

Prüfbericht-Nr.: <i>Test report no.:</i>	CN24XE39 001	Auftrags-Nr.: <i>Order no.:</i>	190159931	Seite 1 von 46 <i>Page 1 of 46</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2024-07-04	
Auftraggeber: <i>Client:</i>	Xiaomi Communications Co., Ltd. #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, 100085, China			
Prüfgegenstand: <i>Test item:</i>	Xiaomi Electric Scooter 5 Pro			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	DDHBC45ZM, DDHBC46ZM, DDHBC47ZM, DDHBC48ZM, DDHBC49ZM, DDHBC53ZM			
Auftrags-Inhalt: <i>Order content:</i>	RED Approval			
Prüfgrundlage: <i>Test specification:</i>	EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:2023, EN 62233:2008, EN 62479:2010, EN 301 489-1 V2.2.3:2019, EN 301 489-17 V3.2.4:2020, EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, EN 300 328 V2.2.2:2019			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2024-06-22			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003719443-004			
Prüfzeitraum: <i>Testing period:</i>	2024-06-26 - 2024-06-30			
Ort der Prüfung: <i>Place of testing:</i>	Refer to section 2.1			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (China) Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	genehmigt von: <i>authorized by:</i>			
Datum: <i>Date:</i>	Ausstellungsdatum: <i>Issue date:</i>			
Stellung / Position:	Stellung / Position:			
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	* Legend:			
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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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Test Summary

5.1.1 HARMONIC CURRENT EMISSIONS ON AC MAINS

RESULT: Pass

5.1.2 VOLTAGE FLUCTUATIONS AND FLICKER ON AC MAINS

RESULT: Pass

5.1.3 RADIATED EMISSION

RESULT: Pass

5.1.4 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

5.1.5 DISCONTINUOUS DISTURBANCE

RESULT: Not applicable

5.2.1 POWER-FREQUENCY MAGNETIC FIELD

RESULT: Pass

5.2.2 RADIO FREQUENCY ELECTROMAGNETIC FIELDS (RS)

RESULT: Pass

5.2.3 RADIO FREQUENCY CONTINUOUS CONDUCTED (CS)

RESULT: Pass

5.2.4 ELECTROSTATIC DISCHARGE (ESD)

RESULT: Pass

5.2.5 ELECTRICAL FAST TRANSIENTS (EFT)

RESULT: Pass

5.2.6 SURGE

RESULT: Pass

5.2.7 VOLTAGE DIPS AND INTERRUPTIONS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

N/A

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2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China

A2LA Certificate No.: 5162.01

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Conducted Emission on AC Mains				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102680	2025-02-22
Artificial Mains Network	R&S	ENV216	101445	2025-02-22
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A
Harmonics & Flicker				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
5KVA AC Power Source	California Instruments	5001iX-CTS-400-413	1827A00145	2024-07-30
Harmonics/voltage fluctuation and flicker test system	California Instruments	100-CTS-230	1827A00144	2024-07-31
Harmonics/voltage fluctuation and flicker test system test software	California Instruments	CTS 4 (Ver.4.29.0)	N/A	N/A
Radiated Emission (3m chamber)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
3m SAC	ETS-Lindgren	SAC3	CT001632-Q1362	2025-04-25
EMI Test Receiver	R&S	ESR7	102111	2024-11-09
Horn Antenna	R&S	HF907	102706	2024-08-03
Preamplifier (1-18GHz)	FIT	SCU-18F	180077	2024-07-31
Trilog-Broadband antenna	SCHWARZBECK	VULB9168	0945	2024-08-19
EMC32 test software	R&S	EMC32(Ver.10.60.20)	N/A	N/A
Electrostatic Discharge (ESD)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
ESD Tester	TESEQ	NSG-437	1282	2024-07-30
Radio Frequency Electromagnetic Field (RS)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
3m FAC	ETS-Lindgren	FAC3	CT001632-Q1362	2025-04-25
Signal Generator	R&S	SMB100A	115183	2024-07-30

