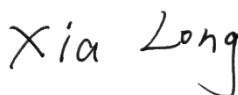


TEST REPORT

Applicant: Honor Device Co., Ltd.
Address: Suite 3401, Unit A, Building 6, Shum Yip Sky Park,
No. 8089, Hongli West Road, Xiangmihu Street,
Futian District, Shenzhen, Guangdong 518040,
People's Republic of China
Equipment Type: Charging Case
Model Name: THO-B10
Brand Name: HONOR
FCC ID: 2AYGCTHO-B10
Test Standard: 47 CFR Part 15 Subpart B
ANSI C63.4-2014
Sample Arrival Date: Nov. 30, 2022
Test Date: Nov. 30, 2022 – Dec. 01, 2022
Date of Issue: Feb. 21, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xiong Chong**Checked by:** Xia Long**Approved by:** Liao Jianming
(Technical Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Feb. 21, 2023</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

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

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Honor Device Co., Ltd.
Address	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, Guangdong 518040, People's Republic of China

2.2 Manufacturer Information

Manufacturer	Honor Device Co., Ltd.
Address	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, Guangdong 518040, People's Republic of China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Charging Case
Model Name Under Test	THO-B10
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	HB681636ECW
	Serial No.	N/A
	Capacity	410 mAh
	Rated Voltage	3.82 V
	Limit Charge Voltage	4.4 V

2.6 Technical Information

Network and Wireless connectivity	N/A
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The requirement for the following technical information of the EUT was tested in this report:

The Highest Speed of Processor	N/A
--------------------------------	-----

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart B	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)	3.22 dB
Radiated emissions (30 MHz-1 GHz)-10m	4.80 dB

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments, Test Date and Test Engineer

Test items	Voltage	Temperature	Relative Humidity	Ambient Pressure	Test Date	Test Engineer
Radiated Emission	USB 5V	24.9℃	47%	101kPa	Dec. 01, 2022	Lin Yupeng
Conducted Emission	USB 5V	21.9	59%	101kPa	Nov. 30, 2022	Liang Yongming

4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz (10 m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2022.09.09	2023.09.08	☒
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2018054558	2022.09.09	2023.09.08	☒
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-01162	2022.08.12	2023.08.11	☒
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	130	2021.08.15	2024.08.14	☒
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V22.930		☒

Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2022.09.09	2023.09.08	☒
LISN	SCHWARZBECK	NSLK 8127	8127-687	2022.06.01	2023.05.31	☒
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2022.02.19	2025.02.18	☒
Description	Manufacturer	Name		Version		Use
Test Software	BALUN	BL410-E		V22.930		☒

4.3 Test Enclosure list

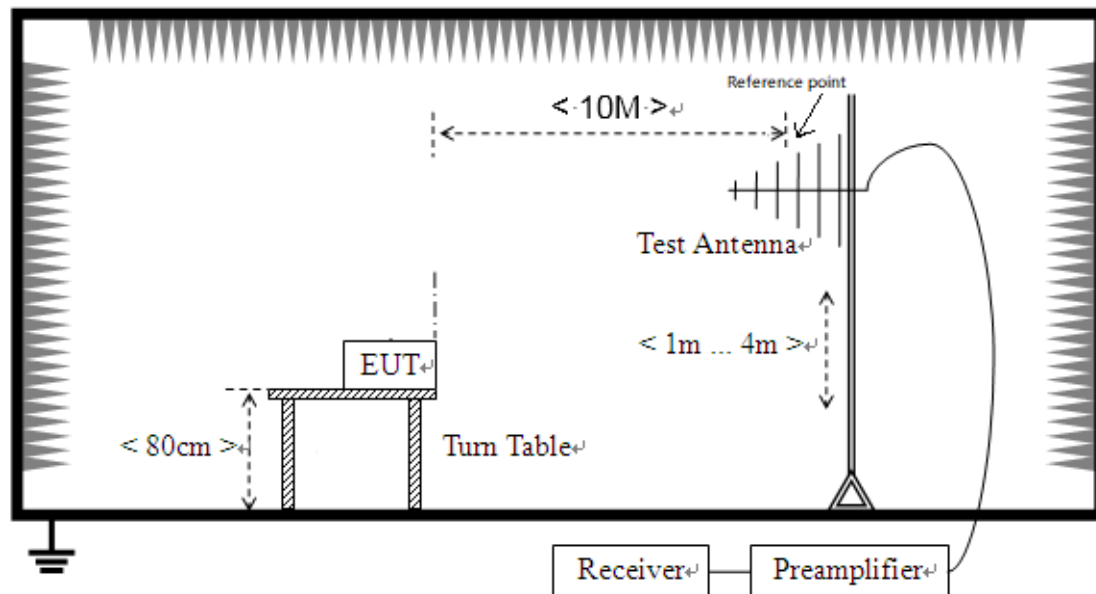
Description	Manufacturer	Model	Serial No.	Length	Description	Use
Type-C Cable	N/A	N/A	N/A	1.0m	N/A	☒
Adapter	Xiaomi	MDY-08-EV	N/A	N/A	N/A	☒
Earphone	HONOR	THO-T10	N/A	N/A	N/A	☒

