

TEST REPORT EN IEC 55014-1:2021 Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus. Part 1: Emission EN IEC 55014-2:2021 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard	
Report Number.....	SZ2026030871-4E
Date of issue.....	2026-04-01
Total number of pages	27
Testing Laboratory	STQ Testing Services Co., Ltd.
Address.....	Building 1, 15 Yin Zhu Road, Suzhou New District, China.
Applicant's name	Mid Ocean Brands B.V.
Address.....	Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Test specification:	
Standard	EN IEC 55014-1:2021, EN IEC 55014-2:2021
Test Report Form No	SZ2026030871-4E
TRF Originator.....	STQ Testing Services Co., Ltd.
General disclaimer:	
The test results presented in this report relate only to the object tested. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This publication may be reproduced in whole or in part for non-commercial purposes as long as the STQ Testing Services Co., Ltd. is acknowledged as copyright owner and source of the material. STQ Testing Services Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.	
Test Item Description	Electric milk frother in ABS housing in black matt.
Trade Mark	N/A
Models	N/A
Ratings	DC 5V, 1A
Result	PASS

Approved by:



Leo Qin/ Manager

Test Report

Test Report No. :	SZ2026030871-4E	2026-04-01
		Date of issue

Equipment under Test : Electric milk frother in ABS housing in black matt.

Test Model : N/A

Listed Models : N/A

Trade Mark : N/A

Applicant : Mid Ocean Brands B.V.

Address : Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

Manufacturer : Mid Ocean Brands B.V.

Address : Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

Factory : Mid Ocean Brands B.V.

Address : Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

Test Result	Pass
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

History of this test report

Report No.	Issued Date	Description	Version
SZ2026030871-4E	2026-04-01	Initial Issued Report	V1.0



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1. TEST STANDARDS

The tests were performed according to following standards:

EN IEC 55014-1:2021 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission

EN IEC 55014-2:2021 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard



2. SUMMARY

2.1. General Remarks

Date of receipt of test sample : 2026-03-25

Testing commenced on : 2026-03-25

Testing concluded on : 2026-04-01

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage : ☐ 230V/50Hz ☐ 115V/60Hz
☐ 12VDC ☐ 24VDC
☒ Other (specified in blank below)

DC 5V&DC 3.7V

Remark: DC 5V by power bank, DC 3.7V by battery.

Sample No.: 1/1

Frequency Clock <15MHz

Cable: USB cable about 0.6m.

2.3. Short description of the Equipment under Test (EUT)

Insert: Usage of Machine, Place it will be used, Functions

The EUT is a Electric milk frother in ABS housing in black matt..

2.4. EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

Mode 1	Running
Mode 2	Charging while running
Remark: Only the worst test patterns are represented in this report	

Test program (customer specific)

Emissions tests.....: According to EN IEC 55014-1:2021, searching for the highest disturbance.

Immunity tests: According to EN IEC 55014-2:2021, searching for the highest susceptibility.

2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

o -supplied by the manufacturer

■- supplied by the lab

Support equipment List

Manufacturer	Description	Model	Serial Number	Certificate
XIAOMI	portable power	PB1033MI	/	/

2.6. Performance level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level defined by its manufacturer or the requestor of the test, or agreed between the manufacturer and the purchaser of the product.

Definition related to the performance level:

- based on the used product standard
- o based on the declaration of the manufacturer, requestor or purchaser

Criterion A:

Definition: normal performance within limits specified by the manufacturer, requestor or purchaser:

The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Criterion B:

Definition: temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention:

The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Criterion C:

Definition: temporary loss of function or degradation of performance, the correction of which requires operator intervention:

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

STQ Testing Services Co., Ltd.
Building 1, 15 Yinzhu Road, High-new district, Suzhou, China 215129

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35°C
Humidity:	30-60%
Atmospheric pressure:	950-1050mbar

3.4. Test Description

Emission Measurement		
Radiation Emission	EN IEC 55014-1:2021	PASS
Immunity Measurement		
Electrostatic Discharge	EN IEC 55014-2:2021 EN 61000-4-2:2009	PASS
RF Field Strength Susceptibility	EN IEC 55014-2:2021 EN IEC 61000-4-3:2020	PASS

Remark:

1. The test result PASS and /or FAIL has no relationship with the measurement uncertainty.

3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the STQ Testing Services Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for STQ laboratory is reported:

Test	Range	Measurement		Notes
		U _{LAB}	U _{CISPR}	
Radiated Emission	30~1000MHz	4.66dB	6.30dB	(1)
Conducted Emission	0.009~0.15MHz	3.08dB	3.80dB	(1)
	0.15~30MHz	2.54dB	3.40dB	(1)
Disturbance Power	30~300MHz	3.40dB	4.50dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.6. Equipments Used during the Test

