



TEST REPORT

No. I21Z62853-EMC01

For

Honor Device Co., Ltd.

Smart Watch

Model Name: MUS-B19

FCC ID: 2AYGCMUS-B19

with

Hardware Version: Au68g

Software Version: 15.0.0.209

Issued Date: 2022-02-16

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I21Z62853-EMC01	Rev.0	1 st edition	2022-2-16

Note: the latest revision of the test report supersedes all previous versions.

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1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#:24849). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology Development Area,
Beijing, P. R. China 100176

CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China 100191

1.3. Testing Environment

Normal Temperature: 15-35°C

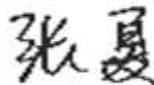
Relative Humidity: 20-75%

1.4. Project data

Testing Start Date: 2021-8-25

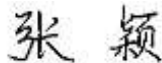
Testing End Date: 2022-1-25

1.5. Signature



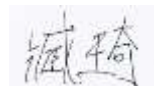
Zhang Xia

(Prepared this test report)



Zhang Ying

(Reviewed this test report)



Zang Qi

(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: Honor Device Co., Ltd.
Address: Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
Contact: Zhang Qian
Email: Zhangqian28@honor.com
Telephone: 15210184193

2.2. Manufacturer Information

Company Name: Honor Device Co., Ltd.
Address: Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
Contact: Zhang Qian
Email: Zhangqian28@honor.com
Telephone: 15210184193

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Smart Watch
Model Name	MUS-B19
FCC ID	2AYGCMUS-B19
Extreme vol. Limits	3.5VDC to 4.4VDC (nominal: 3.8VDC)

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, CAICT.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Remark
EUT1(61403UT05a)	AW7EBB1802000039	Au68g	15.0.0.61C	NVT battery
EUT2(61403UT06a)	AW7EBB1712000077	Au68g	15.0.0.61C	SWD battery
EUT3(62852UT06a)	E4:27:61:7E:D0:98	Au68g	15.0.0.209	NVT battery

*EUT ID: is used to identify the test sample in the lab internally. The HW version, SW version, and remark information were provided by the applicant.

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Manufacture
AE1	Charging dock	0297BB2161000900	SAIBAO(JIANGXI)COMMUNICATION INDUSTRIAL CO.,LTE.
AE2	Charging dock	0295LQ2161000138	XIAMEN XinYuekai ELECTRONICS CO.,LTD.
AE3	USB Cable	/	Fuding Precision Components (Shenzhen) Co., Ltd.
AE4	USB Cable	/	Guangdong Mingji Hi-Tech Electronics Co.,Ltd
AE5	USB Cable	/	Freeport Ji an Electronics Co.,Ltd
AE6	USB Cable	/	Guangxi Broad Telecommunication Co.,Ltd.
AE7	Charger	/	Honor
AE8	USB Cable	/	Luxshare Precision Industry Co.,Ltd.

AE7

Model	HN050100U01
Manufacturer	Honor

Note: The manufacture information were provided by the applicant.

3.4. General Description

The device supports MP3, Bluetooth (Basic Rate, EDR, LE 1M, LE 2M), NFC(active, passive) and GNSS.

3.5. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1 + AE1+AE3+AE7	Charging, NVT battery, Saibao Charging dock, Fuding cable
Set.2	EUT2 + AE2+AE4+AE7	Charging, SWD battery, LiQi charging dock, Mingji cable
Set.3	EUT1+ AE1+AE5+AE7	Charging and Freeport JiAn cable
Set.4	EUT1 + AE1+AE6+AE7	Charging and Broad cable
Set.5	EUT1+ AE1+AE8+AE7	Charging and AE8 cable
Set.6	EUT3+ AE1+AE8+AE7	Charging and AE8 cable



Note: In January, the applicant provided the EUT3. According to the declared changes and the request from client, the worse-case-measurement of Radiated Emission was performed on EUT3. The test results of EUT1 and EUT2 were from report I21Z61402-EMC01.

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices - Unintentional Radiators	2019
ANSI C63.4	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	2014

Note: The test methods have no deviation with standards.

5. LABORATORY ENVIRONMENT

Semi-anechoic chamber SAC-1 (23 meters×17 meters×10 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15°C, Max. = 35°C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m/10m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz

Shielded room did not exceed following limits along the EMC testing:

Temperature	Min. = 15°C, Max. = 35°C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz—1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail
	BR	Re-use test data from basic model report.

Items	Test Name	Clause in FCC rules	Section in this report	Verdict	Test Location
1	Radiated Emission	15.109(a)	A.1	P	CTTL(BDA) CTTL(huayuan North Road)
2	Conducted Emission	15.107(a)	A.2	P	CTTL(BDA) CTTL(huayuan North Road)

Note: In January, the applicant provided the EUT3. According to the declared changes and the request from client, the worse-case-measurement of Radiated Emission was performed on EUT3. The test results of EUT1 and EUT2 were from report I21Z61402-EMC01.

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURER	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESCI	100766	R&S	2022-03-09	1 year
2	LISN	ENV216	101459	R&S	2022-03-22	1 year
3	Test Receiver	ESU 26	100235	R&S	2022-03-25	1 year
4	BiLog Antenna	VULB9163	9163-482	Schwarzbeck	2021-11-04	1 year
5	EMI Antenna	3117	00119024	ETS-Lindgren	2022-04-11	1 year
6	Universal Radio Communication Tester	CMW500	159408	R&S	2022-03-08	1 year
7	Test Receiver	ESW44	103023	R&S	2022-10-28	1 year
8	BiLog Antenna	VULB9163	9163-1223	Schwarzbeck	2022-03-22	1 year
9	EMI Antenna	3115	00167250	ETS-Lindgren	2022-07-01	1 year

Note: The test equipment utilized were in calibration due dates when used.

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V9.01.00	R&S
Conducted Emission	EMC32 V8.52.0	R&S

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission

Reference

FCC: CFR Part 15.109(a).

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator at distances of 3 meters at BDA(Set.1 to Set.5), 10 meters(Set.6) at Huayuan North Road(for 30MHz-1GHz), and 3 meters (for above 1GHz) is tested. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 8.3.

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

A.1.2 EUT Operating Mode

The MS is operating in the charging mode. The EUT was tested while operating in licensed band RX mode if support. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in the Section 3.4, are investigated if support. Only the worst case emissions are reported.

All equipment is placed on the test table top and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions.

A.1.3 Measurement Limit

Frequency range (MHz)	Field strength limit ($\mu\text{V}/\text{m}$)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

Limit (10m) = limit (3m) + 20(log (3/10))

A.1.4 Test Condition

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/3MHz	15	Peak, Average

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss". It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{Mea}} + A_{\text{Rpl}} = P_{\text{Mea}} + G_A + G_{\text{PL}}$$

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case): 30MHz-1GHz: 5.40dB, 1GHz-18GHz: 4.32dB, $k=2$.

Measurement results

Set.1: Charging, Xin Battery, Saibao dock, Fuding Cable, Sports course play mode

Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17387.500	39.07	-23.0	41.3	20.77	54.0	14.9	V
17246.500	39.05	-22.8	41.5	20.43	54.0	15.0	V
17074.500	39.02	-23.0	41.6	20.43	54.0	15.0	V
17424.500	38.99	-23.1	41.3	20.81	54.0	15.0	V
17157.500	38.97	-23.0	41.5	20.40	54.0	15.0	V
17167.000	38.96	-23.0	41.5	20.39	54.0	15.0	V

Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17278.000	52.1	-22.8	41.4	33.43	74.0	21.9	V
16445.500	51.4	-23.1	41.3	33.09	74.0	22.6	H
17383.500	51.3	-23.0	41.3	33.01	74.0	22.7	V
17083.000	51.2	-23.0	41.6	32.67	74.0	22.8	V
17438.500	51.2	-23.1	41.3	33.10	74.0	22.8	V
17036.000	51.2	-23.0	41.7	32.56	74.0	22.8	V

Set.2: Charging, NVT battery, AE2 dock, Mingji Cable, Music play mode
Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17101.500	39.13	-23.0	41.6	20.57	54.0	14.9	V
17254.000	39.12	-22.8	41.4	20.50	54.0	14.9	V
17283.000	39.10	-22.8	41.4	20.46	54.0	14.9	V
17261.500	39.07	-22.8	41.4	20.43	54.0	14.9	V
17074.500	39.06	-23.0	41.6	20.47	54.0	14.9	V
17287.500	39.06	-22.8	41.4	20.42	54.0	14.9	V

Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17362.500	51.61	-23.0	41.3	33.23	74.0	22.4	V
17202.500	51.58	-22.9	41.5	32.99	74.0	22.4	V
17682.000	51.37	-22.1	41.2	32.27	74.0	22.6	V
17442.000	51.33	-23.1	41.3	33.21	74.0	22.7	V
17470.000	51.28	-23.1	41.2	33.15	74.0	22.7	V
16385.000	51.23	-23.1	41.3	33.06	74.0	22.8	V