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Power Amplifier	R&S	BBA150-BC250	103102	2024-07-31
Power Amplifier	R&S	BBA150-D110E100	103117	2024-08-27
NRP6AN Average power sensor	R&S	NRP6AN	101161	2024-07-30
NRP6AN Average power sensor	R&S	NRP6AN	101162	2024-07-30
Stacked double Log.-Per. Antenna1825022	SCHWARZBECK	STLP 9128E	0153	2024-12-29
Stacked Log.-Per. Antenna	SCHWARZBECK	STLP 9149	00520	2024-12-29
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A
Radio Frequency Continuous Conducted (CS)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Conducted Immunity Test System	Teseq	NSG 4070	51350	2024-07-30
6 dB Attenuator	Teseq	100W6dB	/	2024-07-31
Coupling and Decoupling Network	Teseq	CDN M016	51055	2024-07-31
EFT/Surge/Voltage Dips and Interruptions/PFMF (4 in 1 System)				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EFT/Surge/Voltage Dips & Interruption Main test unit	EMTest	compact NX5 bspt-1-300-16	P1807214329	2024-07-31
Variac	EMTest	Variac NX-1-260-16	P1828221789	2024-07-31
PFMF Generator	EMTest	MC 2630	P1816215107	2024-07-31
PFMF Magnetic antenna	EMTest	MS 100N	P1832222236	2024-07-30
EMC 4 IN 1 system test software	EMTest	lec.control (V8.0.3)	N/A	N/A

2.3 Measurement Uncertainties

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Table 2: Measurement Uncertainty levels

Test	Parameters	Expanded uncertainty (U_{lab})	Expanded uncertainty (U_{cisp})
Conducted Emission	Level accuracy (9kHz to 150kHz)	± 3.70 dB	± 3.8 dB
	(150kHz to 30MHz)	± 3.30 dB	± 3.4 dB
Radiated Emission (3m SAC)	Level accuracy (30MHz to 1000MHz)	± 4.52 dB	± 6.3 dB
	Level accuracy (above 1000MHz)	± 4.37 dB	N/A
Mains Harmonic	Current	$\pm 4.60\%$	N/A
Voltage Fluctuations & Flicker	Voltage	$\pm 0.64\%$	N/A

As U_{lab} in all applicable tests listed above are less than U_{cisp} according to CISPR 16-4-2:2011,

- compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

Decision rule is the rule that describes how measurement uncertainty is accounted for when stating conformity with a specified requirement. When decision rule is applicable, please refer to the current version announced in our website <https://www.tuv.com/landingpage/en/qm-gcn/>.

3 General Product Information

3.1 Product Function and Intended Use

The product is an Xiaomi Electric Scooter 5 Pro which supports Bluetooth low energy technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Description
Kind of Equipment:	Xiaomi Electric Scooter 5 Pro
Type Designation:	DDHBC45ZM, DDHBC46ZM, DDHBC47ZM, DDHBC48ZM, DDHBC49ZM, DDHBC53ZM
	DDHBC45ZM: Max speed 25km/h, Motor 400W
	DDHBC46ZM: Max speed 20km/h, Motor 400W
	DDHBC47ZM: Max speed 25km/h, Motor 400W
	DDHBC48ZM: Max speed 25km/h, Motor 400W
	DDHBC49ZM: Max speed 20km/h, Motor 400W
	DDHBC53ZM: Max speed 20km/h, Motor 400W
Operating Voltage:	DC 53.6V@1.3A input via power adapter DC 46.8V input via internal battery
Testing Voltage:	AC 230V@50Hz by adapter or DC 46.8V by internal Battery
Operating Temperature Range:	-10 °C ~ +40 °C
Battery:	Model: T2336-BD4A Rated Capacity: 46.8V DC, 10.2Ah, 477.4Wh Manufacturer: De.power Technology Limited
Adapter:	Model: NBW54D601D3D Input: AC 100-240V, 50-60Hz, 2.0A Max. Output: DC 53.6V, 1.3A Manufacturer: Shenzhen AMC Technology Co., Ltd.

