

FCC

EMC

TEST REPORT

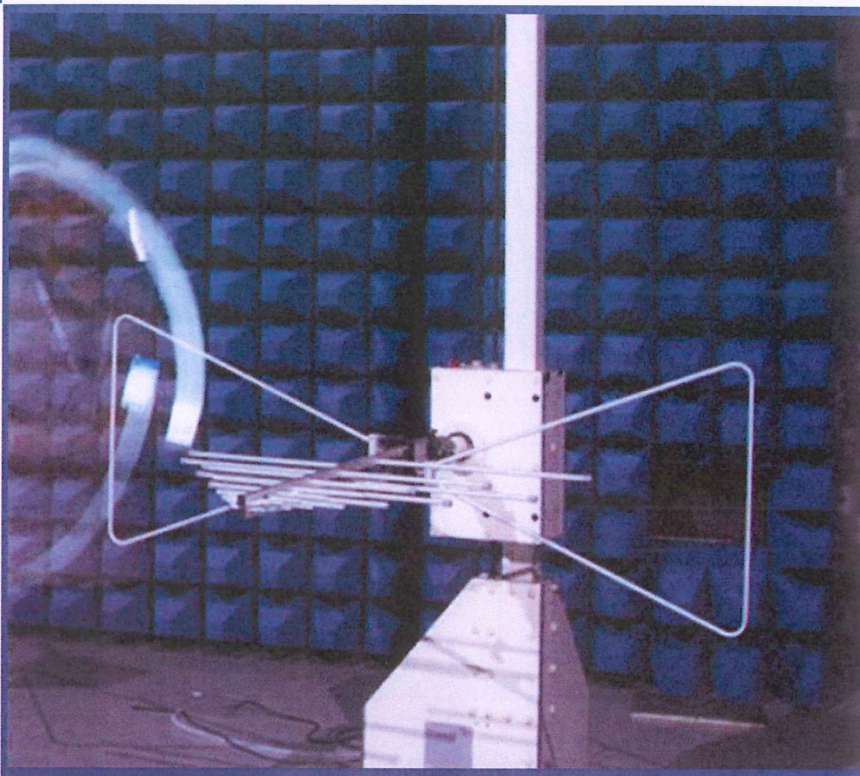
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Notebook Computer

ISSUED TO
Huawei Technologies Co., Ltd.

Administration Building, Headquarters of Huawei Technologies Co.,
Ltd., Bantian, Longgang District, Shenzhen, 518129, China



Tested by: Xia Long
Xia Long

(Engineer)

Date

Jul. 02, 2019

Approved by: Wei Yanquan

Wei Yanquan

(Chief Engineer)

Date

Jul. 02, 2019

Report No.: BL-SZ1940136-401

EUT Name: Notebook Computer

Model Name: HN-W19, HN-W29

Brand Name: HUAWEI

Test Standard: 47 CFR Part 15 Subpart B

FCC ID: QISHN-WX9

Test Conclusion: Pass

Test Date: Apr. 08, 2019 ~ Apr. 11, 2019

Date of Issue: Jul. 02, 2019

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Jul. 02, 2019</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025.The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report refer to the BALUN report mode v6.7.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Huawei Technologies Co., Ltd.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China

2.2 Manufacturer Information

Manufacturer	Huawei Technologies Co., Ltd.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Notebook Computer
Model Name Under Test	HN-W19, HN-W29
Series Model Name	HN-WXXXXX (The "X" in model name can be 0 to 9, A to Z, a to z, "-" or blank, only differences are model names for trading purpose)
Description of Model name differentiation	Refer section 2.5
Hardware Version	NX8311_PCB_MB
Software Version	2.191.0.7(C001)
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Differences Description

Key component List	
CPU	AMD R7-3700U/ AMD R5-3500U
Memory	8G
SSD	512G/256G
1. ALL models are identical each other, except appearance and model name and CPU and SSD. 2. Tested all mode on model HN-W29 (AMD R7-3700U+8G+512G), the model HN-W19 (AMD R5-3500U+8G+256G) test the worst case of each item on HN-W29.	

2.6 Ancillary Equipment

Ancillary Equipment 1	Rechargeable Li-ion Polymer Battery	
	Brand Name	HUAWEI
	Model No.	HB4593J6ECW
	Serial No.	N/A
	Capacity	3660 mAh
	Rated Voltage	11.4 V
	Limit Charge Voltage	13.05 V
Ancillary Equipment 2	Adapter 1	
	Brand Name	HUAWEI
	Model No.	HW-200325BP0 (UK Plug)
	Serial No.	C978Y9J7F00037
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 3	Adapter 2	
	Brand Name	HUAWEI
	Model No.	HW-200325UP0 (US Plug)
	Serial No.	C976Y1J8P00106
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 4	Adapter 3	
	Brand Name	HUAWEI
	Model No.	HW-200325EP0 (EU Plug)
	Serial No.	C974Y1J8W01182
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 5	Adapter 4	
	Brand Name	HUAWEI
	Model No.	HW-200325CP0 (GB Plug)
	Serial No.	C973Y1J5S01577
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 6	Adapter 5	
	Brand Name	HUAWEI
	Model No.	HW-200325AP0 (AU Plug)
	Serial No.	C973Y1J7800783

	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 7	USB-A to RJ45	
	Model No.	AD70
	Serial No.	48XJU17A18011914
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 8	Docking Station	
	Model No.	AD11
	Serial No.	N/A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 9	USB Cable	
	Length (Approx.)	1.8 m
Ancillary Equipment 10	USB-C to USB-A	
Note: All adapter models only with different plug for marketing purpose. We select HW-200325UP0 (US Plug) during testing.		

2.7 Technical Information

Network and Wireless connectivity	WIFI, Bluetooth
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3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 15 Subpart B (10-1-17 Edition)	Unintentional Radiators
2	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low- Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

3.2 Verdict

No.	Description	FCC Rule	Test Verdict	Result
1	Radiated Emission	15.109	Pass	Annex A .1
2	Conducted Emission, AC Ports	15.107	Pass	Annex A .2

3.3 Test Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	3.23 dB
Radiated emissions (30 MHz-1 GHz)	4.30 dB
Radiated emissions (1 GHz-18 GHz)	4.81 dB
Radiated emissions (18 GHz-40 GHz)	5.71 dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

Environment Parameter	Selected Values During Tests			
	Temperature	Voltage	Relative Humidity	Ambient Pressure
Normal Temperature, Normal Voltage (NTNV)	23°C to 25°C	AC 120 V/60 Hz or DC 11.4 V from Battery	50% to 55%	100 kPa to 102 kPa