Radiated Emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	EMI Test Receiver	ROHDE & SCHWARZ	ESU8	100372	2025.06.23	2026.06.22
2	BroadBand Antenna	SchwarzBeck /Germany	VULB 9168	01423	2025.06.22	2026.06.21
3	preamplifier	SchwarzBeck /Germany	BBV 9745	00280	2025.06.23	2026.06.22
4	Horn Antenna	SchwarzBeck /Germany	BBHA 9120 D	02668	2025.06.22	2026.06.21
5	preamplifier	RF system/UK	TRLA-010180G40B	22021601	2025.06.23	2026.06.22
6	Cable	H&S/Swiss	CBL-RE-18	NBZT001-E-23	2025.06.23	2026.06.22
7	Cable	H&S/Swiss	CBL-RE-18	NBZT001-E-24	2025.06.23	2026.06.22
8	Test software	Farad/TW	EZ_EMC	Ver. FA-03A2	/	/

Electrostatic Discharge						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	ESD Simulator	Teseq/ Germany	NSG 437	1765	2025.06.22	2026.06.21

RF Field Strength Susceptibility						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	Power Meter	Narda	EP-601	NBZT001-E-59	2026.03.23	2027.03.22
2	logarithmic broadband periodic antenna	SKET/Germany	STLP9129 PLUS	NBZT001-E-50	2026.03.21	2027.03.20
3	Power Sensor (FWD)	R&S	NRP-Z11	NBZT001-E-56	2026.03.17	2027.03.16

4	Power Sensor (REV)	R&S	NRP-Z11	NBZT001-E-60	2026.03.17	2027.03.16
5	Signal Generator	Agilent/USA	N5181A	NBZT001-E-55	2026.03.17	2027.03.16
6	Power Amplifier	RFLEAD/China	LDPA80M1G500	NBZT001-E-57	2026.03.17	2027.03.16
7	Power Amplifier	RFLEAD/China	LDPA1G6G200	NBZT001-E-58	2026.03.17	2027.03.16
8	Test software	SKET/China	EMC-S	V2.1.3.56	/	/

Mark: The cal. Due is 1 year.



4. TEST CONDITIONS AND RESULTS

4.1. Radiated Emission

For test instruments and accessories used see section 3.6.

4.1.1. Description of the test location

Test location: Radiation Lab CHAMBER

4.1.2. Limits of disturbance

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB μ V/m)
30~230	3	40
230~1000	3	47

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

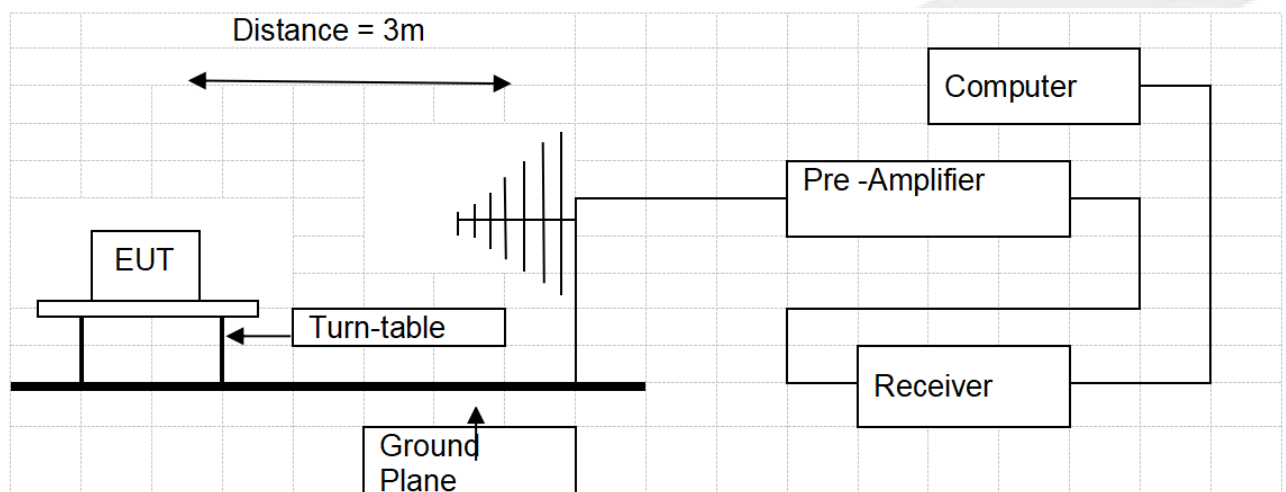
(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

4.1.3. Description of the test set-up

4.1.3.1. Operating Condition

The EUT is set to work shall be carried out with full load mode during the test, and the maximum emanating results are recorded.

4.1.3.2. Configuration of test setup



4.1.4. Test result

The requirements are **Fulfilled**

Band Width: 120kHz

Frequency Range: 30MHz to 1000MHz

Remarks: The limits are kept. For detailed results, please see the following page(s).