Identities and difference:

These models are all the same except for different model names and max speed as described above. Based on above information, all tests have performed on model DDHBC45ZM in this report.

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Normal working mode with BLE Connecting
- B. On, Charging Mode with BLE Connecting
- C. Off

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3.4 Noise Generating and Noise Suppressing Parts

For details refer to the Circuit Diagram.

3.5 Submitted Documents

- Rating Label
- Schematics
- Model Difference Letter
- User Manual
- PCB Layout

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Immunity: The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5 and chapter 6.

According to clause 3.2, all tests were performed on model DDHBC45ZM in this report.

This testing was carried out on different input voltage, but only the worst case was presented in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Mobile Phone	Xiaomi	M1908C3KE	25961/09WX03822	N/A

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

5 Test Results of EMC Requirement

5.1 Test Results of EMISSION

5.1.1 Harmonic Current Emissions on AC Mains

RESULT: Pass

Test Specification

Test standard	: EN 301 489-17 V3.2.4:2020 EN IEC 61000-6-3:2021
Basic standard	: EN 301 489-1 V2.2.3, Clause 8.5 EN IEC 61000-3-2:2019+A1:2021
Measured harmonics	: 2 - 40
Classification	: Class A
Limit	: EN IEC 61000-3-2:2019+A1:2021, Clause 7.1 Table 1

Test Setup

Date of testing	: 2024-06-26
Test voltage	: AC 230V, 50Hz
Operation mode	: B
Test ports	: AC mains
Earthing	: Connected
Test configuration	: Floor-standing
Ambient temperature	: 22.6 °C
Relative humidity	: 51.2 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the following test plots.

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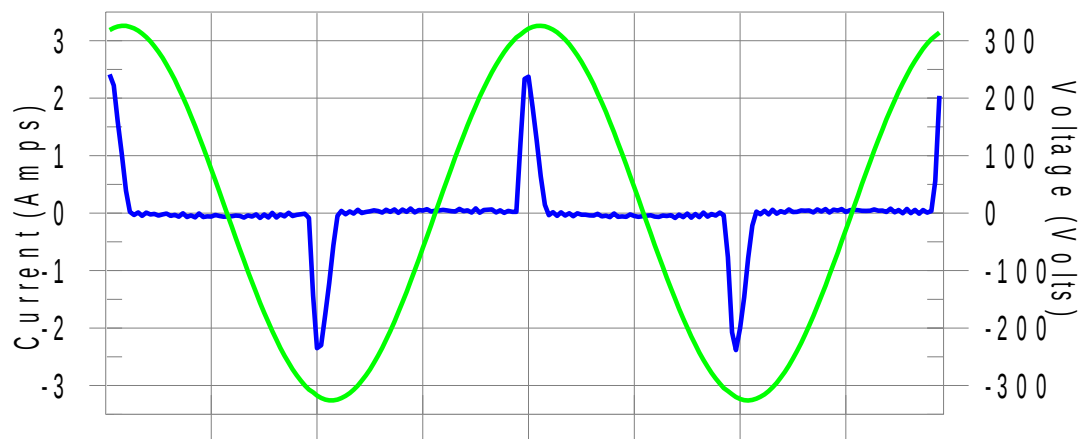
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Harmonics – Class-A per IEC 61000-3-2:2018/AMD1:2020(Run time)