4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2018.06.13	2019.06.12	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-977	2017.07.22	2019.07.21	☒
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1600	2018.07.11	2020.07.10	☐
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2018.08.08	2020.08.07	☒
Test Software	BALUN	BL410_E	V18.705	--	--	☒

Radiated Emission Test For Frequency 1 GHz-18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2018.11.07	2019.11.06	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2017.07.22	2019.07.21	☐
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2018.07.11	2020.07.10	☒
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2020.02.20	☒
Test Software	BALUN	BL410_E	V18.717	--	--	☒

Radiated Emission Test For Frequency Above 18 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE & SCHWARZ	FSV40	101544	2019.02.15	2020.02.14	☒
Test Antenna-Horn	A-INFOMW	LB-180400KF	J211060273	2019.01.05	2020.01.04	☒
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2020.02.20	☒
Test Software	BALUN	BL410_E	V18.717	--	--	☒

Conducted Emission Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWA RZ	ESRP	101036	2018.06.13	2019.06.12	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2018.06.13	2019.06.12	☒
LISN	SCHWARZBECK	NNLK 8129	8129-462	2018.11.07	2019.11.06	☐
ISN	TESEQ	ISN T800	34449	2018.12.04	2019.12.03	☐
Shielded Enclosure	ChangNing	CN-130701	130703	N/A	N/A	☒
Test Software	BALUN	BL410_E	V18.717	--	--	☒

4.3 Test Enclosure list

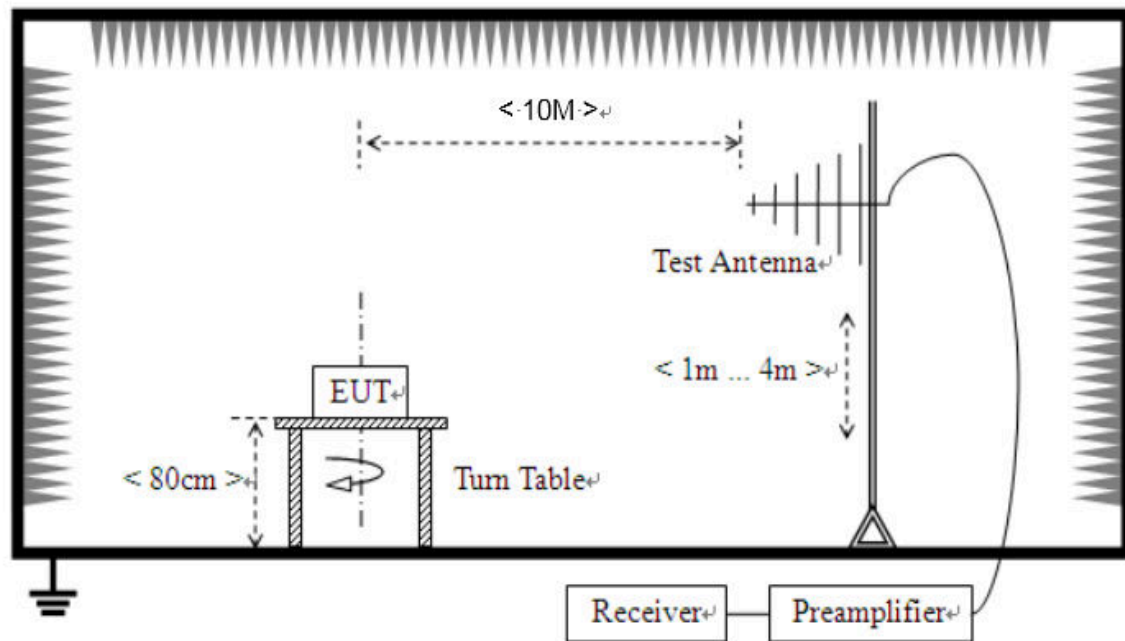
Description	Manufacturer	Model	Serial No.	Length	Description	Use
Laptop	Lenovo	E31-80	R3026PU9	N/A	N/A	☒
Mobile Disk	WD Element	WDBUZG0010BB K	WXA1A48LD 5JT	N/A	N/A	☒
HDMI Cable	N/A	N/A	N/A	1.5 m	Shielded with core	☒
VGA Cable	N/A	N/A	N/A	1.0 m	Shielded with core	☒
Earphone	OPPO	N/A	N/A	1.1 m	N/A	☒
RJ45 Cable	N/A	N/A	N/A	1.0 m	Shielded with core	☒
WIFI Router	TP-LINK	TL-WDR7500	N/A	N/A	N/A	☒
Display Screen	SAMSUNG	S24B360HL	0ZK6STQK51 0032P	N/A	N/A	☒
Display Screen	ASUS	MX27U	H9LMRS0334 74	N/A	N/A	☒
TYPE-C to USB Connector	UGREEN	N/A	N/A	N/A	N/A	☒

4.4 Test Configurations

Test Mode	
Mode 1:	Charging + Earphone + Mobile Disk + Video Playing + WIFI + BT ON + Burn-in test
Mode 2:	Charging + USB + Dock (USB C + USB-A + HDMI Playing)
Mode 3:	Charging + USB + Dock (USB C + USB-A + VGA Playing)
Mode 4:	Charging + Camera On
Mode 5:	Charging + Data Transmitting (USB C + USB-A)
Mode 6:	Charging + Data Transmitting (USB C + USB-A) + Camera On + Earphone + Video Playing + WIFI + BT ON + Burn-in test
Mode 7:	Charging + LAN + Camera On + Earphone + Video Playing + WIFI + BT ON + Burn-in test