Environmental Conditions:	21.0°C, 45.0%RH
Test Voltage:	DC 5V
Test Model:	N/A
Test Mode:	Mode 2
Test Engineer:	Nicole Zhou
Pol:	Vertical

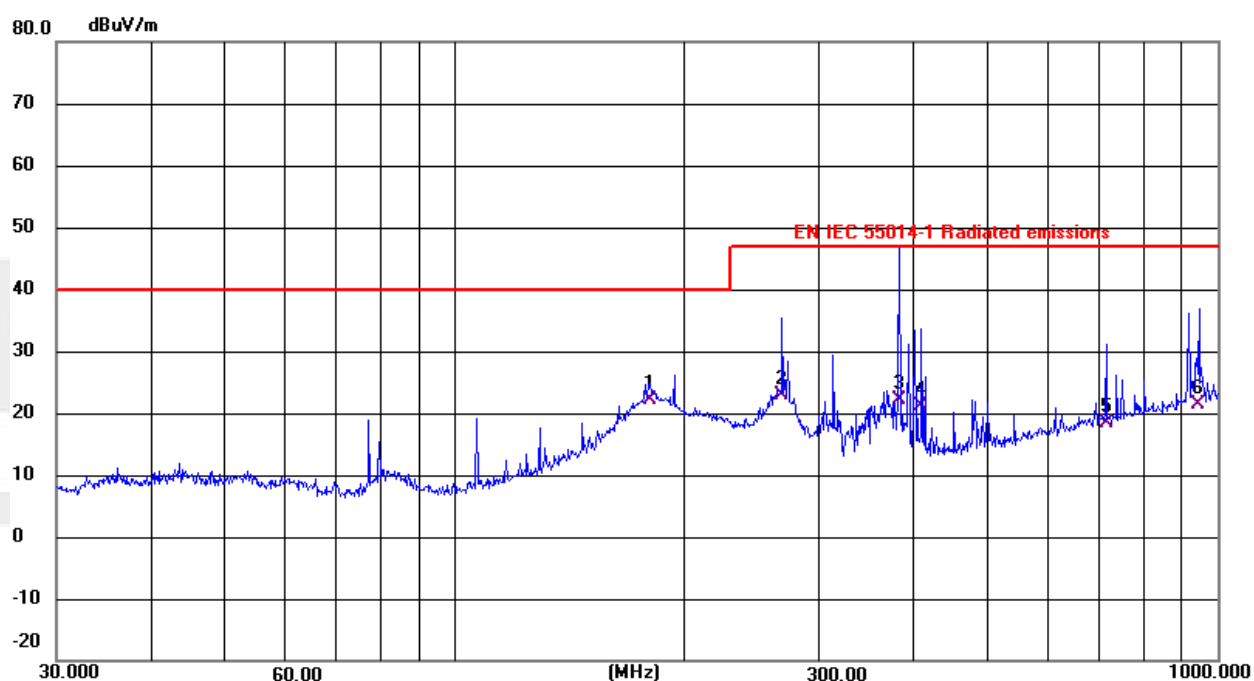
Detailed results are shown below



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	61.3463	26.90	-16.70	10.20	40.00	-29.80	QP	100	92	P	
2	65.5727	26.90	-17.40	9.50	40.00	-30.50	QP	100	110	P	
3	83.2298	27.40	-19.65	7.75	40.00	-32.25	QP	100	92	P	
4	114.9168	27.40	-16.95	10.45	40.00	-29.55	QP	100	119	P	
5	159.7844	26.40	-13.77	12.63	40.00	-27.37	QP	100	162	P	
6 *	958.7943	26.70	-4.78	21.92	47.00	-25.08	QP	100	153	P	

Environmental Conditions:	21.0°C, 45.0%RH
Test Voltage:	DC 5V
Test Model:	N/A
Test Mode:	Mode 2
Test Engineer:	Nicole Zhou
Pol:	Horizontal

Detailed results are shown below



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	180.0165	35.40	-13.29	22.11	40.00	-17.89	QP	200	83	P	
2	268.4853	38.90	-15.95	22.95	47.00	-24.05	QP	100	76	P	
3	382.5879	36.30	-14.06	22.24	47.00	-24.76	QP	100	119	P	
4	408.9460	34.70	-13.67	21.03	47.00	-25.97	QP	200	214	P	
5	714.1734	26.70	-8.21	18.49	47.00	-28.51	QP	100	76	P	
6	945.4399	26.30	-4.82	21.48	47.00	-25.52	QP	100	24	P	

4.2. Electrostatic discharge

For test instruments and accessories used see section 3.6.

4.2.1. Description of the test location and date

Test location: EMS Test Room

Date of test: 2026-03-30

Operator: Nicole Zhou

4.2.2. Severity levels of electrostatic discharge

4.2.2.1. Severity level: Contact Discharge at $\pm 4\text{kV}$ Air Discharge at $\pm 8\text{kV}$

Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)
1	2	2
2	4	4
3	6	8
4	8	15
X	Special	Special

4.2.2.2. Performance criterion: **B**

4.2.3. Description of the test set-up

4.2.3.1. Operating Condition

The EUT is on mode during the test, and the results of the maximum susceptibility are recorded.