4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The Charging Test Mode</u> EUT + Battery + Earphone + Type-C Cable + Adapter

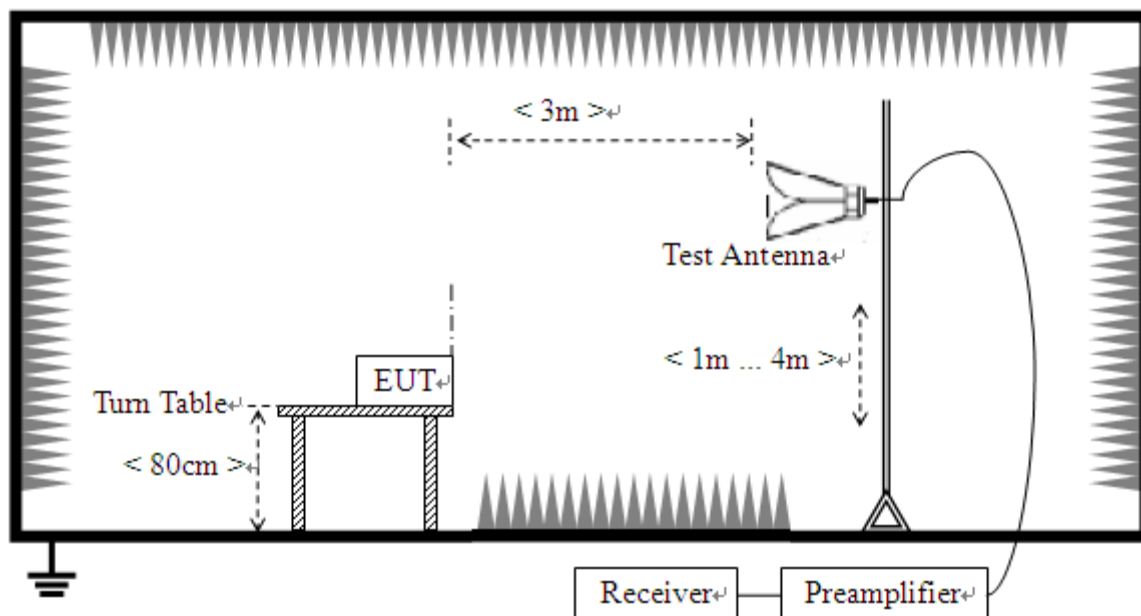
4.5 Test Setups

Test Setup 1

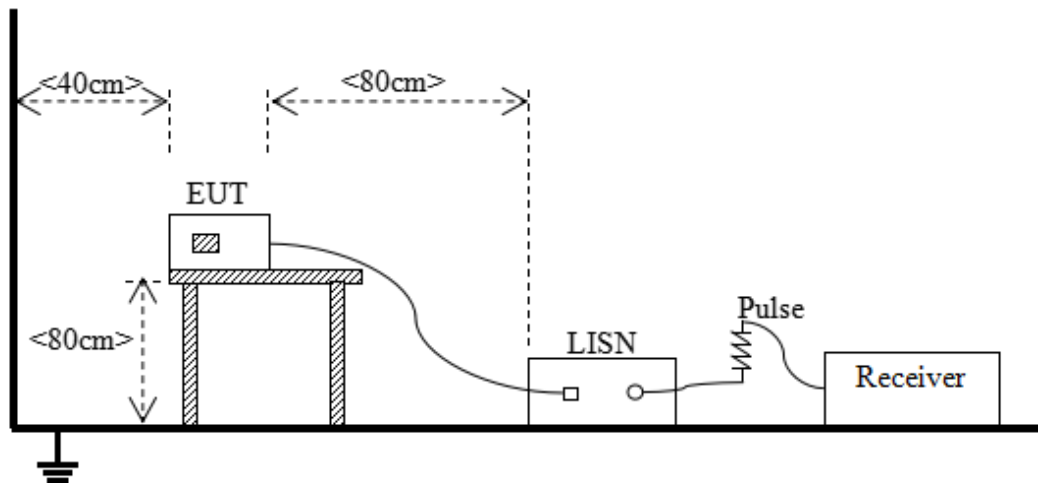


(For Radiated Emission Test (30 MHz-1 GHz))

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 Setup	Test Setup 1&2
	Test Configuration	TC01 ^{Note}
Conducted Emission, AC Ports	Test Setup	Test Setup 3
	Test Configuration	TC01 ^{Note}
Note: Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report. The Charging Test Mode is the worst mode in this report.		

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 $\mu\text{V/m}$) = $20 \cdot \log [\text{Field Strength } (\mu\text{V/m})]$.
- 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.

The measurement frequency range is from 30 MHz to the 5th harmonic of the maximum frequency of the EUT internal source. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1 \text{ GHz}$, 100 kHz for $f < 1 \text{ GHz}$