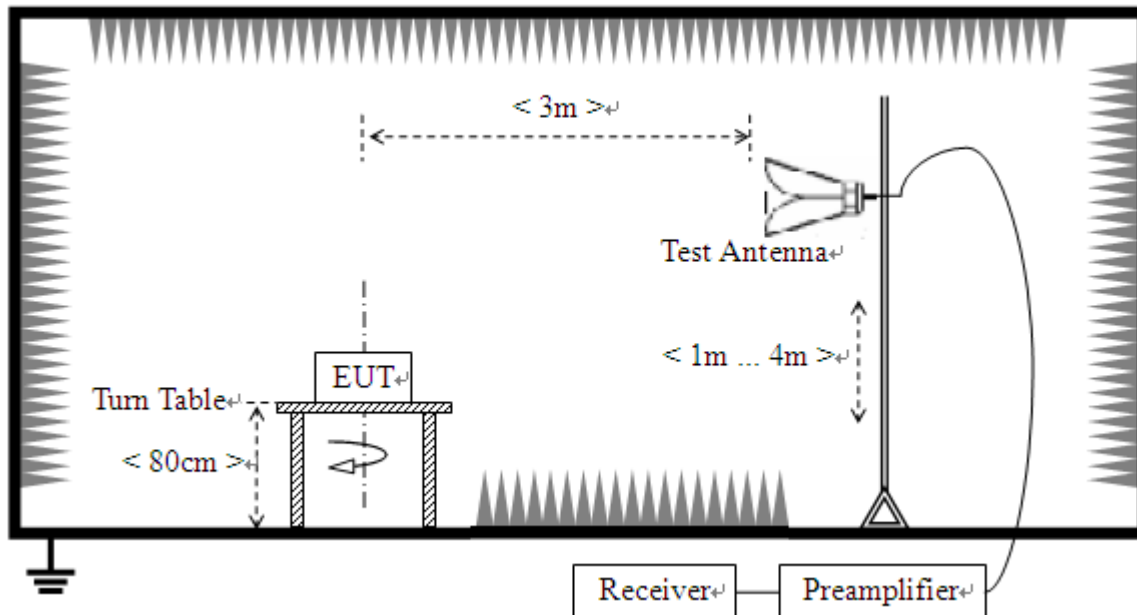
4.5 Test Setups

Test Setup 1



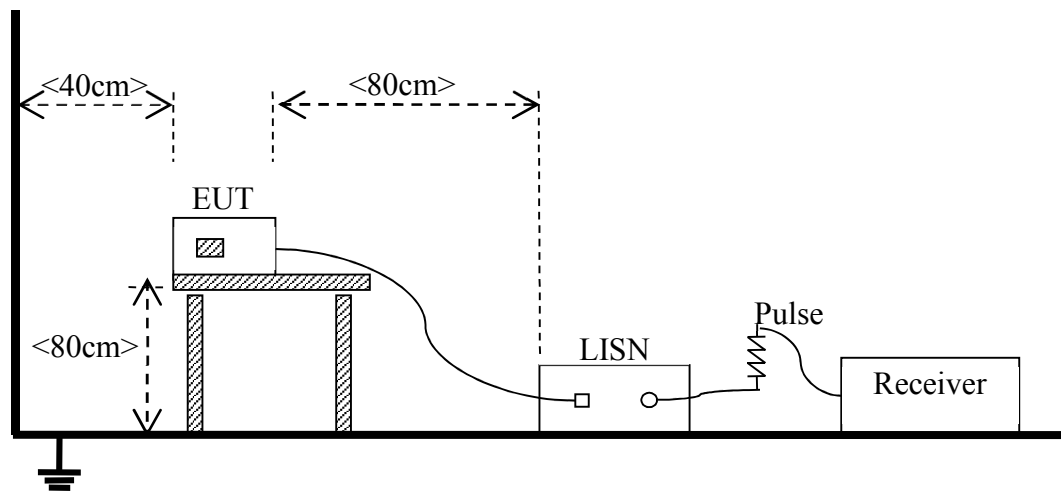
(For Radiated Emission Test (30 MHz-1 GHz))

Test Setup 2



(For Radiated Emission Test (above 1 GHz))

Test Setup 3



(For Conducted Emission, AC Ports Test)

4.6 Test Conditions

Test Case	Test Conditions	
Radiated Emission	Test Env.	NTNV
	Test Setup	Test Setup 1&2
	Test Configuration	Mode 1 ~ Mode 7 ^{Note}
Conducted Emission	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	Mode 1 ~ Mode 7 ^{Note}

Note:

- 1) If there is one kind of accessories with different models, each one should be applied throughout the compliance test respectively, however, only the worst case will be recorded in this report.
- 2) If EUT has more than one typical operation, only the worst test mode will be recorded in this report.

Worst Case:

1) Radiated Emission

Mode 7: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + LAN + Camera On + Earphone + Video Playing + WIFI + BT ON + Burn-in test. This result is the worst case. (30MHz-1GHz).
Mode 2: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + USB + Dock (USB C + USB-A + HDMI Playing). This result is the worst case. (1GHz-18GHz).
Mode 2: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + USB + Dock (USB C + USB-A + HDMI Playing). This result is the worst case. (18GHz-40GHz).

2) Conducted Emission

Mode 4: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + Camera On. This result is the worst case.

5 TEST ITEMS

5.1 Emission Tests

5.1.1 Radiated Emission

5.1.1.1 Limit

Frequency range (MHz)	Class B (at 3 m)		Class B (at 10 m)	Class A (at 10 m)	
	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)
30 - 88	100	40	30	90	39
88 - 216	150	43.5	33.5	150	43.5
216 - 960	200	46	36	210	46.4
Above 960	500	54	44	300	49.5

NOTE:

- 1) Field Strength (dB $\mu\text{V/m}$) = $20 \times \log [\text{Field Strength } (\mu\text{V/m})]$.
- 2) In the emission tables above, the tighter limit applies at the band edges.

5.1.1.2 Test Setup

Refer to 4.5 section (test setup 1 to test setup 2) for radiated emission test, the photo of test setup please refer to ANNEX B.

5.1.1.3 Test Procedure

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

5.1.1.4 Test Result

Please refer to ANNEX A.1.

NOTE:

1. Results (dB $\mu\text{V/m}$) = Reading (dB μV) + Factor (dB/m)

The reading level is calculated by software which is not shown in the sheet

2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Amplifier Gain (dB)

3. Over limit = Results – Limit.

5.1.2 Conducted Emission

5.1.2.1 Test Limit

Frequency range (MHz)	Class A	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- 1) The lower limit shall apply at the band edges.
- 2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.

5.1.2.2 Test Setup

Refer to 4.5 section test (test setup 3) for conducted emission, the photo of test setup please refer to ANNEX B.

5.1.2.3 Test Procedure

The EUT is connected to the power mains through a LISN which provides 50 Ω /50 μ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

$$1. \text{ Results (dB}\mu\text{V/m)} = \text{Reading (dB}\mu\text{V)} + \text{Factor (dB/m)}$$