4.2.3.2. Test Configuration and Procedure:

Air Discharge:

- This test is done on a non-conductive surfaces. The round discharge tip of the Electrostatic Discharge simulator shall be approached as fast as possible then to touch the EUT. After each discharge, the simulator shall be removed from the EUT. The simulator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed

Contact Discharge:

- All the procedure shall be same as air discharge, except using the acute discharge tip. The top end of the Electrostatic Discharge simulator is touch the EUT all the time when the simulator is re-triggered for a new single discharge and repeated 10 times for each pre-selected test point.

Indirect Discharge:

- The vertical coupling plane(VCP) is placed 0.1m away from EUT. The top end of Electrostatic Discharge simulator should aim at the center of one border of the VCP for at least 10 times discharge.
- The top end of Electrostatic Discharge simulator should place at the point 0.1m away from EUT on the horizontal coupling plane(HCP). At least 10 times discharge should be done for every pre-selected point around EUT.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.2.4. Test specification:Contact discharge voltage:☐ 2 kV ☒ 4kVAir discharge voltage:☐ 2kV ☐ 4kV ☒ 8kVEvents(every polarity) /per point:☒ 10Time between events:☒ 1sType of discharge:

☐ Direct discharge ☒ Air discharge
☐ Indirect discharge ☒ Contact discharge
☒ Positive ☒ Negative

Polarity:Discharge location:

☒ all external locations accessible by hand
☒ horizontal coupling plane (HCP)
☒ vertical coupling plane (VCP)

4.2.5. Test result

Test mode		Mode 1 & Mode 2
Environmental conditions	Temperature	20.0°C
	Humidity	50.0%RH
	Atmospheric pressure	1017mbar

The requirements are **Fulfilled**Performance Criterion: **A**
Remarks: During the test no deviation was detected to the selected operation mode(s).

4.3. Radiated, radio-frequency, electromagnetic field

For test instruments and accessories used see section 3.6.

4.3.1. Description of the test location and date

Test location: EMC Test Room

Date of test: 2026-03-31

Operator: Nicole Zhou

4.3.2. Severity levels of electrostatic discharge

4.3.2.1. Severity level: 3V/m

Level	Field Strength (V/m)
1	1
2	3
3	10
x	Special

4.3.2.2. Performance criterion: A

4.3.3. Description of the test set-up

4.3.3.1. Operating Condition

The EUT is on mode during the test, and the results of the maximum susceptibility are recorded.

4.3.3.2. Test Configuration and Procedure:

EUT is placed on a table which is 0.8 meter above ground. The center of the transmitting antenna mounted on an antenna mast is set 3 meter away from the EUT. During the test, each of four sides of EUT will face the transmitting antenna with the turntable cycled. Both horizontal and vertical polarization of the antenna are set on test and measured individually.

In order to judge the performance of the EUT, a set of monitor system is used.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.3.4. Test specification:

Frequency range:

■ 80MHz to 1000MHz

Field strength:

■ 3V/m

EUT - antenna separation:

■ 3m

Modulation:

■ AM: 80%
■ sinusoidal 1000Hz

Frequency step:

■ 1% with 3s dwell time

Antenna polarisation:

■ horizontal ■ vertical

4.3.5. Test result

Test mode		Mode 1 & Mode 2
Environmental conditions	Temperature	21.0 °C
	Humidity	45.0%RH

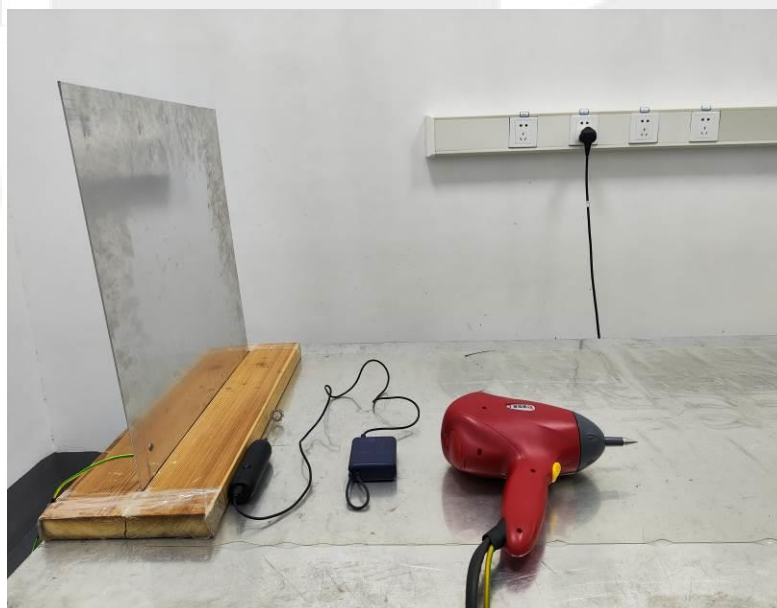
The requirements are **Fulfilled**Performance Criterion: **A****Remarks:** During the test no deviation was detected to the selected operation mode(s).