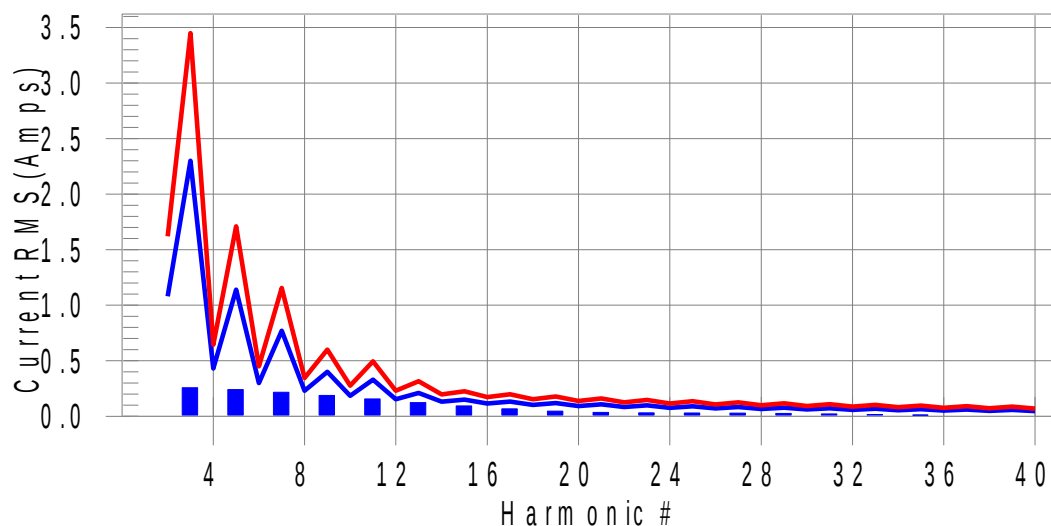
Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass **Worst harmonics H15-42.5% of 150% limit, H15-62% of 100% limit**

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Current Test Result Summary (Run time)

Test Result: Pass Source qualification: Normal
THC(A): 0.516 I-THD(%): 187.4 POHC(A): 0.074 POHC Limit(A): 0.251

Highest parameter values during test:

V_RMS (Volts):	230.31	Frequency(Hz):	50.00
I_Peak (Amps):	2.495	I_RMS (Amps):	0.590
I_Fund (Amps):	0.275	Crest Factor:	4.239
Power (Watts):	60.9	Power Factor:	0.452

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.003	1.080	N/A	0.004	1.620	N/A	Pass
3	0.257	2.300	11.2	0.259	3.450	7.5	Pass
4	0.003	0.430	N/A	0.004	0.645	N/A	Pass
5	0.240	1.140	21.1	0.242	1.710	14.1	Pass
6	0.003	0.300	N/A	0.004	0.450	N/A	Pass
7	0.216	0.770	28.1	0.219	1.155	18.9	Pass
8	0.003	0.230	N/A	0.003	0.345	N/A	Pass
9	0.188	0.400	46.9	0.190	0.600	31.6	Pass
10	0.003	0.184	N/A	0.004	0.276	N/A	Pass
11	0.156	0.330	47.2	0.158	0.495	32.0	Pass
12	0.003	0.153	N/A	0.004	0.230	N/A	Pass
13	0.124	0.210	58.8	0.126	0.315	40.0	Pass
14	0.003	0.131	N/A	0.004	0.197	N/A	Pass
15	0.093	0.150	62.0	0.096	0.225	42.5	Pass
16	0.003	0.115	N/A	0.004	0.173	N/A	Pass
17	0.067	0.132	50.5	0.069	0.198	35.0	Pass
18	0.003	0.102	N/A	0.004	0.153	N/A	Pass
19	0.047	0.118	39.4	0.049	0.178	27.6	Pass
20	0.002	0.092	N/A	0.003	0.138	N/A	Pass
21	0.035	0.107	32.6	0.037	0.161	22.8	Pass
22	0.002	0.084	N/A	0.003	0.125	N/A	Pass
23	0.031	0.098	31.4	0.032	0.147	21.7	Pass
24	0.002	0.077	N/A	0.003	0.115	N/A	Pass
25	0.030	0.090	33.4	0.031	0.135	22.8	Pass
26	0.002	0.071	N/A	0.003	0.107	N/A	Pass
27	0.029	0.083	34.7	0.030	0.125	24.1	Pass
28	0.003	0.066	N/A	0.004	0.099	N/A	Pass
29	0.026	0.078	33.3	0.027	0.116	23.2	Pass
30	0.002	0.061	N/A	0.003	0.092	N/A	Pass
31	0.021	0.073	29.2	0.022	0.109	20.6	Pass
32	0.002	0.058	N/A	0.003	0.086	N/A	Pass
33	0.016	0.068	23.1	0.017	0.102	16.5	Pass
34	0.001	0.054	N/A	0.002	0.081	N/A	Pass
35	0.011	0.064	16.5	0.011	0.096	11.8	Pass
36	0.001	0.051	N/A	0.001	0.077	N/A	Pass
37	0.008	0.061	12.4	0.008	0.091	8.6	Pass
38	0.001	0.048	N/A	0.001	0.073	N/A	Pass
39	0.007	0.058	12.7	0.007	0.087	8.6	Pass
40	0.001	0.046	N/A	0.001	0.069	N/A	Pass