The reading level is calculated by software which is not shown in the sheet

$$2. \text{ Factor} = \text{Insertion loss} + \text{Cable loss}$$

$$3. \text{ Over limit} = \text{Results} - \text{Limit.}$$

ANNEX A TEST RESULTS

A.1 Radiated Emission

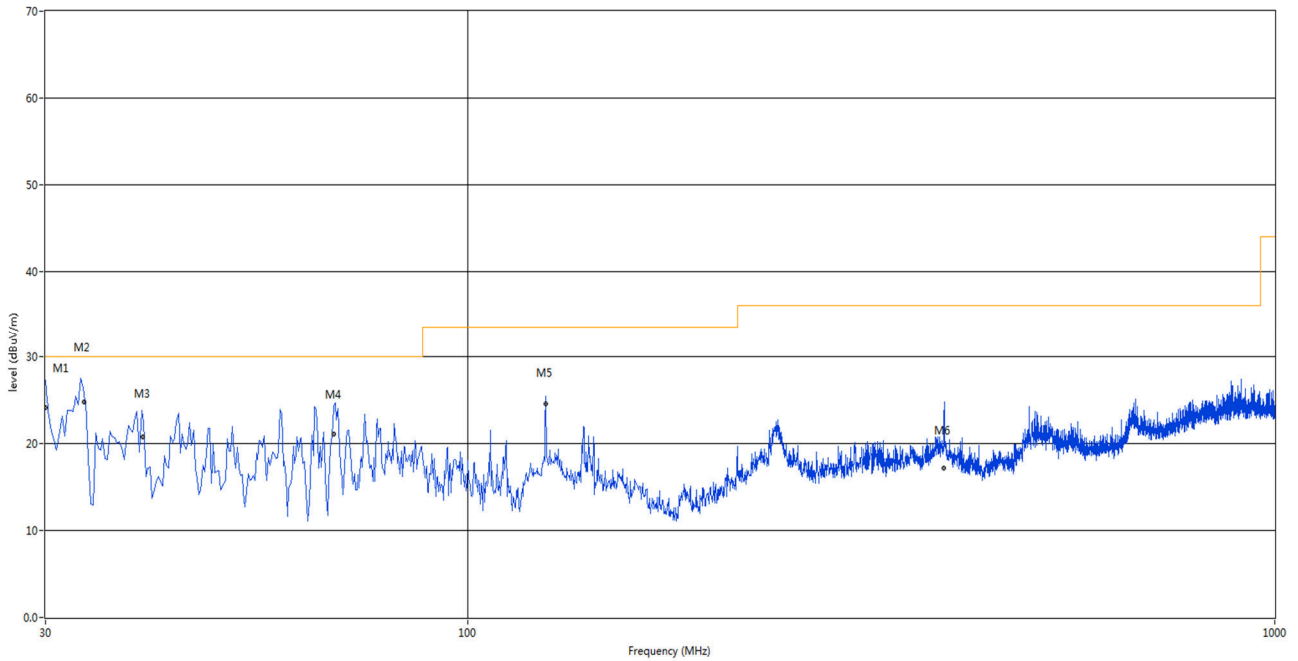
Note 1: The symbol of “--” in the table which means not application.

Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Test Data and Plots

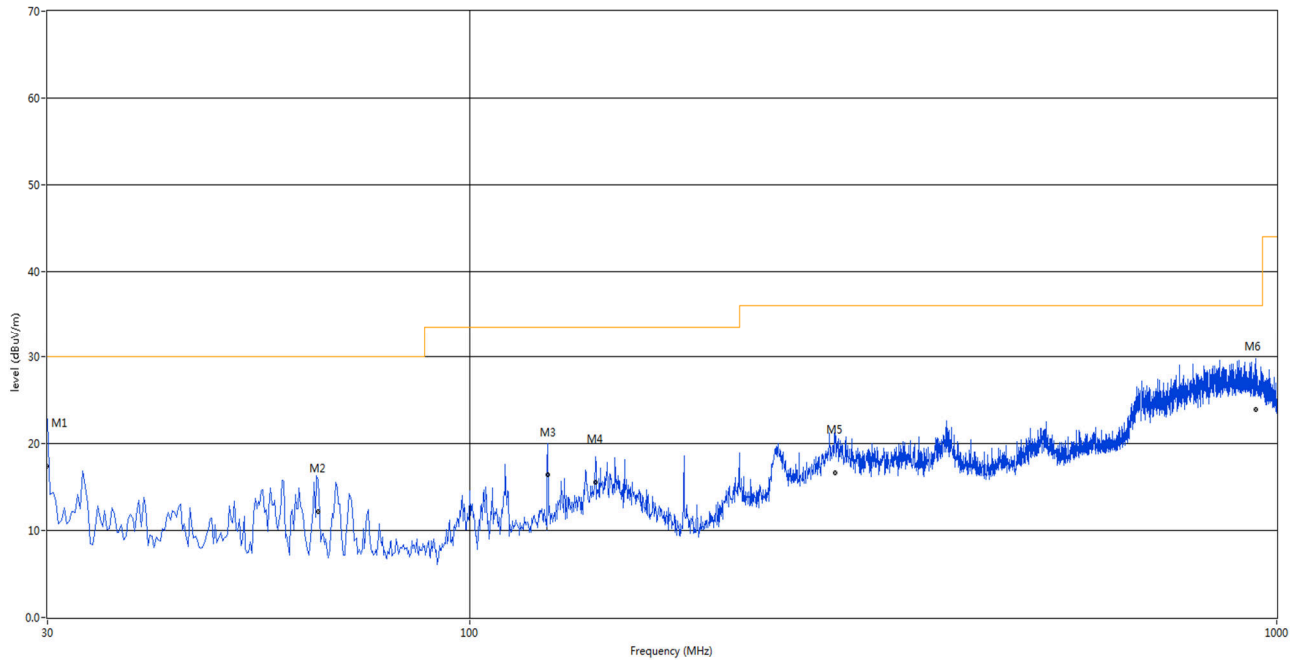
Test Mode 7: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + LAN + Camera On + Earphone + Video Playing + WIFI + BT ON + Burn-in test

A.1.1 Test Antenna Vertical, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	30.000	30.25	-27.47	30.0	0.25	Peak	268.00	159	V	N/A
1*	30.000	24.22	-27.47	30.0	-5.78	QP	268.00	159	V	Pass
2	33.447	28.20	-27.42	30.0	-1.80	Peak	300.00	166	V	N/A
2*	33.447	24.94	-27.42	30.0	-5.06	QP	300.00	166	V	Pass
3	39.552	23.54	-26.80	30.0	-6.46	Peak	0.00	319	V	N/A
3*	39.552	20.78	-26.80	30.0	-9.22	QP	0.00	319	V	Pass
4	68.223	23.61	-29.45	30.0	-6.39	Peak	167.00	212	V	N/A
4*	68.223	21.15	-29.45	30.0	-8.85	QP	167.00	212	V	Pass
5	124.994	26.02	-27.62	33.5	-7.48	Peak	268.00	108	V	N/A
5*	124.994	24.57	-27.62	33.5	-8.93	QP	268.00	108	V	Pass
6	389.400	26.28	-23.40	36.0	-9.72	Peak	224.00	113	V	N/A
6*	389.400	17.22	-23.40	36.0	-18.78	QP	224.00	113	V	Pass