5. Test Setup Photos

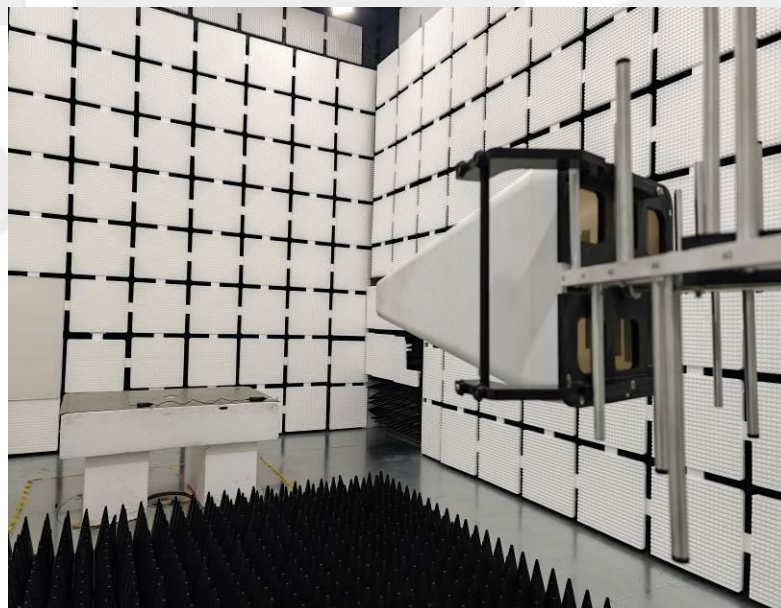
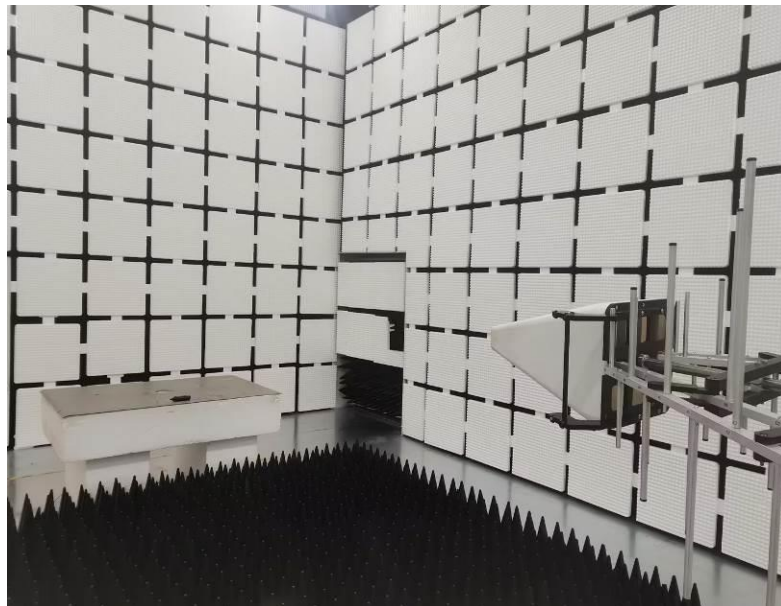
5.1 Photo of Radiated Emission Test