Set.3: Charging, NVT battery, AE2 dock, Freeport Ji an cable, outdoor running(GNSS receiving) mode
Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17094.500	39.22	-23.0	41.6	20.65	54.0	14.8	V
17287.000	39.21	-22.8	41.4	20.57	54.0	14.8	V
17385.000	39.11	-23.0	41.3	20.80	54.0	14.9	V
17243.500	39.10	-22.8	41.5	20.48	54.0	14.9	V
17271.500	39.10	-22.8	41.4	20.46	54.0	14.9	V
17049.500	39.10	-23.0	41.6	20.48	54.0	14.9	H

Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
16999.000	51.4	-23.0	41.7	32.72	74.0	22.6	H
17080.500	51.4	-23.0	41.6	32.80	74.0	22.6	H
17289.000	51.4	-22.8	41.4	32.72	74.0	22.6	V
17062.000	51.3	-23.0	41.6	32.66	74.0	22.7	H
16419.500	51.2	-23.1	41.3	33.03	74.0	22.8	H
17698.000	51.2	-22.2	41.2	32.17	74.0	22.8	V

Set.4: Charging, NVT battery, AE2 dock, Guangxi Broad cable, Sports course play mode
Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17280.500	39.32	-22.8	41.4	20.68	54.0	14.7	H
17071.500	39.25	-23.0	41.6	20.66	54.0	14.7	H
17093.000	39.23	-23.0	41.6	20.66	54.0	14.8	V
17072.500	39.14	-23.0	41.6	20.55	54.0	14.9	V
17392.000	39.14	-23.0	41.3	20.86	54.0	14.9	V
17082.000	39.13	-23.0	41.6	20.55	54.0	14.9	V

Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
16676.000	52.1	-23.2	41.5	33.75	74.0	21.9	V
16349.000	51.8	-23.1	41.2	33.64	74.0	22.2	V
16374.000	51.6	-23.1	41.3	33.42	74.0	22.4	H
17456.000	51.5	-23.2	41.2	33.48	74.0	22.5	H
16711.500	51.4	-23.1	41.5	33.02	74.0	22.6	V
16982.000	51.4	-23.0	41.7	32.74	74.0	22.6	H

Set.5: Charging, NVT battery, AE2 dock, AE8 cable, black screen no interference mode
Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17199.000	39.26	-22.9	41.5	20.66	54.0	14.7	V
17273.500	39.24	-22.8	41.4	20.60	54.0	14.8	V
17073.500	39.23	-23.0	41.6	20.63	54.0	14.8	H
17423.500	39.22	-23.1	41.3	21.04	54.0	14.8	V
17420.500	39.21	-23.1	41.3	21.02	54.0	14.8	H
17434.000	39.20	-23.1	41.3	21.06	54.0	14.8	H

Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17448.500	51.9	-23.2	41.3	33.84	74.0	22.1	V
17429.500	51.9	-23.1	41.3	33.75	74.0	22.1	H
17208.000	51.7	-22.9	41.5	33.10	74.0	22.3	H
17387.000	51.6	-23.0	41.3	33.29	74.0	22.4	V
17051.500	51.6	-23.0	41.6	32.94	74.0	22.4	H
17198.000	51.5	-22.9	41.5	32.93	74.0	22.5	V

Set.6: Charging, ATL battery, AE2 dock, AE8 cable, black screen no interference mode
Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17992.520	40.5	-29.1	46.7	22.898	54.0	13.5	V
17960.900	40.3	-29.1	46.7	22.701	54.0	13.7	H
17988.440	40.2	-29.1	46.7	22.598	54.0	13.8	V
17999.660	40.2	-29.1	46.7	22.598	54.0	13.8	V
17965.660	40.1	-29.1	46.7	22.501	54.0	13.9	H
17946.280	40.1	-28.9	46.7	22.383	54.0	13.9	H

Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17962.600	52.2	-29.1	46.7	34.601	74.0	21.8	H
17980.620	51.6	-29.1	46.7	33.998	74.0	22.4	V
17641.980	51.4	-29.6	45.2	35.753	74.0	22.6	H
17845.300	51.4	-29.3	46.0	34.782	74.0	22.6	V
17909.900	51.4	-29.3	46.0	34.772	74.0	22.6	V
17909.560	51.4	-29.3	46.0	34.772	74.0	22.6	H

Set.1: Charging, Xin Battery, Saibao dock, Fuding Cable, Sports course play mode

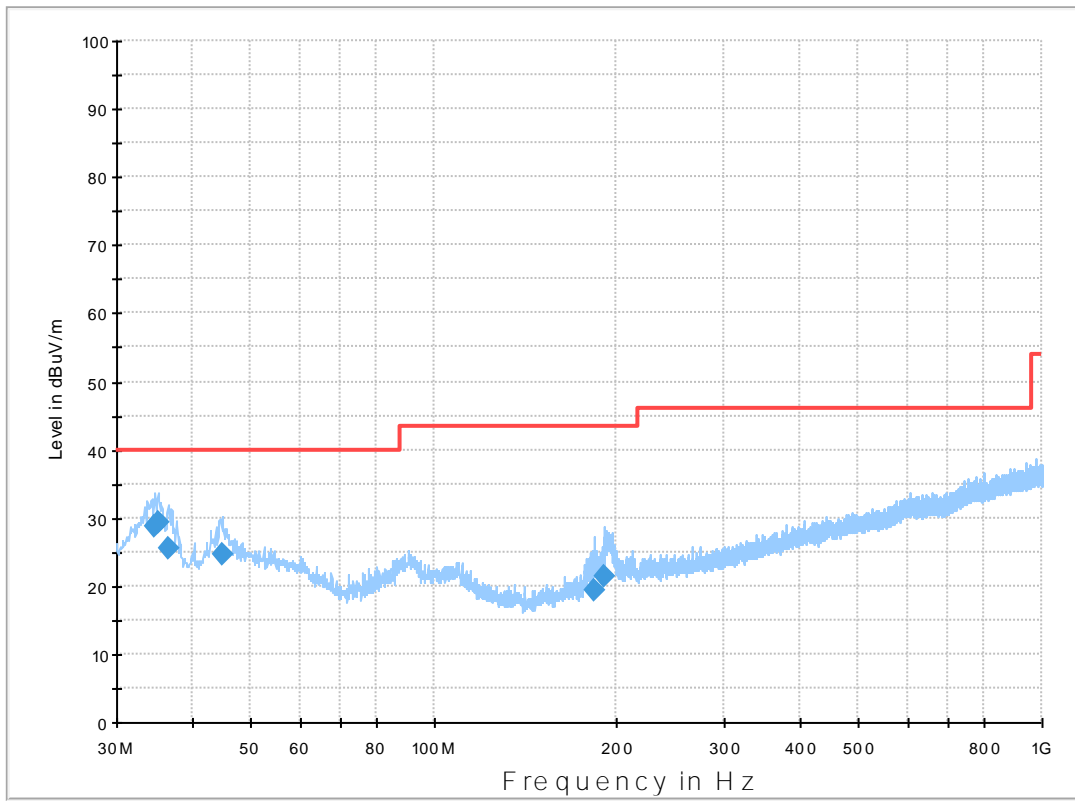


Figure A.1 Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBuV/m)
34.753000	28.6	100.0	V	269.0	11.4	40.0
35.044000	29.4	100.0	V	150.0	10.6	40.0
36.402000	25.6	100.0	V	299.0	14.4	40.0
44.841000	24.8	113.0	V	300.0	15.2	40.0
182.969000	19.4	100.0	V	15.0	24.1	43.5
190.729000	21.4	100.0	V	15.0	22.1	43.5