VBW $\geq$ RBW

Sweep = auto

Detector function = peak for $f < 1 \text{ GHz}$, peak & RMS Average for $f \geq 1 \text{ GHz}$

Trace = max hold

5.1.1.4 Test Result

Please refer to ANNEX A.1.

NOTE:

1. Results (dB μ V/m) = Reading (dB μ V/m) + 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.

Use the following spectrum analyzer settings:

RBW = 9 kHz

VBW $\geq$ RBW

Sweep = 10ms

Detector function = peak & Average

Trace = max hold

5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

1. Results (dBμV) = Reading (dBμV) + Factor (dB)

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

2. Factor = Insertion loss + Cable loss

3. Over limit = Results – Limit.

ANNEX A TEST RESULTS

A.1 Radiated Emission

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

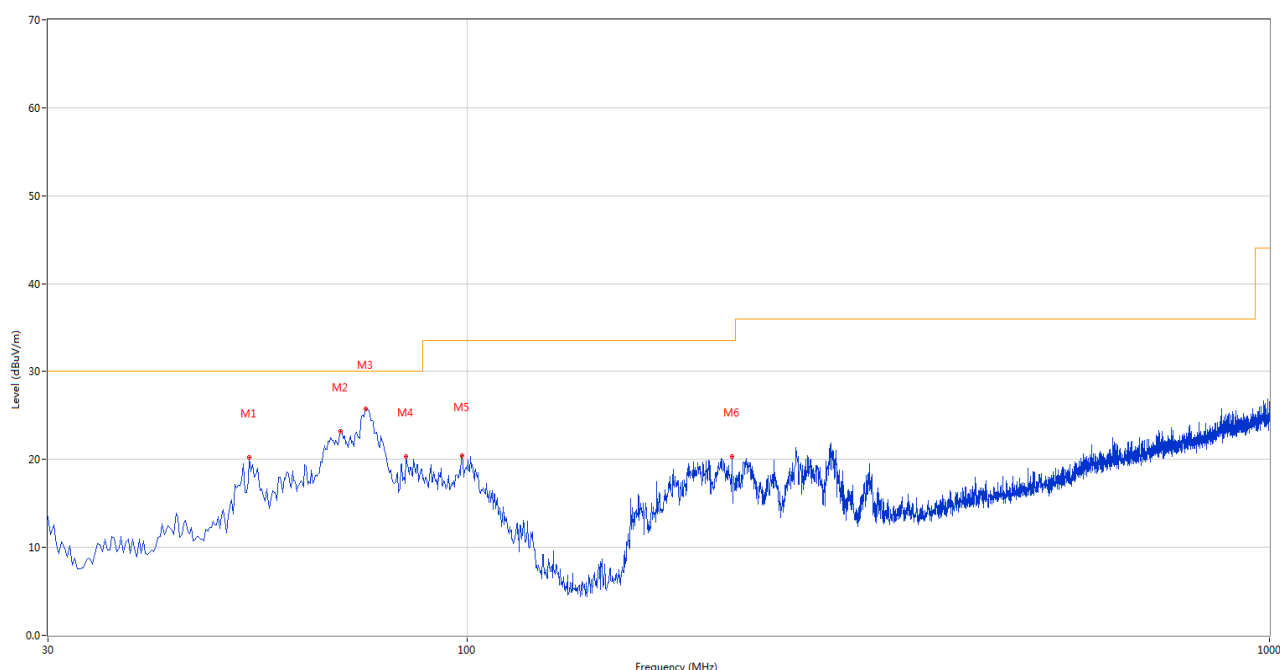
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data and Plots