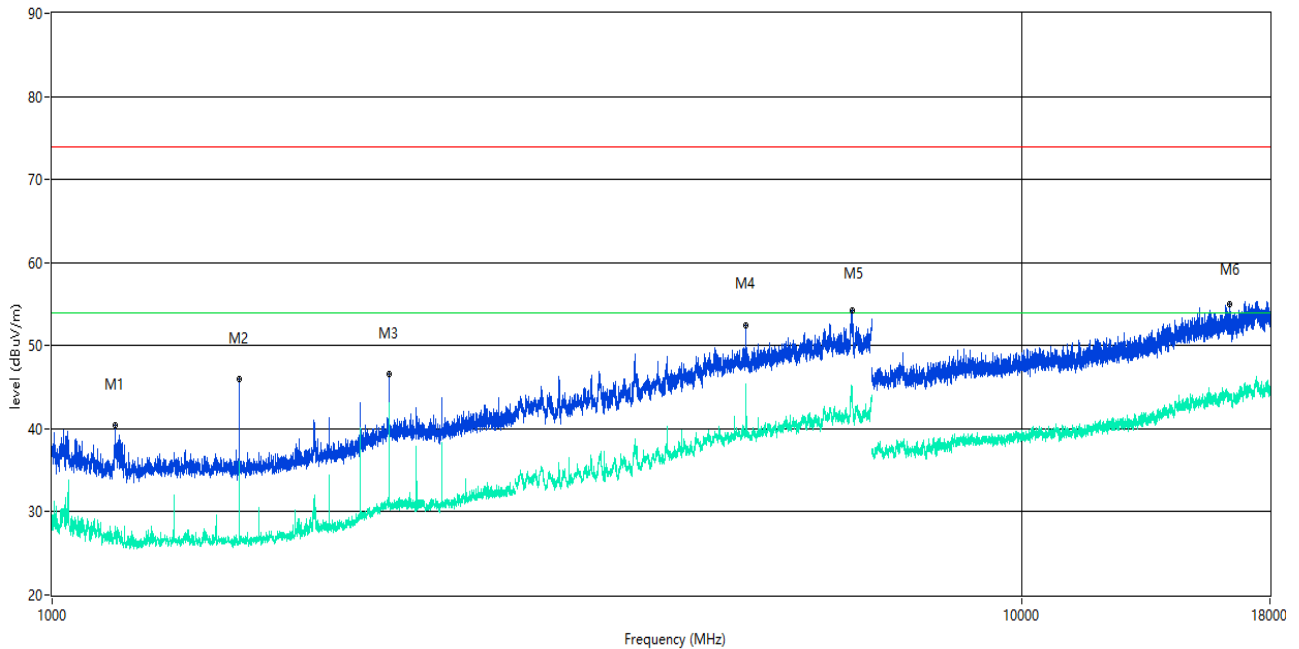
A.1.2 Test Antenna Horizontal, 30 MHz – 1 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	30.000	23.43	-27.47	30.0	-6.57	Peak	220.00	400	H	N/A
1*	30.000	18.55	-27.47	30.0	-11.45	QP	220.00	400	H	Pass
2	66.615	17.02	-27.78	30.0	-12.98	Peak	360.00	400	H	N/A
2*	66.615	13.16	-27.78	30.0	-16.84	QP	360.00	400	H	Pass
3	125.060	20.08	-27.62	33.5	-13.42	Peak	16.00	200	H	N/A
3*	125.060	17.16	-27.62	33.5	-16.34	QP	16.00	200	H	Pass
4	143.235	21.39	-26.28	33.5	-12.11	Peak	206.00	226	H	N/A
4*	143.235	15.56	-26.28	33.5	-17.94	QP	206.00	226	H	Pass
5	283.647	22.71	-26.15	36.0	-13.29	Peak	256.00	322	H	N/A
5*	283.647	16.61	-26.15	36.0	-19.39	QP	256.00	322	H	Pass
6	942.643	28.93	-11.48	36.0	-7.07	Peak	211.00	119	H	N/A
6*	942.643	23.90	-11.48	36.0	-12.10	QP	211.00	119	H	Pass

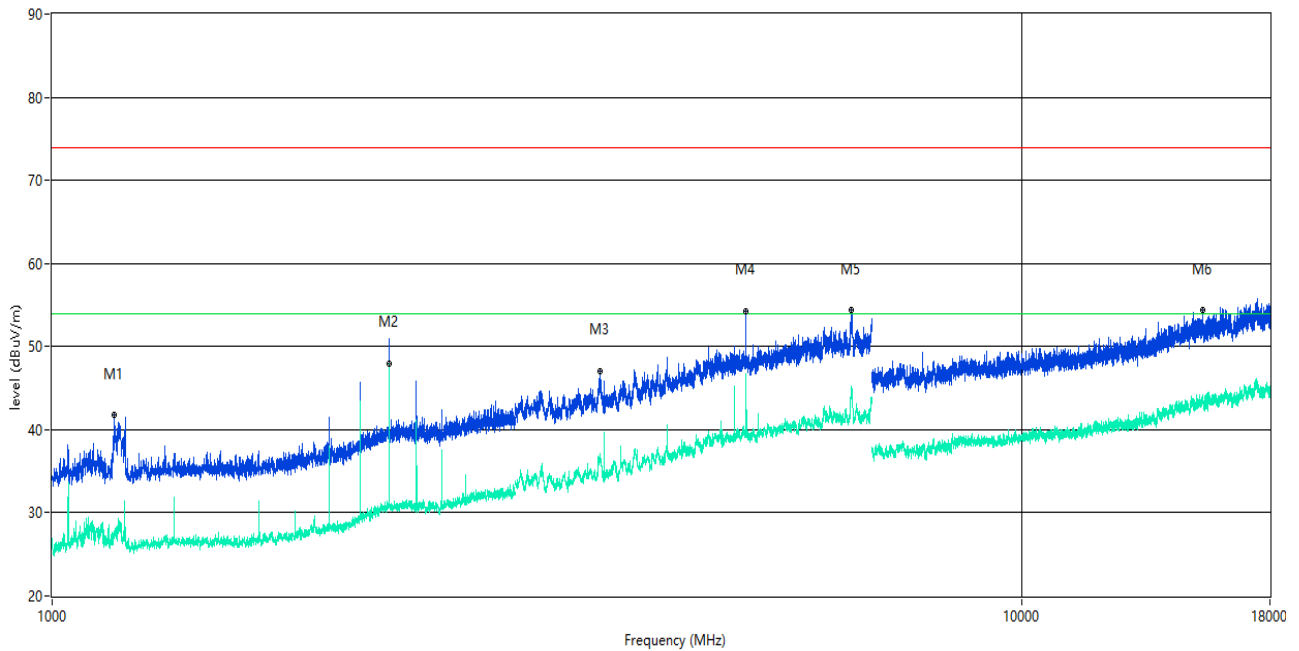
Test Mode 2: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + USB + Dock (USB C + USB-A + HDMI Playing)