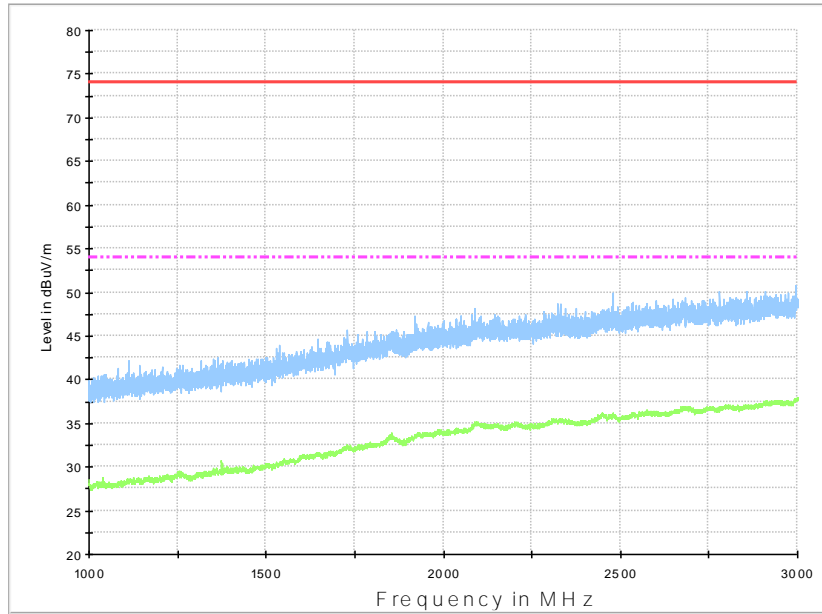


Figure A.2 Radiated Emission from 1GHz to 3GHz

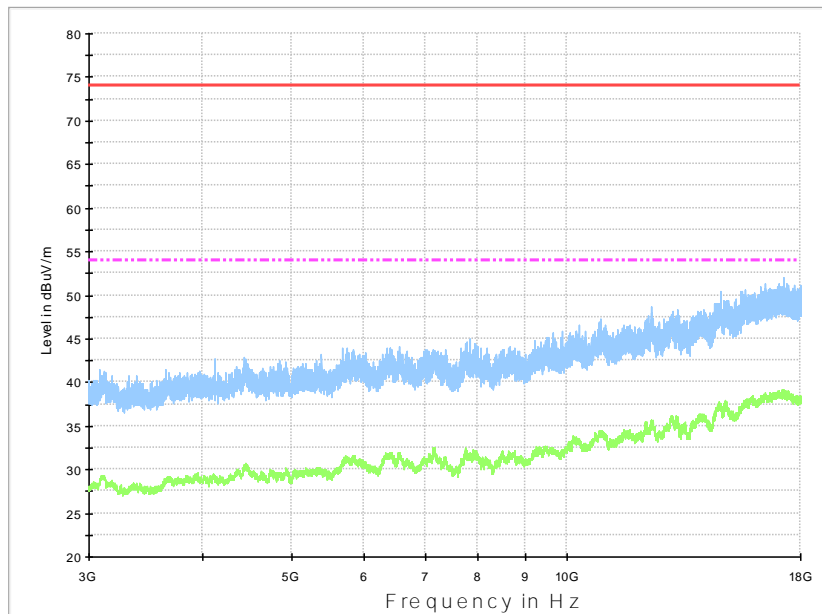


Figure A.3 Radiated Emission from 3GHz to 18GHz

Set.2: Charging, NVT battery, AE2 dock, Mingji Cable, Music play mode

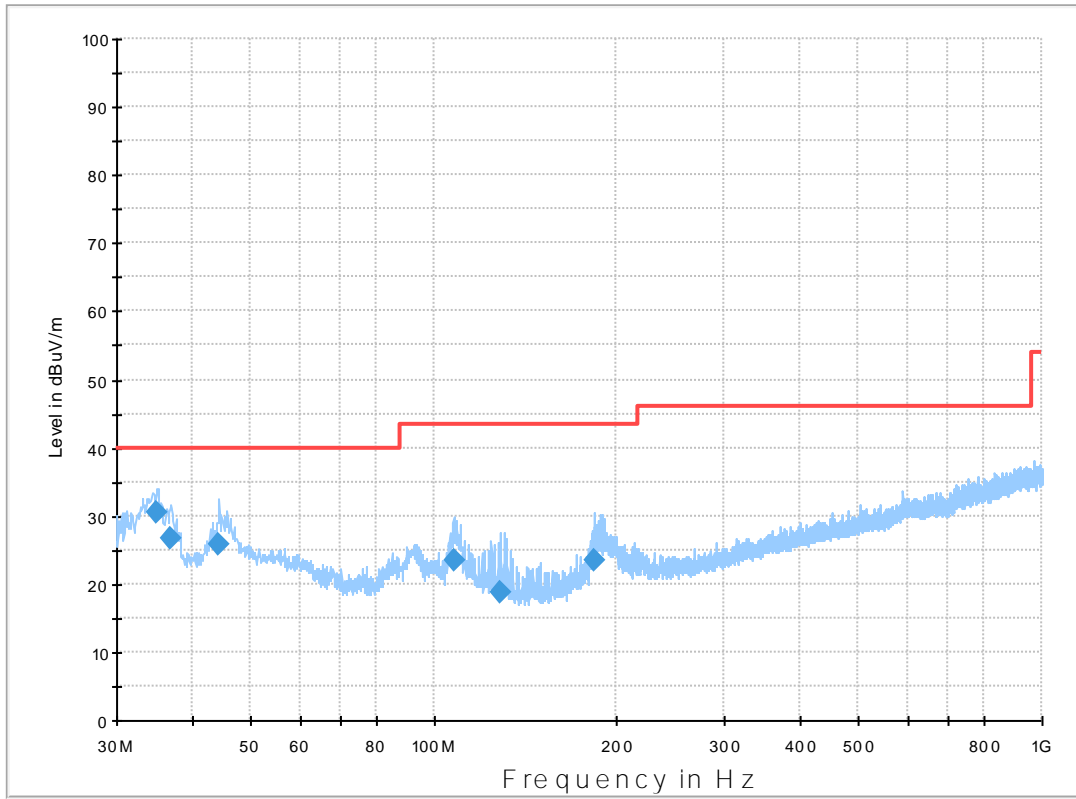


Figure A.4 Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBuV/m)
34.947000	30.6	100.0	V	149.0	9.4	40.0
36.887000	26.6	113.0	V	150.0	13.4	40.0
44.259000	25.8	100.0	V	135.0	14.2	40.0
107.503000	23.5	100.0	V	179.0	20.0	43.5
128.649000	18.8	100.0	V	149.0	24.7	43.5
183.260000	23.5	100.0	V	0.0	20.0	43.5

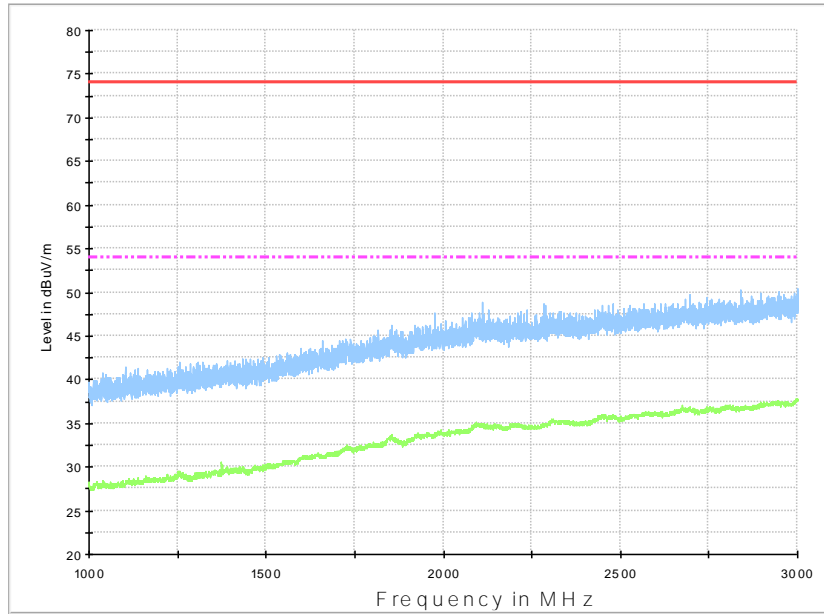


Figure A.5 Radiated Emission from 1GHz to 3GHz

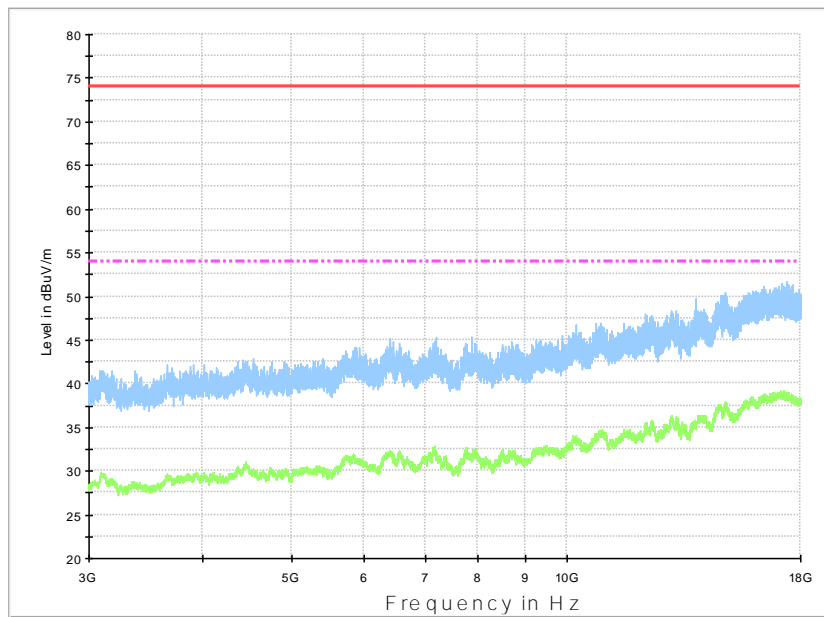


Figure A.6 Radiated Emission from 3GHz to 18GHz

Set.3: Charging, NVT battery, AE2 dock, Freeport Ji an cable, outdoor running(GNSS receiving) mode