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Voltage Source Verification Data (Run time)

Test Result: Pass Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	230.31	Frequency(Hz):	50.00
I_Peak (Amps):	2.495	I_RMS (Amps):	0.590
I_Fund (Amps):	0.275	Crest Factor:	4.239
Power (Watts):	60.9	Power Factor:	0.452

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.066	0.461	14.41	OK
3	0.522	2.073	25.20	OK
4	0.062	0.461	13.44	OK
5	0.083	0.921	8.99	OK
6	0.038	0.461	8.25	OK
7	0.089	0.691	12.89	OK
8	0.010	0.461	2.07	OK
9	0.090	0.461	19.59	OK
10	0.011	0.461	2.32	OK
11	0.092	0.230	39.89	OK
12	0.013	0.230	5.76	OK
13	0.076	0.230	33.12	OK
14	0.008	0.230	3.37	OK
15	0.069	0.230	29.81	OK
16	0.011	0.230	4.87	OK
17	0.053	0.230	22.94	OK
18	0.015	0.230	6.65	OK
19	0.046	0.230	20.14	OK
20	0.035	0.230	15.28	OK
21	0.036	0.230	15.52	OK
22	0.008	0.230	3.42	OK
23	0.032	0.230	13.68	OK
24	0.005	0.230	2.11	OK
25	0.035	0.230	15.19	OK
26	0.006	0.230	2.39	OK
27	0.040	0.230	17.16	OK
28	0.005	0.230	2.04	OK
29	0.034	0.230	14.95	OK
30	0.004	0.230	1.58	OK
31	0.032	0.230	13.70	OK
32	0.004	0.230	1.94	OK
33	0.026	0.230	11.34	OK
34	0.004	0.230	1.73	OK
35	0.020	0.230	8.76	OK
36	0.003	0.230	1.50	OK
37	0.016	0.230	6.77	OK
38	0.005	0.230	1.96	OK
39	0.016	0.230	6.82	OK
40	0.019	0.230	8.14	OK

5.1.2 Voltage Fluctuations and Flicker on AC Mains

RESULT: Pass

Test Specification

Test standard	: EN 301 489-17 V3.2.4:2020 EN IEC 61000-6-3:2021
Basic standard	: EN 301 489-1 V2.2.3, Clause 8.6 EN 61000-3-3:2013
Frequency range	: 0 – 2 KHz
Limit	: EN 61000-3-3:2013+A1+A2, Clause 5

Test Setup

Date of testing	: 2024-06-26
Test voltage	: AC 230V@50Hz
Operation mode	: B
Test Ports	: Enclosure
Earthing	: Not connected
Test configuration	: Floor-standing
Ambient temperature	: 23.6 °C
Relative humidity	: 51.5 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the following test plots.