A.1.3 Test Antenna Vertical, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1161.500	28.12	-17.90	54.0	-25.88	AV	154.00	100	V	Pass
1	1161.500	40.40	-17.90	74.0	-33.60	Peak	154.00	100	V	Pass
2**	1560.000	33.31	-17.74	54.0	-20.69	AV	132.00	100	V	Pass
2	1560.000	45.93	-17.74	74.0	-28.07	Peak	132.00	100	V	Pass
3**	2225.500	41.71	-12.68	54.0	-12.29	AV	335.00	100	V	Pass
3	2225.500	46.57	-12.68	74.0	-27.43	Peak	335.00	100	V	Pass
4**	5192.000	39.75	-2.76	54.0	-14.25	AV	228.00	100	V	Pass
4	5192.000	52.49	-2.76	74.0	-21.51	Peak	228.00	100	V	Pass
5**	6673.000	45.04	1.94	54.0	-8.96	AV	137.00	100	V	Pass
5	6673.000	54.32	1.94	74.0	-19.68	Peak	137.00	100	V	Pass
6**	16360.688	43.86	2.48	54.0	-10.14	AV	282.00	100	V	Pass
6	16360.688	55.03	2.48	74.0	-18.97	Peak	282.00	100	V	Pass

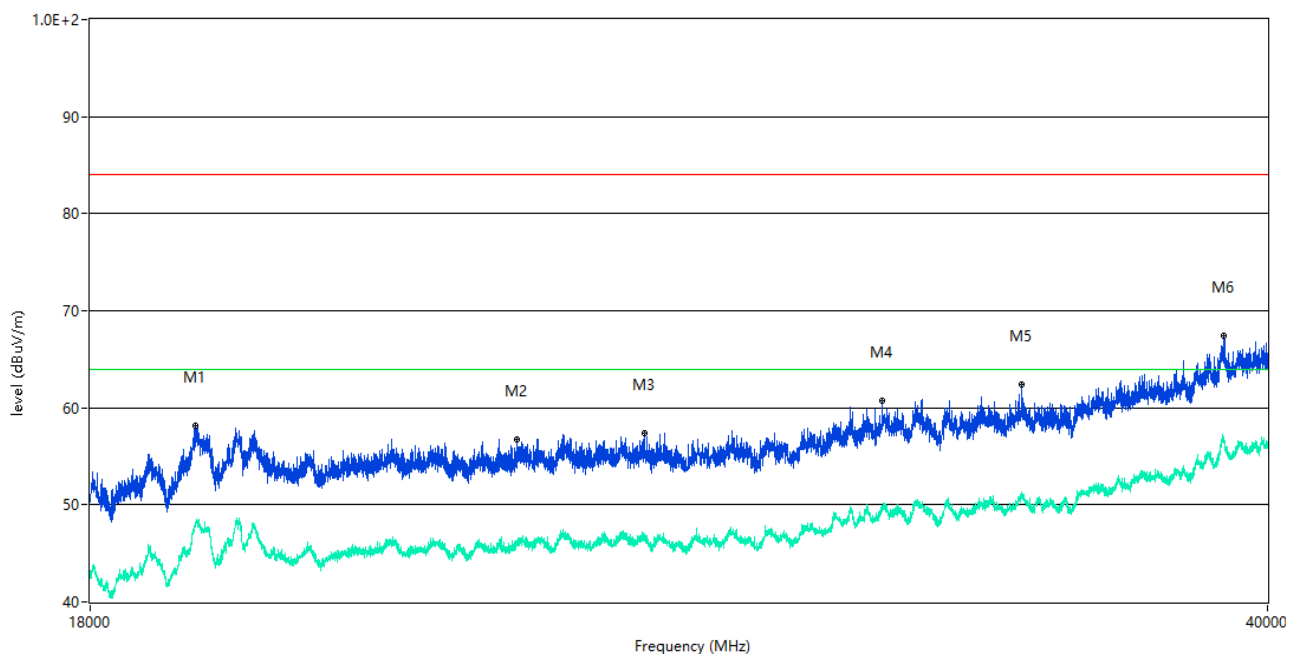
A.1.4 Test Antenna Horizontal, 1 GHz – 18 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1160.000	27.70	-17.75	54.0	-26.30	AV	280.00	100	H	Pass
1	1160.000	41.74	-17.75	74.0	-32.26	Peak	280.00	100	H	Pass
2**	2226.000	47.87	-12.72	54.0	-6.13	AV	142.00	100	H	Pass
2	2226.000	47.85	-12.72	74.0	-26.15	Peak	142.00	100	H	Pass
3**	3673.000	36.89	-5.11	54.0	-17.11	AV	229.00	100	H	Pass
3	3673.000	47.09	-5.11	74.0	-26.91	Peak	229.00	100	H	Pass
4**	5192.000	39.31	-2.76	54.0	-14.69	AV	195.00	100	H	Pass
4	5192.000	54.30	-2.76	74.0	-19.70	Peak	195.00	100	H	Pass
5**	6667.000	44.27	1.87	54.0	-9.73	AV	0.00	100	H	Pass
5	6667.000	54.44	1.87	74.0	-19.56	Peak	0.00	100	H	Pass
6**	15339.563	43.39	1.72	54.0	-10.61	AV	360.00	100	H	Pass
6	15339.563	54.35	1.72	74.0	-19.65	Peak	360.00	100	H	Pass