5.2 Photo of Electrostatic Discharge Test



5.3 Photo of Radiated, radio-frequency, electromagnetic field Test



6. Photos of the EUT



Fig. 1

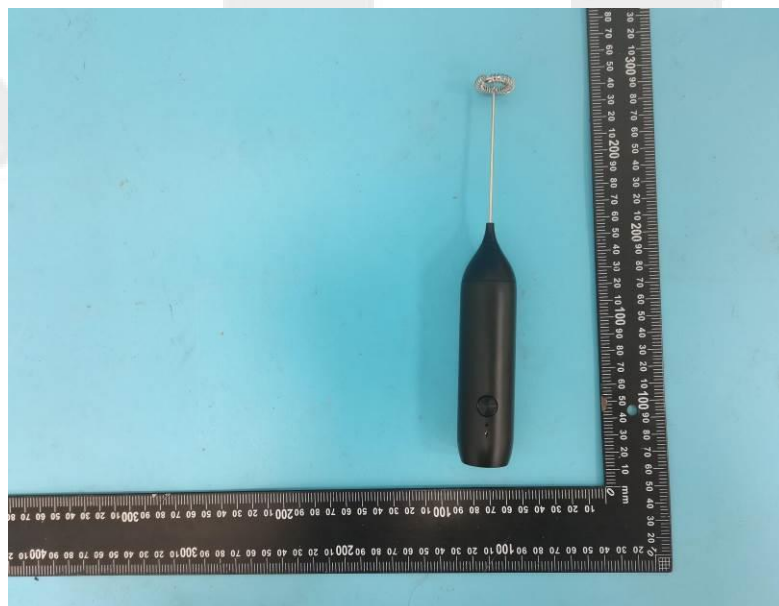


Fig. 2

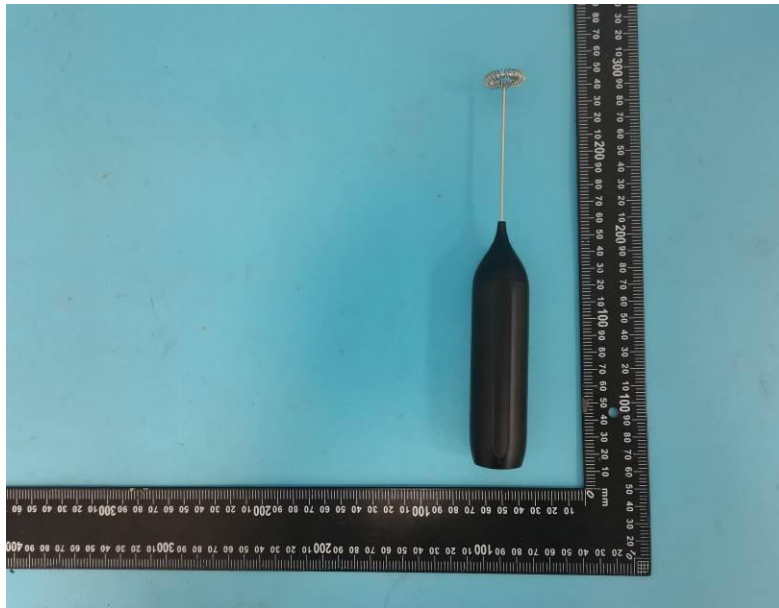