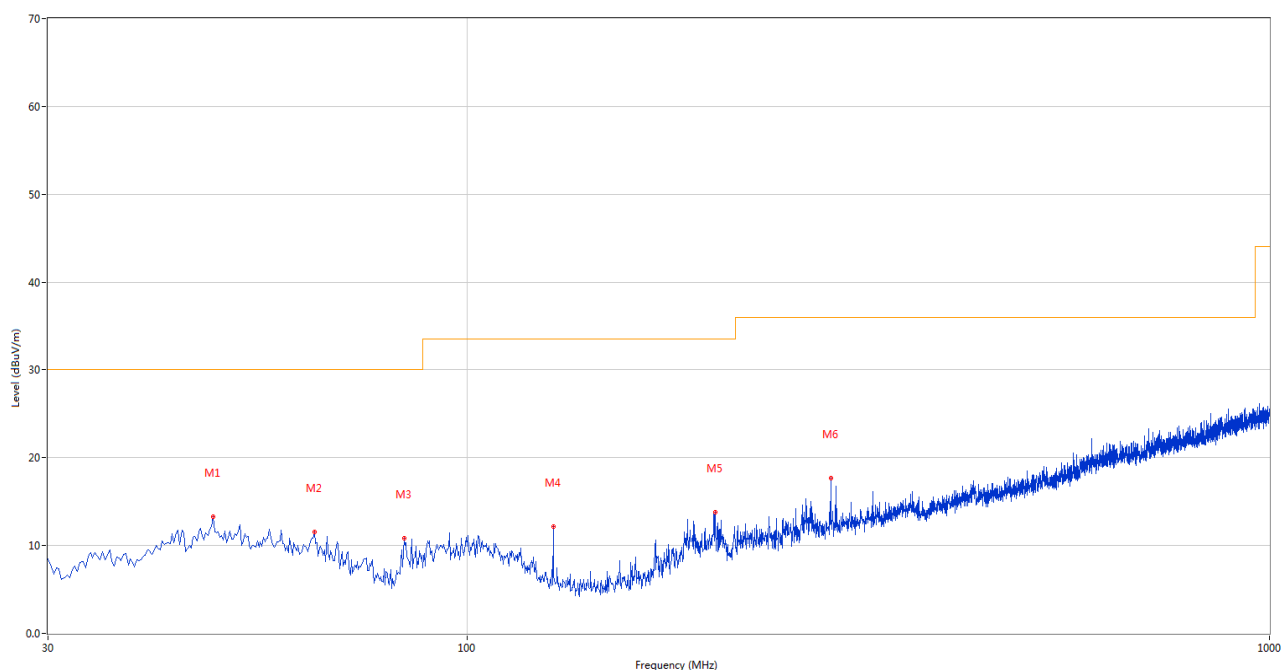
The Charging Test Mode

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



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	53.517	20.20	-26.46	30.0	9.80	Peak	103.00	100	Vertical	Pass
2	69.518	23.24	-30.15	30.0	6.76	Peak	127.00	100	Vertical	Pass
3	74.609	25.74	-31.64	30.0	4.26	Peak	124.00	200	Vertical	Pass
4	83.822	20.34	-31.20	30.0	9.66	Peak	118.00	100	Vertical	Pass
5	98.610	20.49	-28.13	33.5	13.01	Peak	69.00	200	Vertical	Pass
6	213.769	20.31	-27.89	33.5	13.19	Peak	230.00	100	Vertical	Pass