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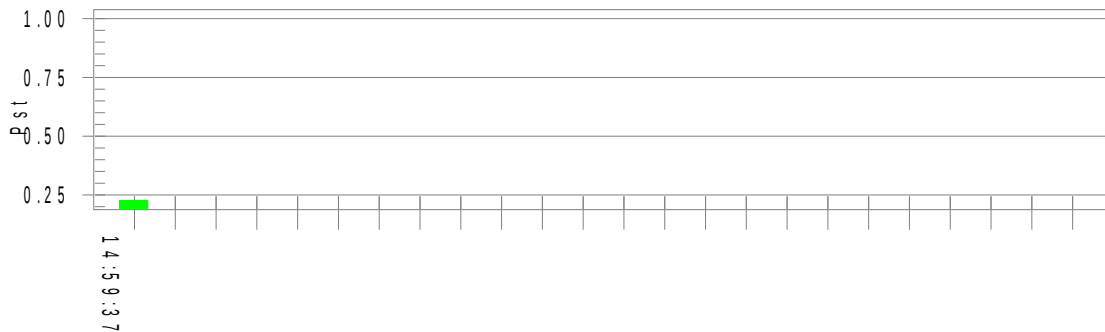
Flicker Test Summary per IEC61000-3-3:2013/AMD1:2017 (Run time)

Test Result: Pass

Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 230.14

Highest dt (%):

T-max (mS): 0

Highest dc (%): 0.00

Highest dmax (%): 0.00

Highest Pst (10 min. period): 0.226

Highest Plt (2 hr. period): 0.099

Test limit (%):

Test limit (mS): 500.0 Pass

Test limit (%): 3.30 Pass

Test limit (%): 4.00 Pass

Test limit: 1.000 Pass

Test limit: 0.650 Pass

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5.1.3 Radiated Emission

RESULT:
 Pass

Test Specification

Test standard	: EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN IEC 61000-6-3:2021
Basic standard	: EN 55032:2015 CISPR 14-1
Test requirement	: EN 301 489-1 V2.2.3, Clause 8.2 EN IEC 61000-6-3:2021, Clause 11
Classification	: Class B
Frequency range	: 30 MHz – 6 GHz
Kind of test site	: 3m Semi-anechoic Chamber
Limit	: EN 301 489-1 V2.2.3, Clause 8.2.3 EN IEC 61000-6-3:2021, Table 3

Test Setup

Date of testing	: 2024-06-28 to 2024-06-30
Test voltage	: AC 230V@50Hz by adapter DC 36V by internal Battery
Operation mode	: A, B
Test Ports	: Enclosure
Earthing	: Not connected
Ambient temperature	: Refer to test results
Relative humidity	: Refer to test results
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the following test plots.

Prüfbericht - Nr.:

Test Report No.:

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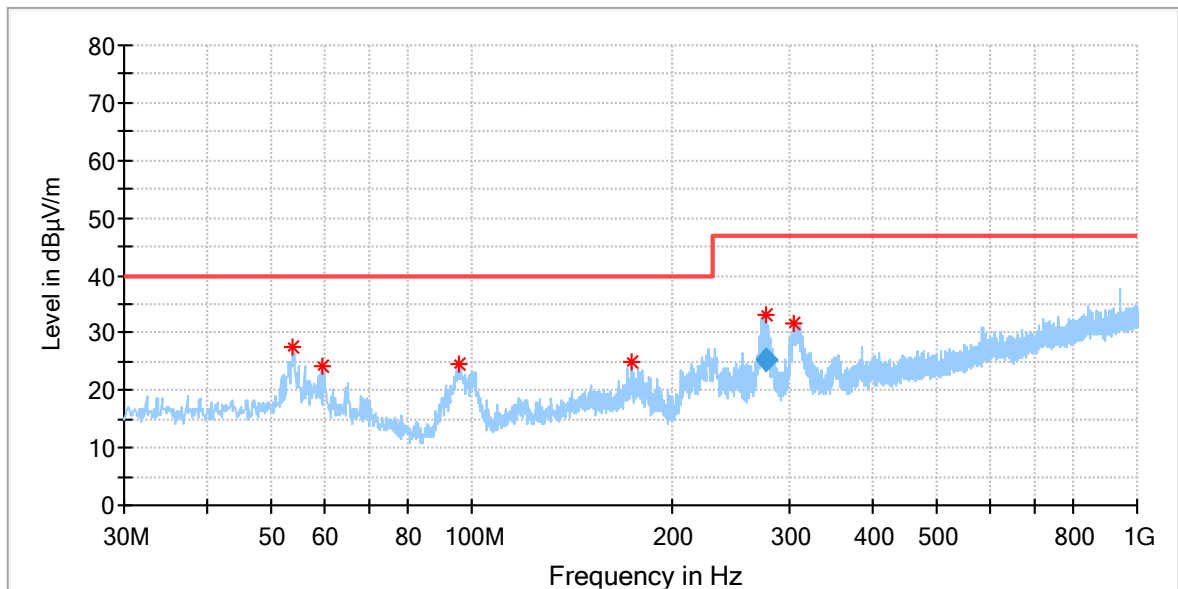
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Normal working mode with BLE Connecting:

EUT Information

EUT Name:	Xiaomi Electric Scooter 5 Pro
Order Number:	190157804
Model:	DDHBC45ZM
Test Mode:	Normal working with BLE Connecting
Test Voltage:	Battery
Test Standard:	EN 301489-1
Test By:/Review By:	Birch Zhang / Shower Dai
Tem./Hum./Pressure:	24.1°C/51.2%/101kPa
Remark:	3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
53.668000	27.54	40.00	12.46	200.0	H	358.0	20.6
59.779000	24.33	40.00	15.67	200.0	H	264.0	20.1
95.669000	24.74	40.00	15.26	200.0	H	153.0	15.4
173.754000	24.98	40.00	15.02	200.0	H	49.0	20.1
276.779000	33.04	47.00	13.96	100.0	H	201.0	20.9
303.734000	31.52	47.00	15.48	200.0	H	323.0	21.6

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
276.779000	25.31	47.00	21.69	1000.0	120.000	100.0	H	201.0	20.9

Prüfbericht - Nr.:

Test Report No.:

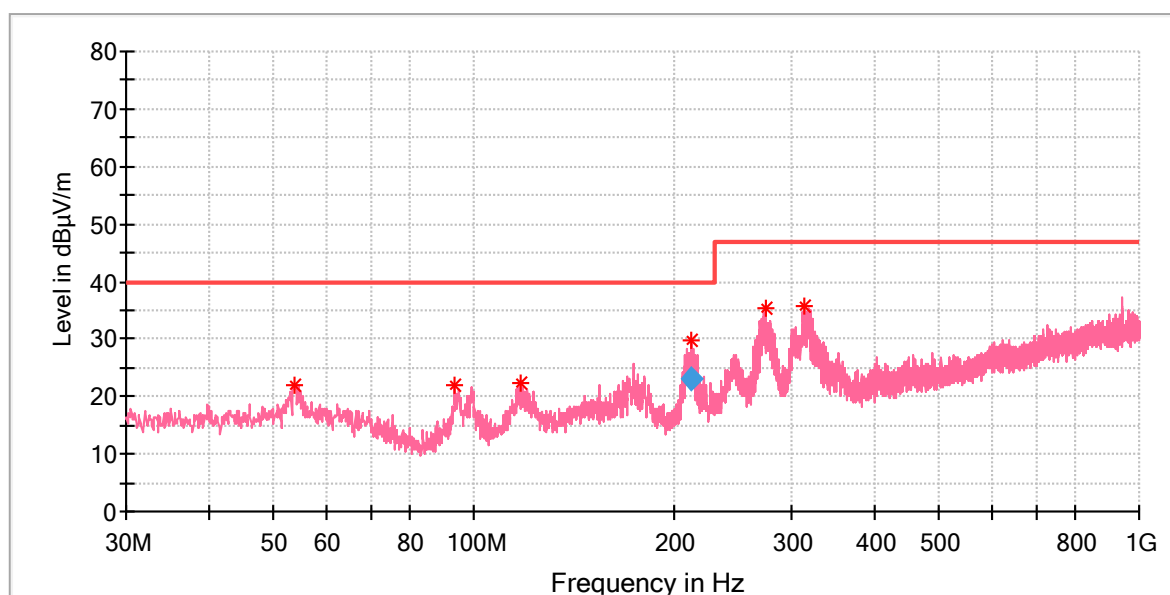
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Normal working with BLE Connecting
Test Voltage: Battery
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
53.571000	22.08	40.00	17.92	100.0	V	0.0	20.6
93.729000	21.84	40.00	18.16	200.0	V	208.0	15.2
117.882000	22.42	40.00	17.58	200.0	V	157.0	18.2
211.681000	29.69	40.00	10.31	100.0	V	305.0	17.6
275.119000	35.23	47.00	11.77	300.0	V	317.0	20.8
314.210000	35.67	47.00	11.33	100.0	V	273.0	22.0

