Polarization :**	Vertical
Remark :	#6 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
Condition : FCC CLASS-B 3m LF_ANT(35408)_2019 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	30.00	25.60	-14.40	40.00	30.99	24.90	1.01	31.30	---	---	Peak
2	90.14	33.21	-10.29	43.50	47.78	15.20	1.73	31.50	154	136	Peak
3	198.78	25.60	-17.90	43.50	38.59	15.75	2.56	31.30	---	---	Peak
4	305.48	33.54	-12.46	46.00	42.32	19.46	3.15	31.39	---	---	Peak
5	553.80	28.78	-17.22	46.00	30.64	25.22	4.24	31.32	---	---	Peak
6	624.61	30.95	-15.05	46.00	32.70	25.25	4.51	31.51	---	---	Peak
7	2968.00	44.02	-29.98	74.00	57.98	33.47	9.89	57.32	---	---	Peak
8	4990.00	44.72	-29.28	74.00	52.96	34.90	14.46	57.60	---	---	Peak
9	6038.00	44.65	-29.35	74.00	51.91	35.93	14.45	57.64	---	---	Peak
10	8890.00	44.04	-29.96	74.00	48.00	37.03	18.03	59.02	---	---	Peak
11	10868.00	45.03	-28.97	74.00	44.53	38.36	20.59	58.45	---	---	Peak
12	12155.00	44.77	-29.23	74.00	41.24	39.86	20.98	57.31	---	---	Peak

Note:

1. Level(dBμV/m) = Read Level(dBμV) + Antenna Factor(dB/m) + Cable Loss(dB) - Preamp Factor(dB)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Jul. 22, 2019	Jul. 04, 2020	Jul. 21, 2020	Radiation (03CH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 17, 2020	Jul. 04, 2020	Apr. 16, 2021	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5Ghz	Dec. 27, 2019	Jul. 04, 2020	Dec. 26, 2020	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 19, 2019	Jul. 04, 2020	Jul. 18, 2020	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Aug. 27, 2019	Jul. 04, 2020	Aug. 26, 2020	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 17, 2020	Jul. 04, 2020	Apr. 16, 2021	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2019	Jul. 04, 2020	Oct. 17, 2020	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 22, 2019	Jul. 04, 2020	Jul. 21, 2020	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 17, 2020	Jul. 04, 2020	Apr. 16, 2021	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	6160100019885	N/A	NCR	Jul. 04, 2020	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jul. 04, 2020	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jul. 04, 2020	NCR	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2018	Jul. 03, 2020	Dec. 25, 2020	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Oct. 17, 2019	Jul. 03, 2020	Oct. 16, 2020	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 17, 2019	Jul. 03, 2020	Oct. 16, 2020	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	NCR	Jul. 03, 2020	NCR	Conduction (CO01-SZ)

NCR: No Calibration Required

5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.7dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.7dB

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))	4.3dB