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



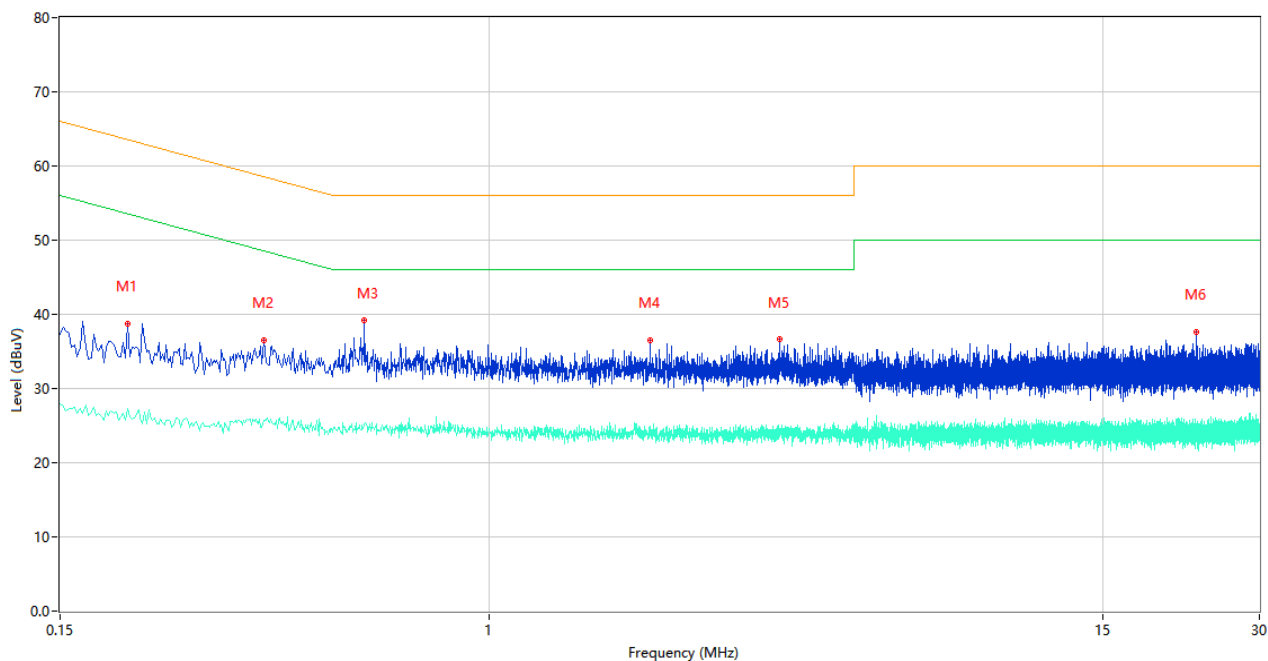
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	48.183	13.26	-26.36	30.0	16.74	Peak	180.00	200	Horizontal	Pass
2	64.426	11.57	-28.21	30.0	18.43	Peak	288.00	200	Horizontal	Pass
3	83.337	10.84	-31.24	30.0	19.16	Peak	161.00	200	Horizontal	Pass
4	127.946	12.20	-31.06	33.5	21.30	Peak	360.00	200	Horizontal	Pass
5	203.587	13.80	-27.81	33.5	19.70	Peak	130.00	200	Horizontal	Pass
6	283.834	17.65	-25.57	36.0	18.35	Peak	319.00	200	Horizontal	Pass