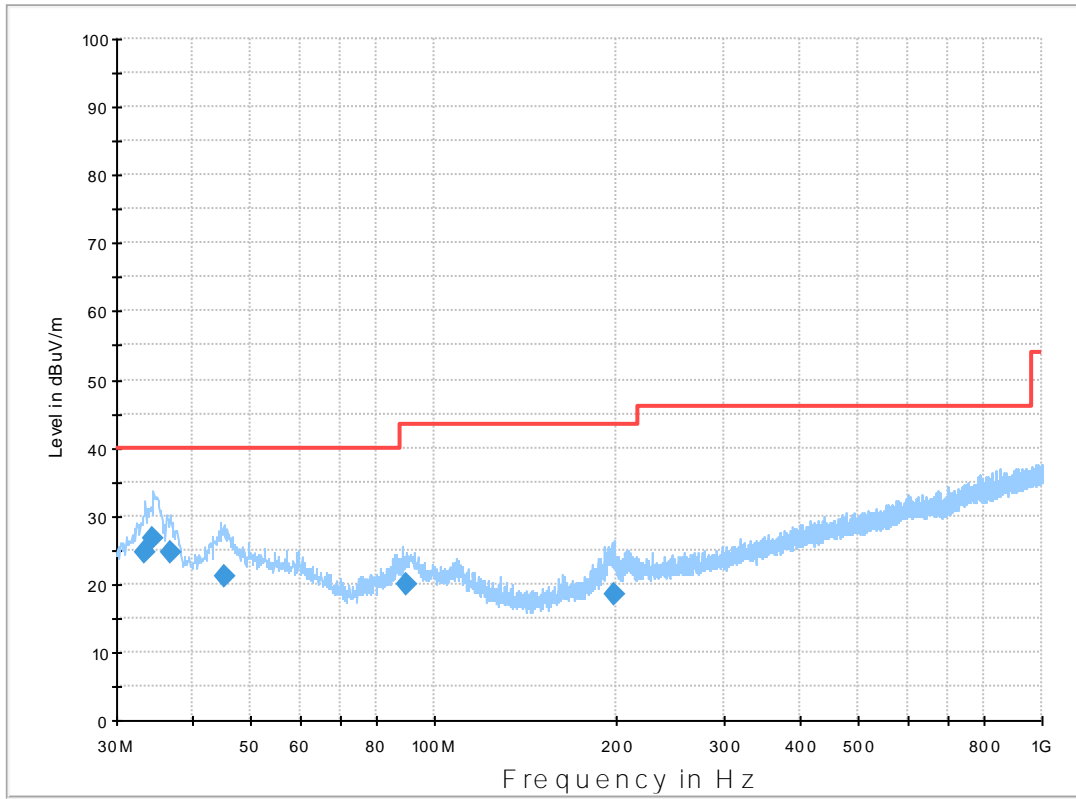


Figure A.7 Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBuV/m)
33.395000	24.7	113.0	V	179.0	15.3	40.0
34.462000	26.5	100.0	V	-31.0	13.5	40.0
36.693000	24.7	100.0	V	135.0	15.3	40.0
45.035000	21.0	113.0	V	179.0	19.0	40.0
89.849000	19.8	100.0	V	300.0	23.7	43.5
197.325000	18.6	114.0	V	-1.0	24.9	43.5

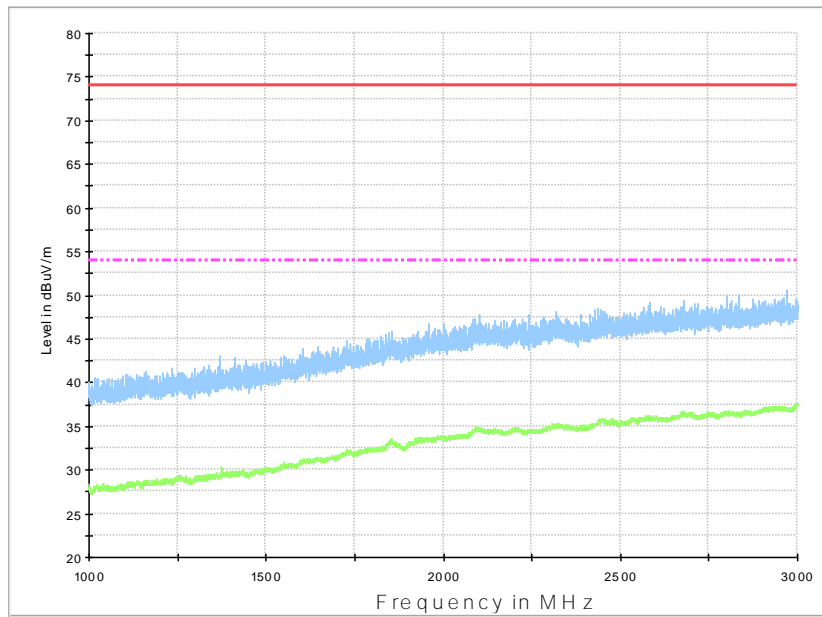


Figure A.8 Radiated Emission from 1GHz to 3GHz

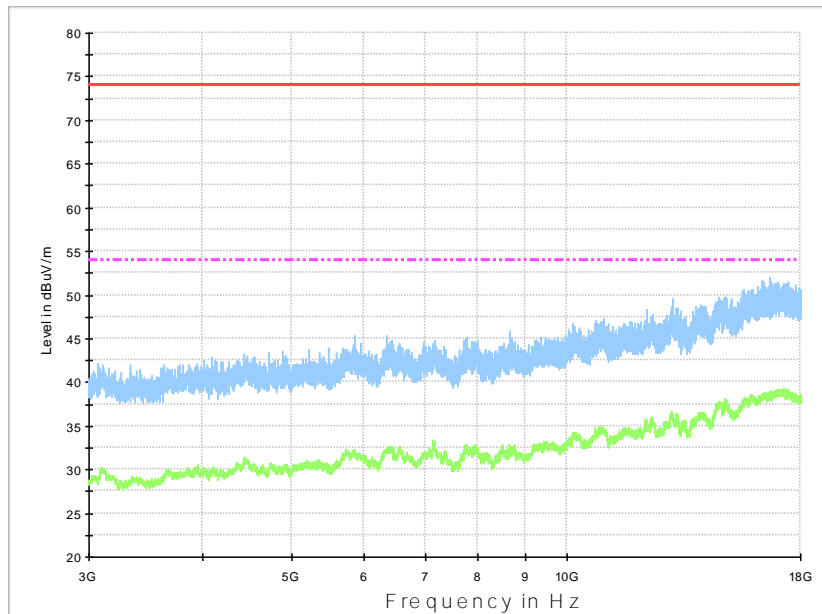


Figure A.9 Radiated Emission from 3GHz to 18GHz

Set.4: Charging, NVT battery, AE2 dock, Guangxi Broad cable, Sports course play mode

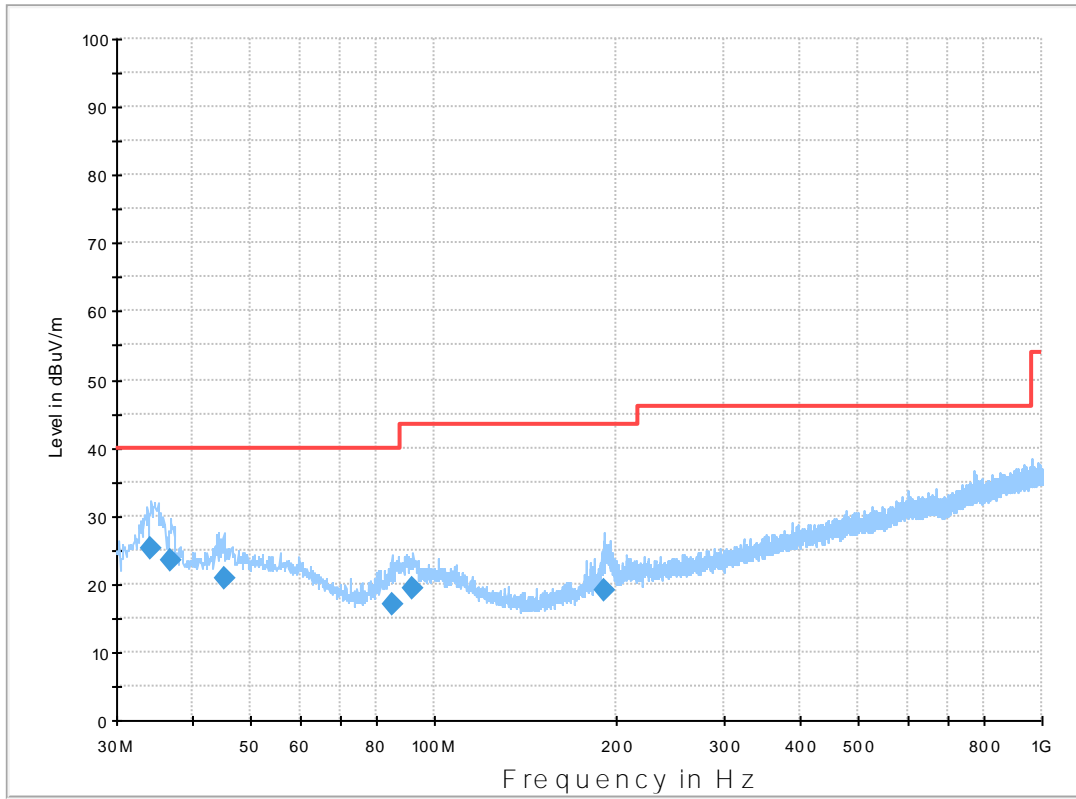


Figure A.10 Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
34.171000	25.3	100.0	V	149.0	-1.7	14.7	40.0
36.790000	23.3	100.0	V	315.0	-1.1	16.7	40.0
45.035000	20.9	100.0	V	-30.0	-0.3	19.1	40.0
84.999000	16.9	125.0	V	300.0	-5.3	23.1	40.0
92.371000	19.4	100.0	V	225.0	-3.2	24.1	43.5
190.244000	19.0	113.0	V	15.0	-2.0	24.5	43.5