Fig. 3

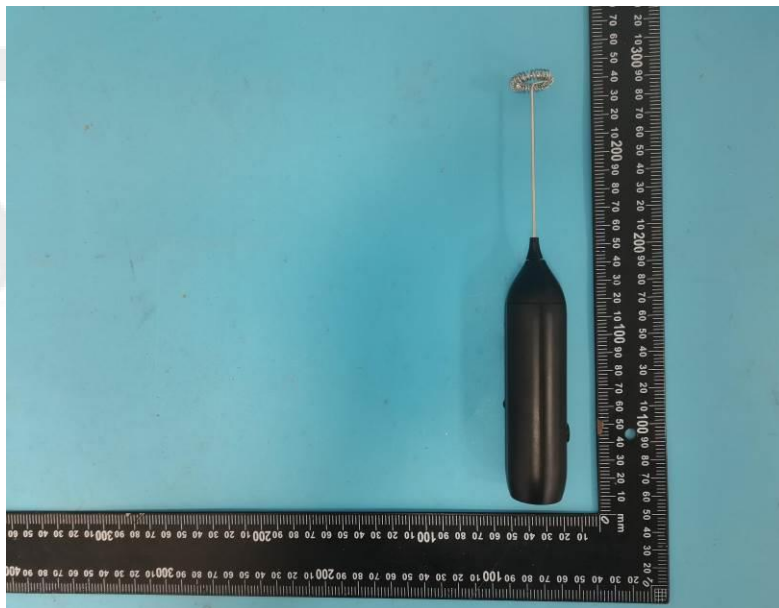


Fig. 4

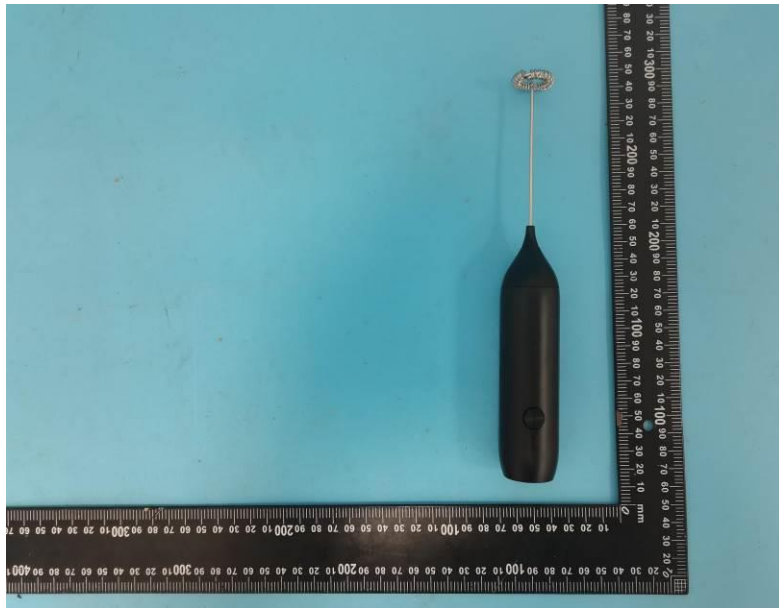


Fig. 5

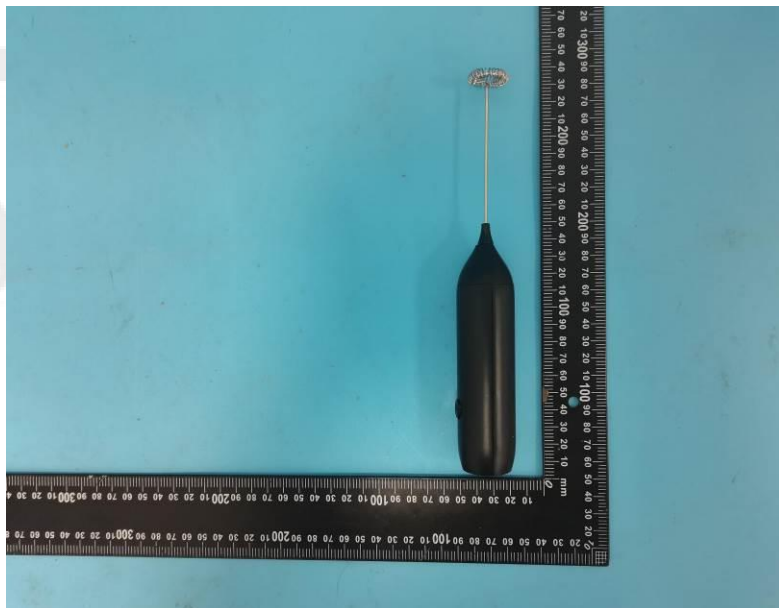


Fig. 6

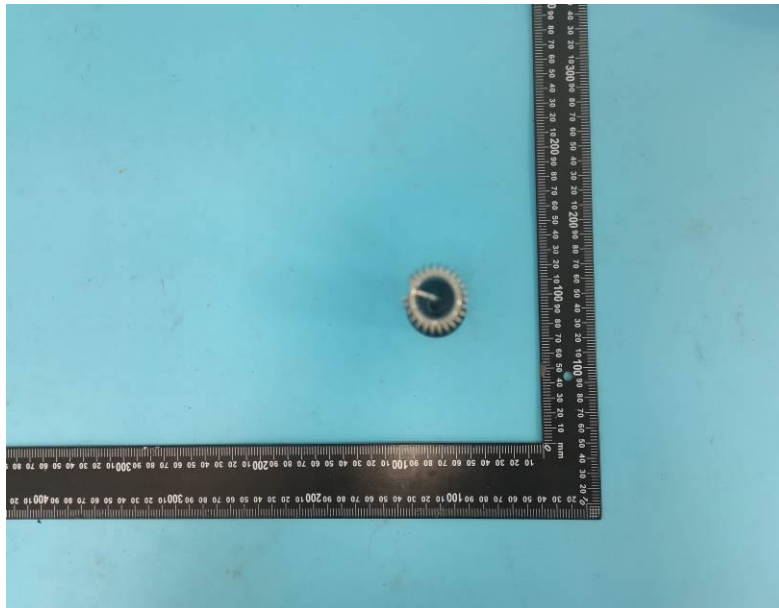


Fig. 7



Fig. 8



Fig. 9