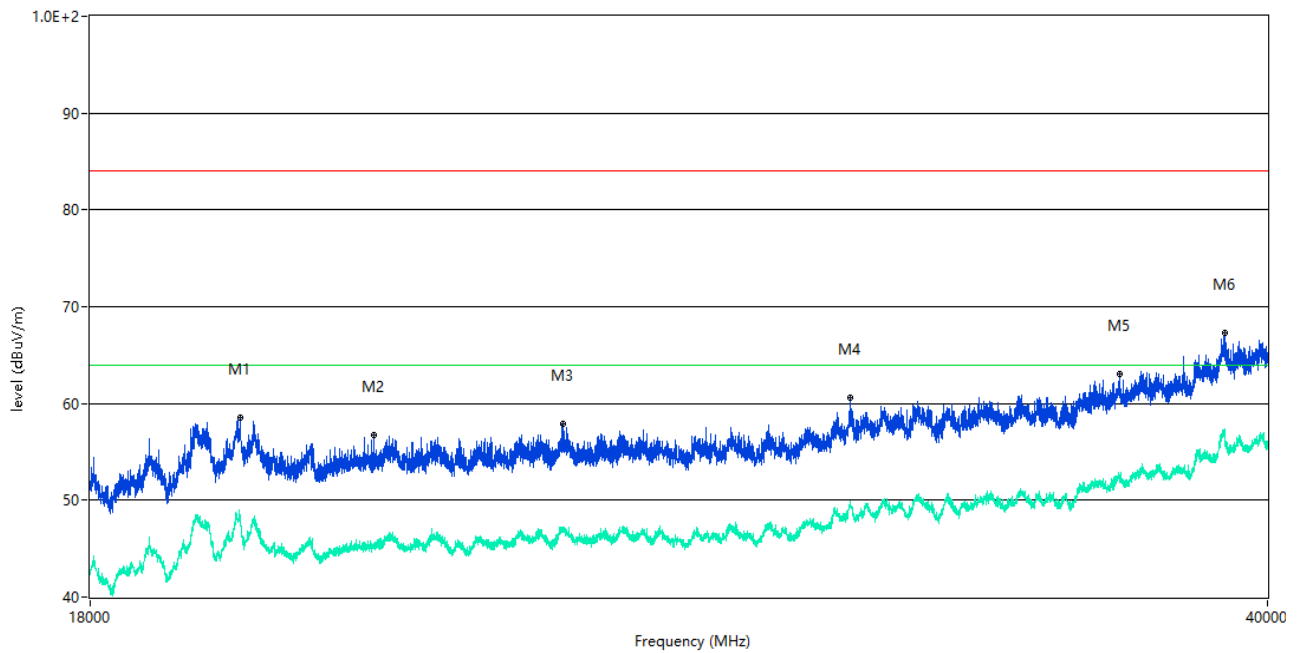
Test Mode 2: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + USB + Dock (USB C + USB-A + HDMI Playing)

A.1.5 Test Antenna Vertical, 18 GHz – 40 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	19329.918	47.68	22.36	64.0	-16.32	AV	191.00	100	V	Pass
1	19329.918	58.13	22.36	84.0	-25.87	Peak	191.00	100	V	Pass
2**	24041.990	46.07	20.84	64.0	-17.93	AV	135.00	100	V	Pass
2	24041.990	56.74	20.84	84.0	-27.26	Peak	153.00	100	V	Pass
3**	26215.321	46.70	21.14	64.0	-17.30	AV	212.00	100	V	Pass
3	26215.321	57.36	21.14	84.0	-26.64	Peak	212.00	100	V	Pass
4**	30798.675	49.53	22.47	64.0	-14.47	AV	353.00	100	V	Pass
4	30798.675	60.72	22.47	84.0	-23.28	Peak	353.00	100	V	Pass
5**	33855.661	51.35	23.31	64.0	-12.65	AV	210.00	100	V	Pass
5	33855.661	62.43	23.31	84.0	-21.57	Peak	210.00	100	V	Pass
6**	38815.671	56.77	24.39	64.0	-7.23	AV	190.00	100	V	Pass
6	38815.671	67.48	24.39	84.0	-16.52	Peak	190.00	100	V	Pass

A.1.6 Test Antenna Horizontal, 18 GHz – 40 GHz



No.	Frequency (MHz)	Results (dBuH/m)	Factor (dB)	Limit (dBuH/m)	OHer Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Herdict
1**	19929.018	48.08	22.40	64.0	-15.92	AV	10.00	100	H	Pass
1	19929.018	58.58	22.40	84.0	-25.42	Peak	10.00	100	H	Pass
2**	21821.920	45.12	21.23	64.0	-18.88	AV	40.00	100	H	Pass
2	21821.920	56.75	21.23	84.0	-27.25	Peak	40.00	100	H	Pass
3**	24798.300	46.96	20.94	64.0	-17.04	AV	81.00	100	H	Pass
3	24798.300	57.88	20.94	84.0	-26.12	Peak	81.00	100	H	Pass
4**	30133.967	49.45	22.25	64.0	-14.55	AV	72.00	100	H	Pass
4	30133.967	60.62	22.25	84.0	-23.38	Peak	72.00	100	H	Pass
5**	36173.707	52.63	23.69	64.0	-11.37	AV	114.00	100	H	Pass
5	36173.707	63.10	23.69	84.0	-20.90	Peak	114.00	100	H	Pass
6**	38856.161	56.20	24.41	64.0	-7.80	AV	112.00	100	H	Pass
6	38856.161	67.34	24.41	84.0	-16.66	Peak	112.00	100	H	Pass

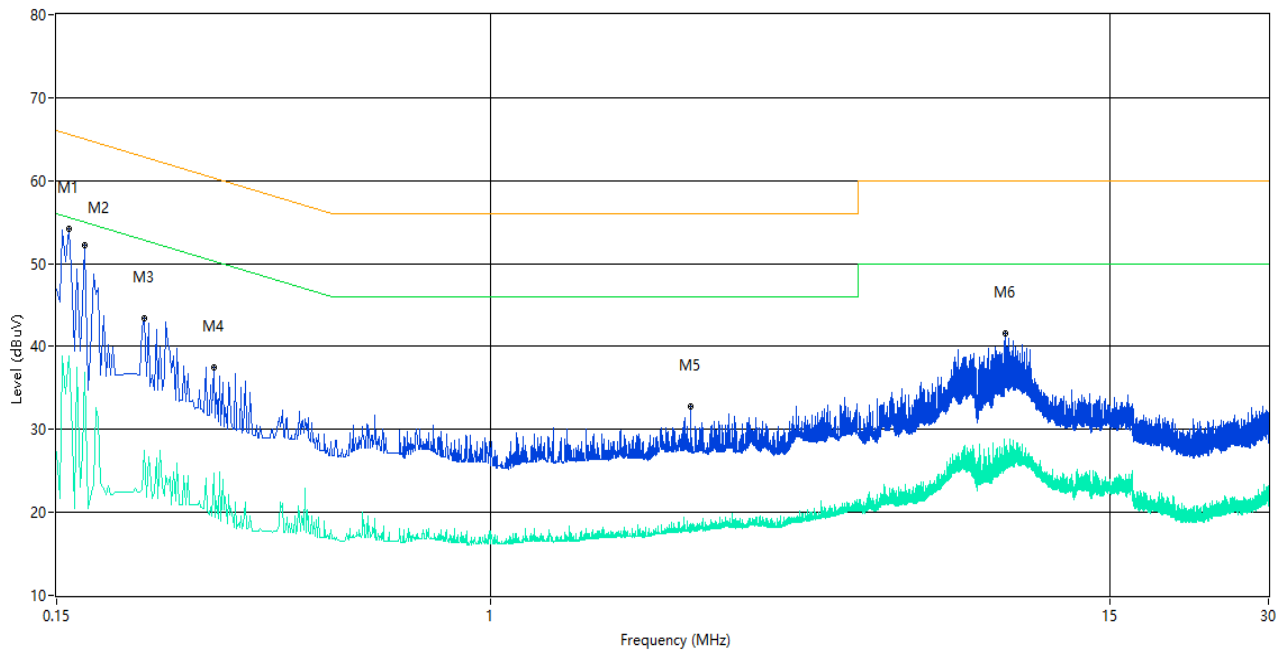
A.2 Conducted Emission

Test Data and Plots

Test Mode 4: Adapter (Model: HW-200325EP0, SN: C976Y1J8P00106) + Charging + Camera On