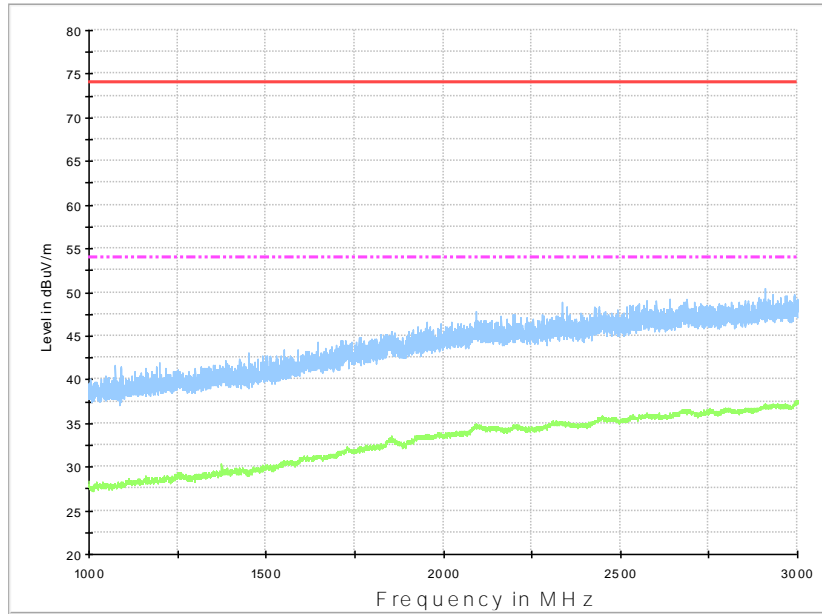


Figure A.11 Radiated Emission from 1GHz to 3GHz

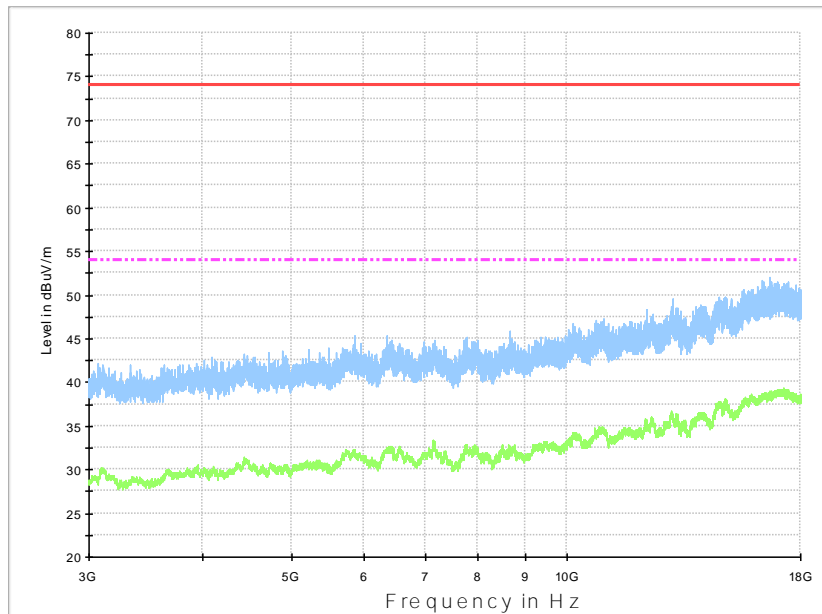


Figure A.12 Radiated Emission from 3GHz to 18GHz

Set.5: Charging, NVT battery, AE2 dock, AE8 cable, black screen no interference mode

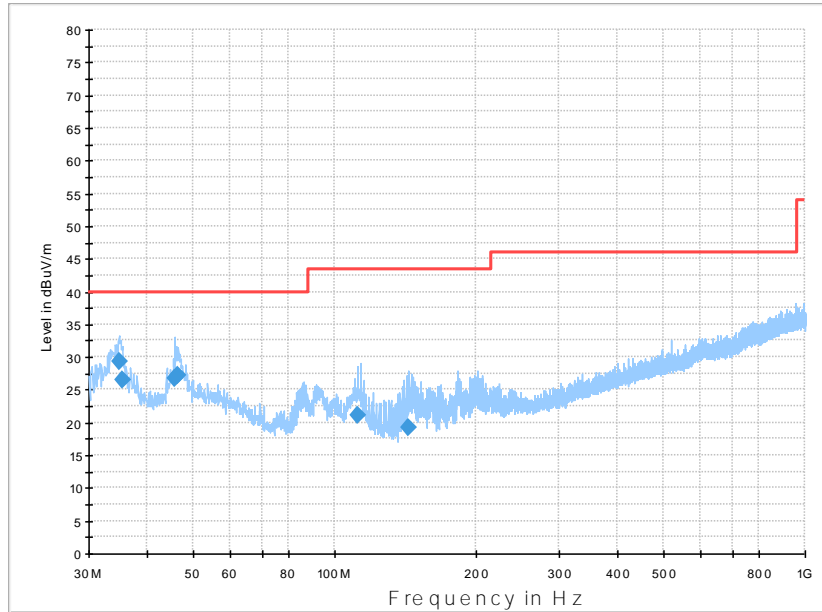


Figure A.13 Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBuV/m)
34.753000	29.3	113.0	V	135.0	10.7	40.0
35.432000	26.5	113.0	V	180.0	13.5	40.0
45.714000	26.7	100.0	V	120.0	13.3	40.0
46.587000	27.2	100.0	V	90.0	12.8	40.0
111.965000	21.1	100.0	V	270.0	22.4	43.5
143.684000	19.2	100.0	V	0.0	24.3	43.5