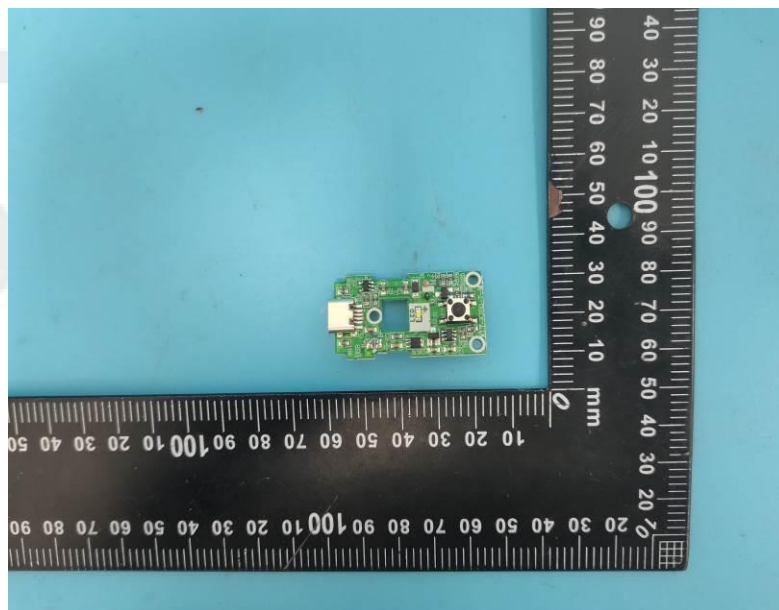


Fig. 10

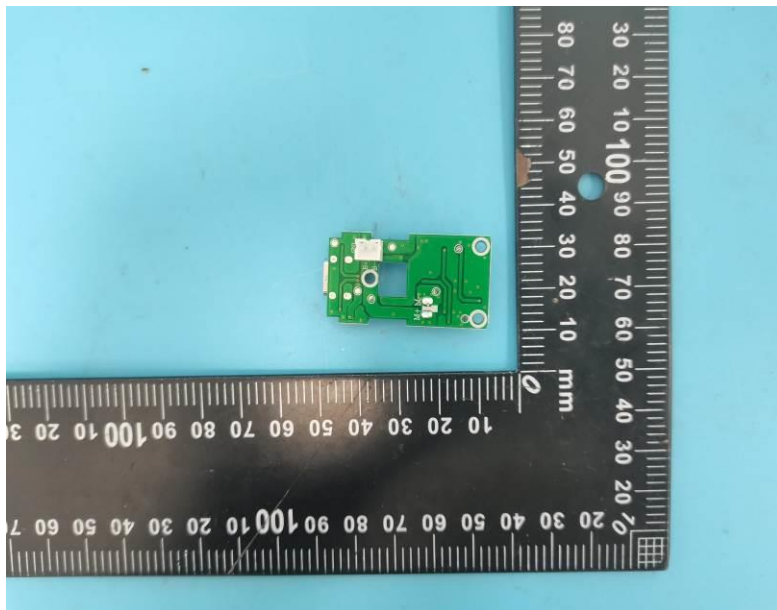


Fig. 11

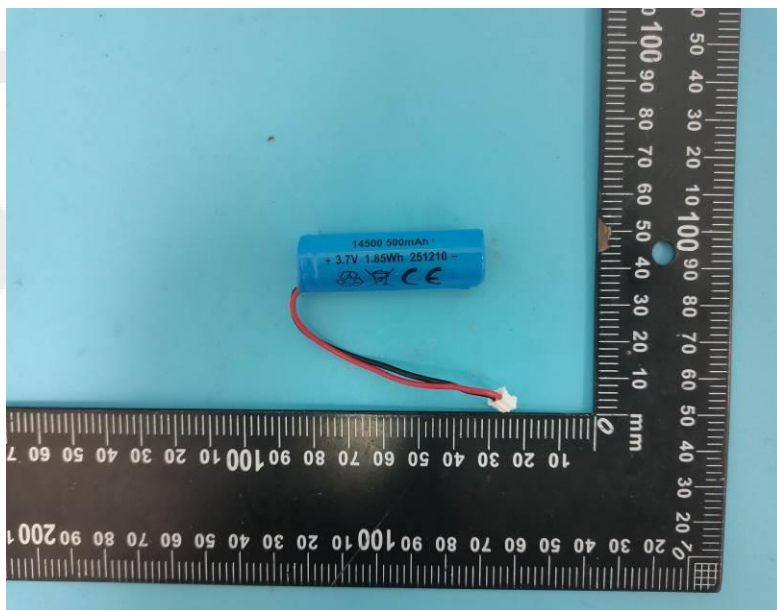


Fig. 12

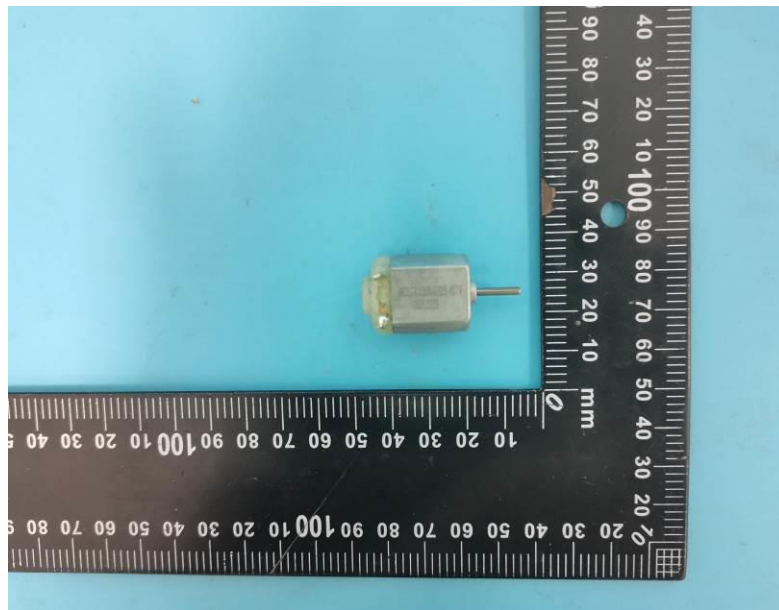


Fig. 13

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