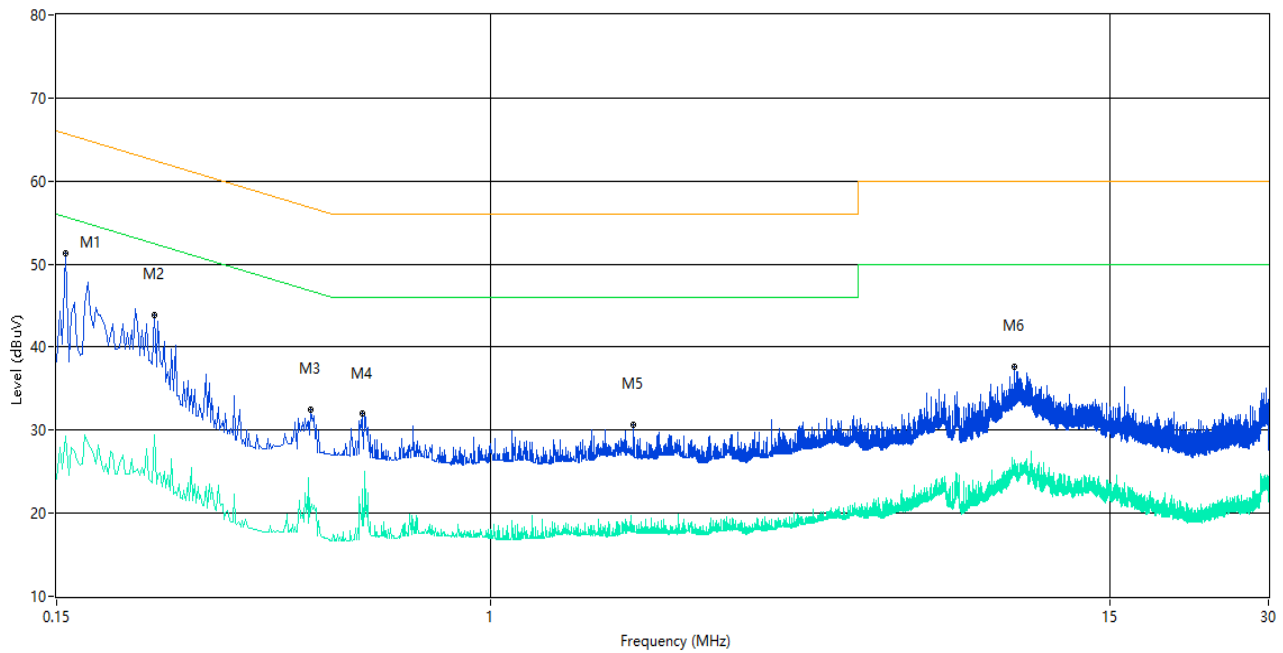
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.158	54.37	10.01	65.6	-11.23	Peak	L Line	N/A
1*	0.158	51.72	10.01	65.6	-13.88	QP	L Line	Pass
1**	0.158	36.95	10.01	55.6	-18.65	AV	L Line	Pass
2	0.170	50.70	10.01	65.0	-14.30	Peak	L Line	N/A
2*	0.170	43.81	10.01	65.0	-21.19	QP	L Line	Pass
2**	0.170	27.82	10.01	55.0	-27.18	AV	L Line	Pass
3	0.220	45.06	10.02	62.8	-17.74	Peak	L Line	N/A
3*	0.220	40.83	10.02	62.8	-21.97	QP	L Line	Pass
3**	0.220	23.46	10.02	52.8	-29.34	AV	L Line	Pass
4	0.298	37.17	10.03	60.3	-23.13	Peak	L Line	N/A
4*	0.298	32.68	10.03	60.3	-27.62	QP	L Line	Pass
4**	0.298	20.17	10.03	50.3	-30.13	AV	L Line	Pass
5	2.400	26.02	10.07	56.0	-29.98	Peak	L Line	N/A
5*	2.400	19.51	10.07	56.0	-36.49	QP	L Line	Pass
5**	2.400	11.74	10.07	46.0	-34.26	AV	L Line	Pass
6	9.502	37.04	10.17	60.0	-22.96	Peak	L Line	N/A
6*	9.502	30.59	10.17	60.0	-29.41	QP	L Line	Pass
6**	9.502	23.42	10.17	50.0	-26.58	AV	L Line	Pass

A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	55.33	10.01	65.7	-10.37	Peak	N Line	N/A
1*	0.156	52.36	10.01	65.7	-13.34	QP	N Line	Pass
1**	0.156	37.24	10.01	55.7	-18.46	AV	N Line	Pass
2	0.230	45.50	10.01	62.4	-16.90	Peak	N Line	N/A
2*	0.230	41.33	10.01	62.4	-21.07	QP	N Line	Pass
2**	0.230	25.95	10.01	52.4	-26.45	AV	N Line	Pass
3	0.456	31.58	10.02	56.8	-25.22	Peak	N Line	N/A
3*	0.456	27.38	10.02	56.8	-29.42	QP	N Line	Pass
3**	0.456	17.61	10.02	46.8	-29.19	AV	N Line	Pass
4	0.572	31.07	10.01	56.0	-24.93	Peak	N Line	N/A
4*	0.572	27.75	10.01	56.0	-28.25	QP	N Line	Pass
4**	0.572	18.69	10.01	46.0	-27.31	AV	N Line	Pass
5	1.870	32.27	10.04	56.0	-23.73	Peak	N Line	N/A
5*	1.870	27.29	10.04	56.0	-28.71	QP	N Line	Pass
5**	1.870	16.59	10.04	46.0	-29.41	AV	N Line	Pass
6	9.876	40.62	10.17	60.0	-19.38	Peak	N Line	N/A
6*	9.876	31.86	10.17	60.0	-28.14	QP	N Line	Pass
6**	9.876	25.26	10.17	50.0	-24.74	AV	N Line	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1940136-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1940136-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ1940136-AI.PDF”.

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