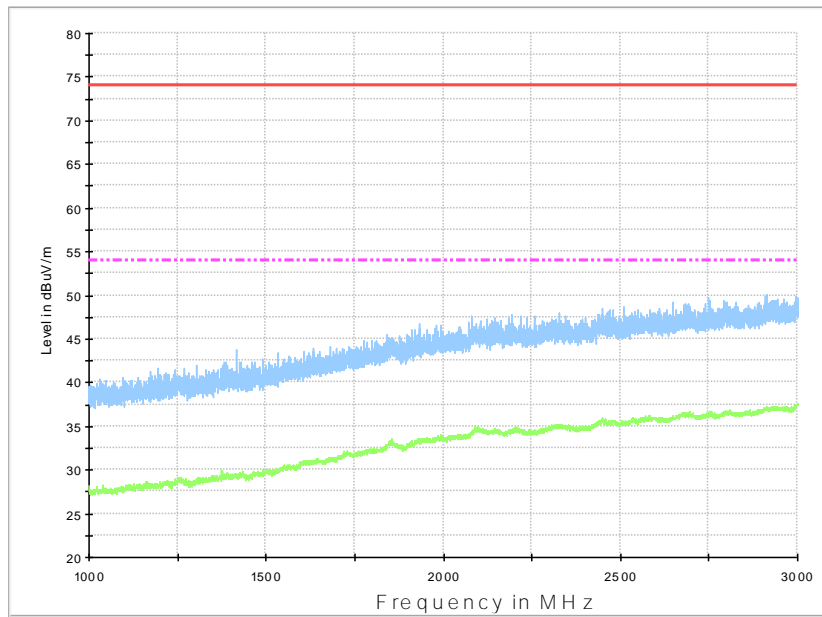


Figure A.14 Radiated Emission from 1GHz to 3GHz

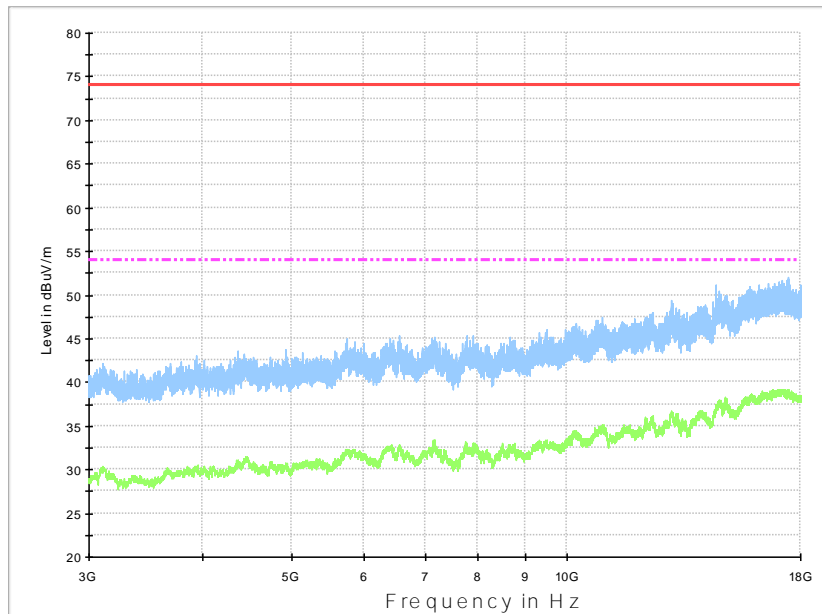


Figure A.15 Radiated Emission from 3GHz to 18GHz

Set.6: Charging, ATL battery, AE2 dock, AE8 cable, black screen no interference mode

Full Spectrum

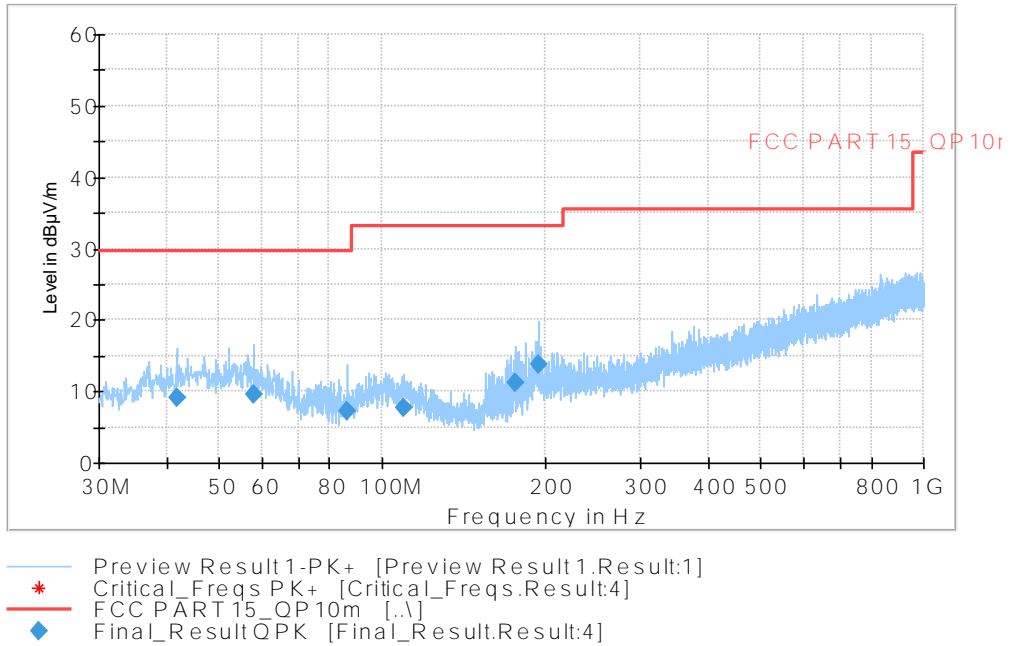


Figure A.13 Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBuV/m)
41.737000	9.07	175.0	V	80.0	20.47	29.54
57.936000	9.59	302.0	V	61.0	19.95	29.54
86.260000	7.21	103.0	V	280.0	22.33	29.54
109.734000	7.72	301.0	V	210.0	25.34	33.06
176.664000	11.17	95.0	V	-28.0	21.89	33.06
194.124000	13.86	95.0	V	12.0	19.20	33.06

Full Spectrum

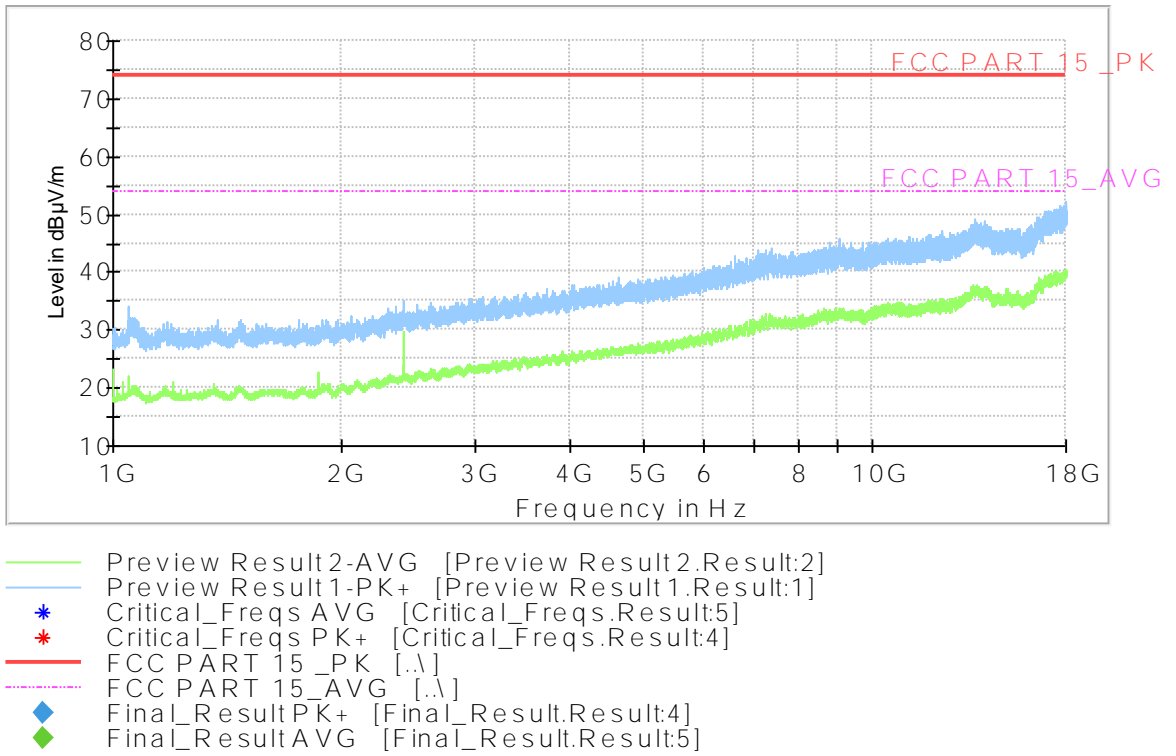


Figure A.14 Radiated Emission from 1GHz to 18GHz

A.2 Conducted Emission

Reference

FCC: CFR Part 15.107(a).

A.2.1 Method of measurement

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. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 7.3.

A.2.2 EUT Operating Mode

The MS is operating in the charging mode.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	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

A.2.4 Test Condition in charging mode

Voltage (V)	Frequency (Hz)
120	60

RBW/IF bandwidth	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

Measurement Result = Receiver Reading + Voltage deviation factor + Cable loss

Measurement uncertainty: $U= 3.10 \text{ dB}$, $k=2$.