A.2 Conducted Emission

Test Data and Plots

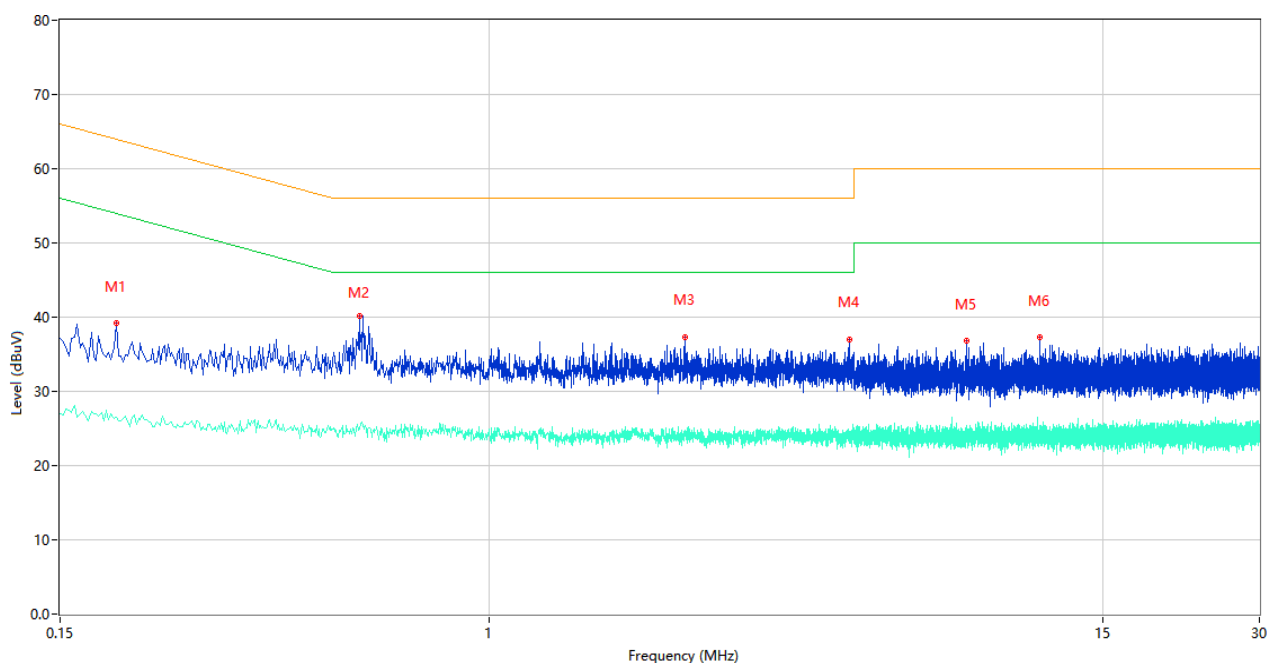
The Charging Test Mode

A.2.1 L Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.202	38.72	10.05	63.53	24.81	Peak	L	Pass
1**	0.202	27.34	10.05	53.53	26.19	AV	L	Pass
2	0.370	36.54	10.89	58.50	21.96	Peak	L	Pass
2**	0.370	25.71	10.89	48.50	22.79	AV	L	Pass
3	0.576	39.18	10.28	56.00	16.82	Peak	L	Pass
3**	0.576	25.06	10.28	46.00	20.94	AV	L	Pass
4	2.032	36.55	10.50	56.00	19.45	Peak	L	Pass
4**	2.032	24.29	10.50	46.00	21.71	AV	L	Pass
5	3.604	36.67	10.43	56.00	19.33	Peak	L	Pass
5**	3.604	24.63	10.43	46.00	21.37	AV	L	Pass
6	22.676	37.66	10.48	60.00	22.34	Peak	L	Pass
6**	22.676	25.08	10.48	50.00	24.92	AV	L	Pass

A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.192	39.17	10.06	63.95	24.78	Peak	N	Pass
1**	0.192	26.53	10.06	53.95	27.42	AV	N	Pass
2	0.562	40.21	10.24	56.00	15.79	Peak	N	Pass
2**	0.562	25.26	10.24	46.00	20.74	AV	N	Pass
3	2.378	37.30	10.27	56.00	18.70	Peak	N	Pass
3**	2.378	24.69	10.27	46.00	21.31	AV	N	Pass
4	4.914	37.00	10.24	56.00	19.00	Peak	N	Pass
4**	4.914	24.15	10.24	46.00	21.85	AV	N	Pass
5	8.242	36.75	10.48	60.00	23.25	Peak	N	Pass
5**	8.242	23.83	10.48	50.00	26.17	AV	N	Pass
6	11.360	37.29	10.27	60.00	22.71	Peak	N	Pass
6**	11.360	23.57	10.27	50.00	26.43	AV	N	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-EC2320029-AE.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-EC2320029-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-EC2320029-AI.PDF”.

Statement

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--END OF REPORT--