Set.1: Charging, Xin Battery, Saibao dock, Fuding Cable, Sports course play mode

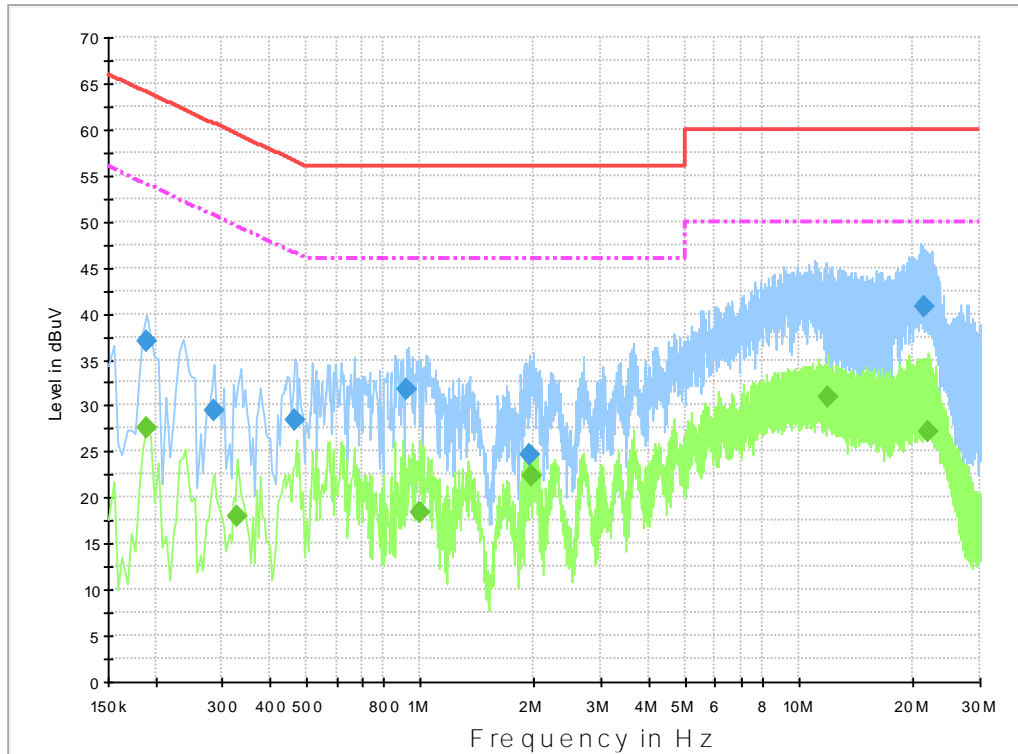


Figure A.16 Conducted Emission

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.190500	37.1	5000.0	9.000	On	L1	19.7	27.0	64.0
0.285000	29.5	5000.0	9.000	On	N	19.7	31.1	60.7
0.465000	28.5	5000.0	9.000	On	L1	19.8	28.1	56.6
0.919500	31.7	5000.0	9.000	On	L1	19.7	24.3	56.0
1.932000	24.7	5000.0	9.000	On	N	19.6	31.3	56.0
21.273000	40.8	5000.0	9.000	On	L1	19.8	19.2	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.190500	27.6	5000.0	9.000	On	L1	19.7	26.4	54.0
0.330000	18.1	5000.0	9.000	On	N	19.7	31.4	49.5
1.000500	18.4	5000.0	9.000	On	N	19.7	27.6	46.0
1.963500	22.3	5000.0	9.000	On	L1	19.7	23.7	46.0
11.949000	30.9	5000.0	9.000	On	L1	19.8	19.1	50.0
21.948000	27.1	5000.0	9.000	On	N	19.9	22.9	50.0

Set.2: Charging, NVT battery, AE2 dock, Mingji Cable, Music play mode

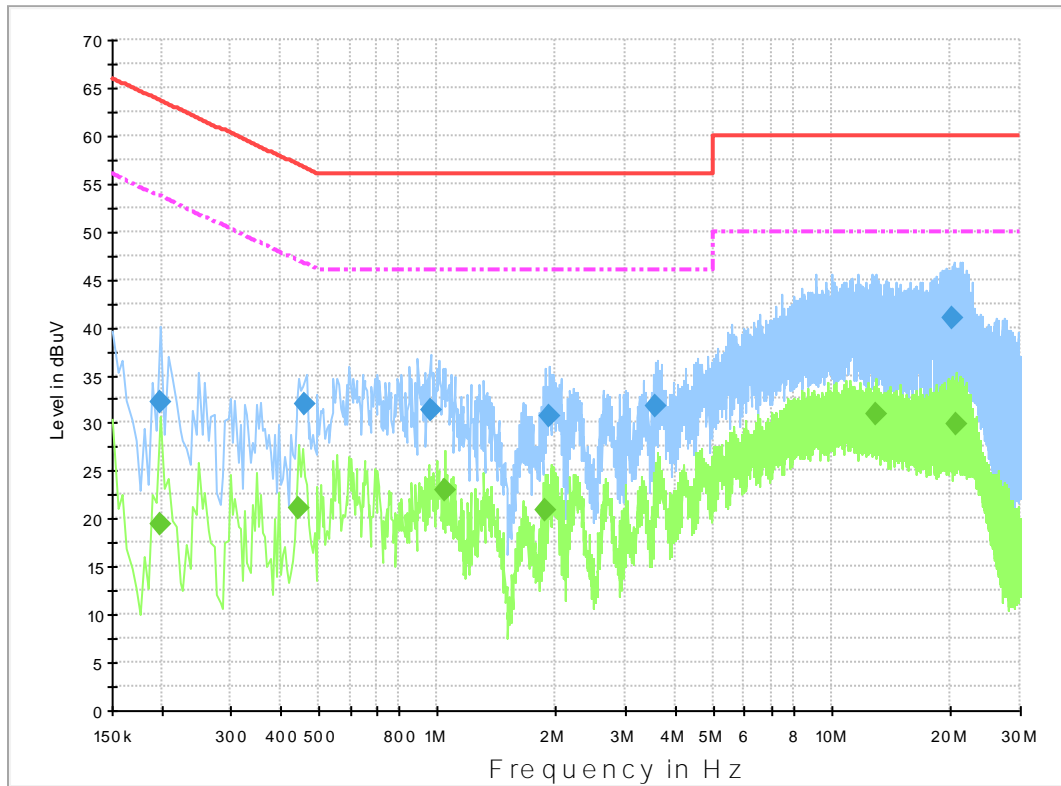


Figure A.17 Conducted Emission

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.199500	32.1	5000.0	9.000	On	L1	19.6	31.5	63.6
0.460500	32.1	5000.0	9.000	On	L1	19.8	24.6	56.7
0.960000	31.3	5000.0	9.000	On	L1	19.7	24.7	56.0
1.918500	30.7	5000.0	9.000	On	L1	19.7	25.3	56.0
3.588000	31.8	5000.0	9.000	On	L1	19.6	24.2	56.0
20.157000	41.0	5000.0	9.000	On	L1	19.8	19.0	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.199500	19.5	5000.0	9.000	On	N	19.6	34.2	53.6
0.447000	21.0	5000.0	9.000	On	L1	19.8	25.9	46.9
1.045500	23.0	5000.0	9.000	On	L1	19.6	23.0	46.0
1.882500	20.9	5000.0	9.000	On	L1	19.7	25.1	46.0
12.876000	30.9	5000.0	9.000	On	L1	19.7	19.1	50.0
20.746500	29.8	5000.0	9.000	On	L1	19.8	20.2	50.0

Set.3: Charging, NVT battery, AE2 dock, Freeport Ji an cable, outdoor running(GNSS receiving) mode

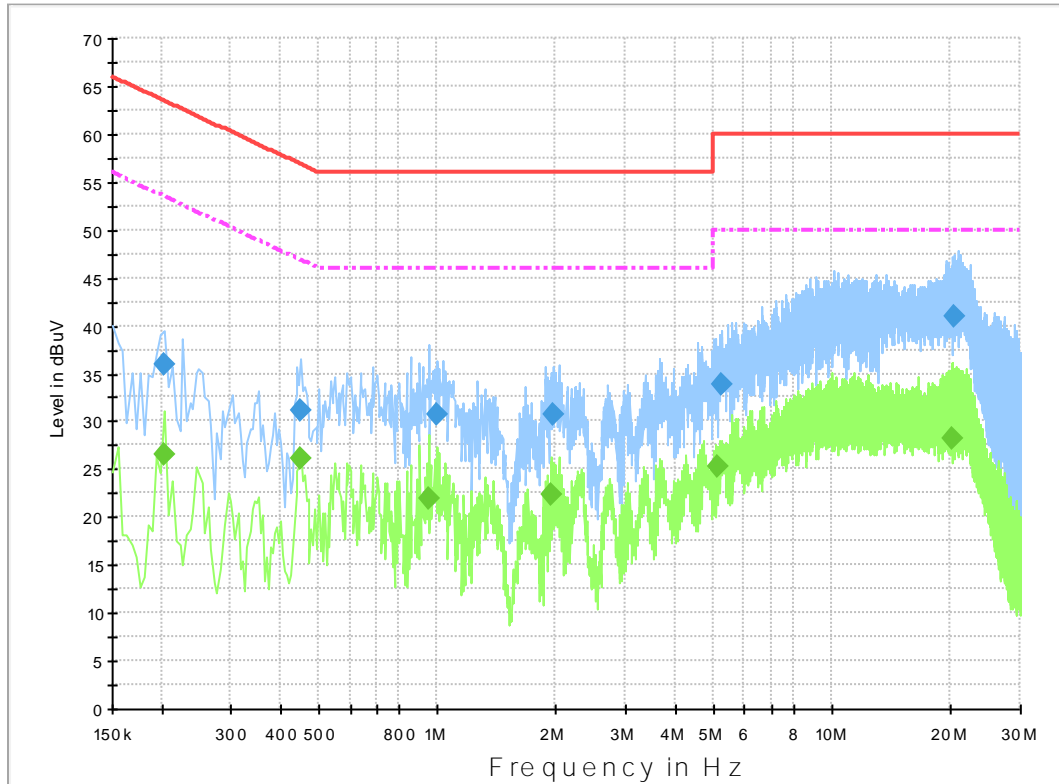


Figure A.18 Conducted Emission

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.204000	36.0	5000.0	9.000	On	L1	19.7	27.4	63.4
0.451500	31.2	5000.0	9.000	On	N	19.8	25.7	56.8
1.000500	30.8	5000.0	9.000	On	L1	19.7	25.2	56.0
1.977000	30.7	5000.0	9.000	On	L1	19.7	25.3	56.0
5.226000	33.8	5000.0	9.000	On	L1	19.6	26.2	60.0
20.436000	40.9	5000.0	9.000	On	L1	19.8	19.1	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.204000	26.5	5000.0	9.000	On	L1	19.7	27.0	53.4
0.451500	26.1	5000.0	9.000	On	L1	19.8	20.8	46.8
0.951000	21.8	5000.0	9.000	On	L1	19.7	24.2	46.0
1.936500	22.3	5000.0	9.000	On	L1	19.7	23.7	46.0
5.109000	25.3	5000.0	9.000	On	L1	19.7	24.7	50.0
20.157000	28.2	5000.0	9.000	On	N	19.9	21.8	50.0

Set.4: Charging, NVT battery,AE2 dock, Guangxi Broad cable, Sports course play mode

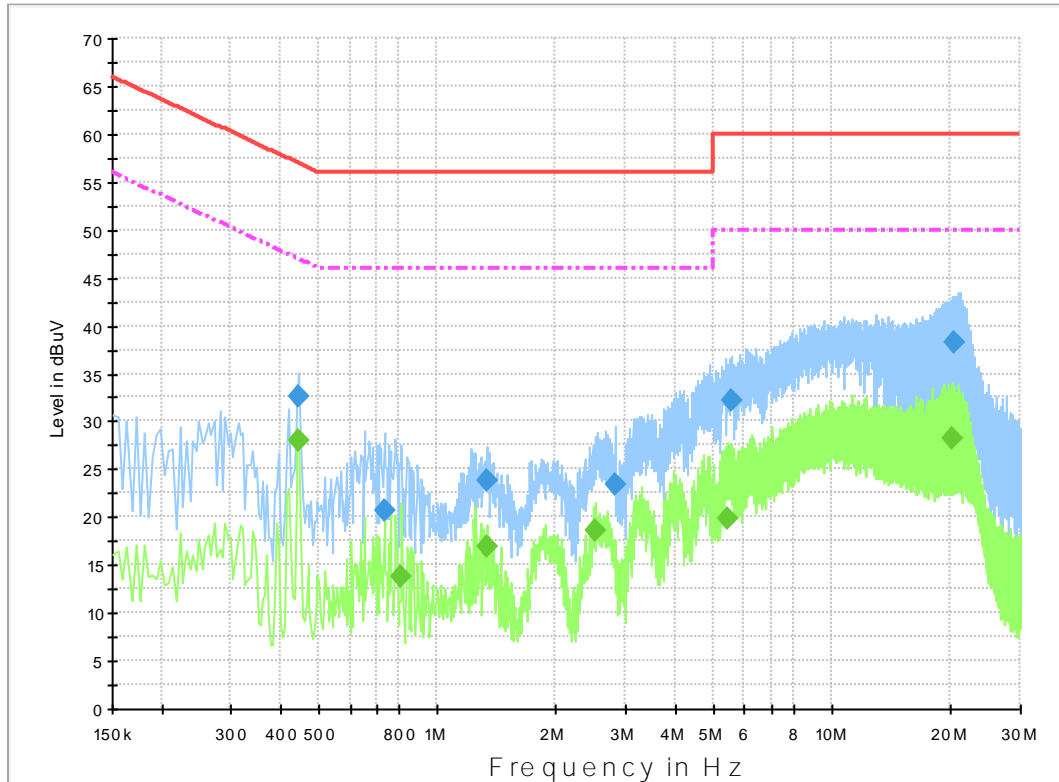


Figure A.14 Conducted Emission

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.447000	32.6	5000.0	9.000	On	N	19.8	24.3	56.9
0.735000	20.6	5000.0	9.000	On	N	19.7	35.4	56.0
1.333500	23.8	5000.0	9.000	On	L1	19.7	32.2	56.0
2.818500	23.4	5000.0	9.000	On	L1	19.7	32.6	56.0
5.554500	32.2	5000.0	9.000	On	L1	19.7	27.8	60.0
20.436000	38.2	5000.0	9.000	On	N	19.9	21.8	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.447000	28.0	5000.0	9.000	On	L1	19.8	19.0	46.9
0.811500	13.8	5000.0	9.000	On	N	19.7	32.2	46.0
1.333500	16.9	5000.0	9.000	On	L1	19.7	29.1	46.0
2.517000	18.6	5000.0	9.000	On	L1	19.6	27.4	46.0
5.455500	19.8	5000.0	9.000	On	N	19.6	30.2	50.0
20.188500	28.3	5000.0	9.000	On	L1	19.8	21.7	50.0

Set.5: Charging, NVT battery,AE2 dock, AE8 cable, black screen no interference mode

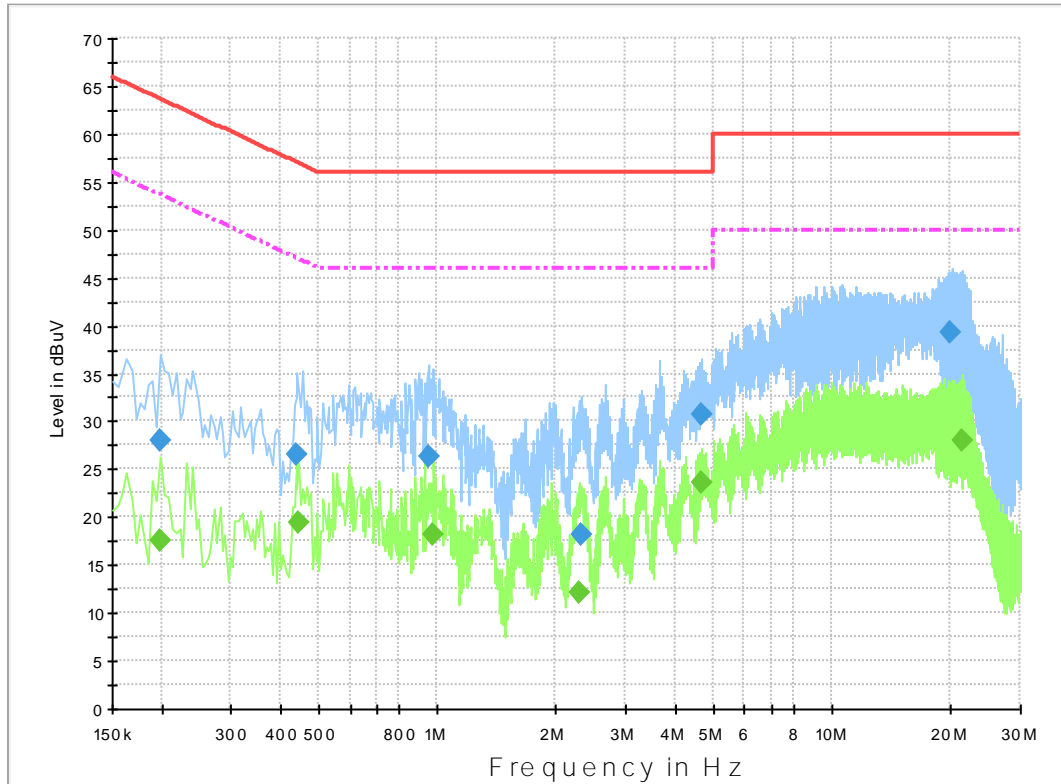


Figure A.15 Conducted Emission

Note1: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.199500	28.0	5000.0	9.000	On	L1	19.6	35.6	63.6
0.442500	26.5	5000.0	9.000	On	L1	19.8	30.5	57.0
0.946500	26.4	5000.0	9.000	On	L1	19.7	29.6	56.0
2.314500	18.1	5000.0	9.000	On	N	19.6	37.9	56.0
4.645500	30.8	5000.0	9.000	On	L1	19.7	25.2	56.0
19.891500	39.3	5000.0	9.000	On	L1	19.8	20.7	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.199500	17.5	5000.0	9.000	On	L1	19.6	36.1	53.6
0.447000	19.5	5000.0	9.000	On	L1	19.8	27.4	46.9
0.978000	18.1	5000.0	9.000	On	L1	19.7	27.9	46.0
2.283000	12.2	5000.0	9.000	On	L1	19.6	33.8	46.0
4.668000	23.6	5000.0	9.000	On	L1	19.7	22.4	46.0
21.340500	28.1	5000.0	9.000	On	L1	19.8	21.9	50.0



ANNEX B: Persons involved in this testing

Test Item	Tester
Radiated Emission	Li Zongliang, Zhang Tianli
Conducted Emission	Guo Qian

*****END OF REPORT*****