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
211.681000	23.21	40.00	16.79	1000.0	120.000	100.0	V	305.0	17.6

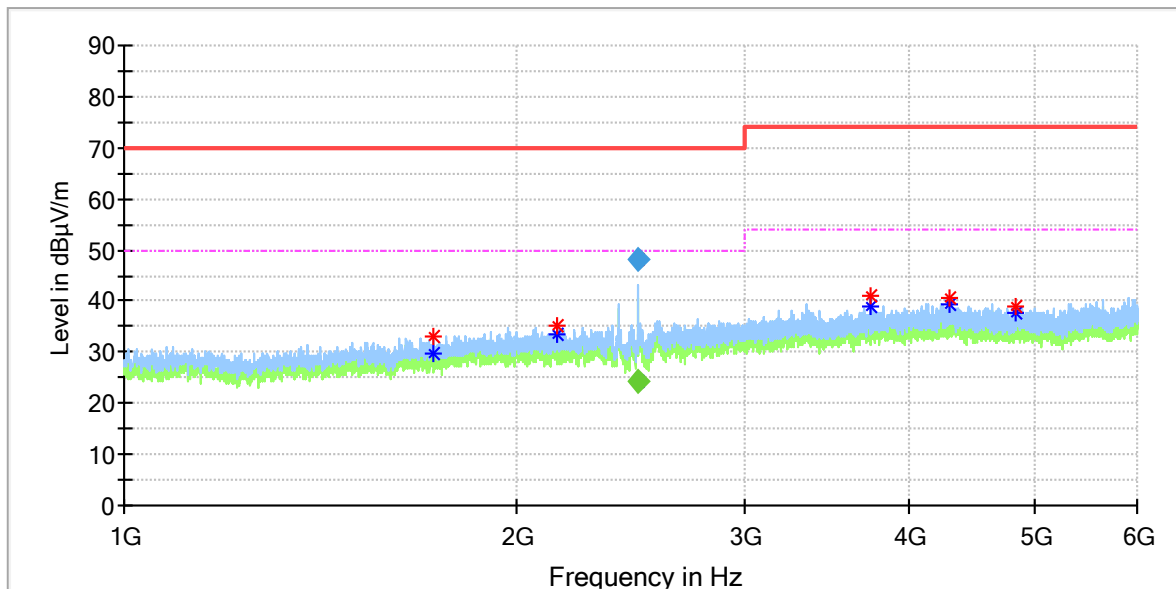
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Normal working with BLE Connecting
Test Voltage: Battery
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1727.500000	32.89	---	70.00	37.11	100.0	H	16.0	-8.5
1728.000000	---	29.69	50.00	20.31	100.0	H	283.0	-8.5
2151.000000	---	33.49	50.00	16.51	100.0	H	342.0	-6.9
2151.000000	35.03	---	70.00	34.98	100.0	H	342.0	-6.9
2480.200000	47.97	---	70.00	22.03	100.0	H	301.0	-5.6
2485.500000	---	24.38	50.00	25.62	100.0	H	301.0	-5.6
3742.000000	---	39.12	54.00	14.88	100.0	H	216.0	-0.8
3742.500000	40.93	---	74.00	33.07	100.0	H	216.0	-0.9
4302.000000	---	39.45	54.00	14.55	100.0	H	110.0	1.1
4302.000000	40.65	---	74.00	33.35	100.0	H	110.0	1.1
4833.000000	---	37.84	54.00	16.16	100.0	H	166.0	1.1
4833.500000	38.80	---	74.00	35.20	100.0	H	166.0	1.1

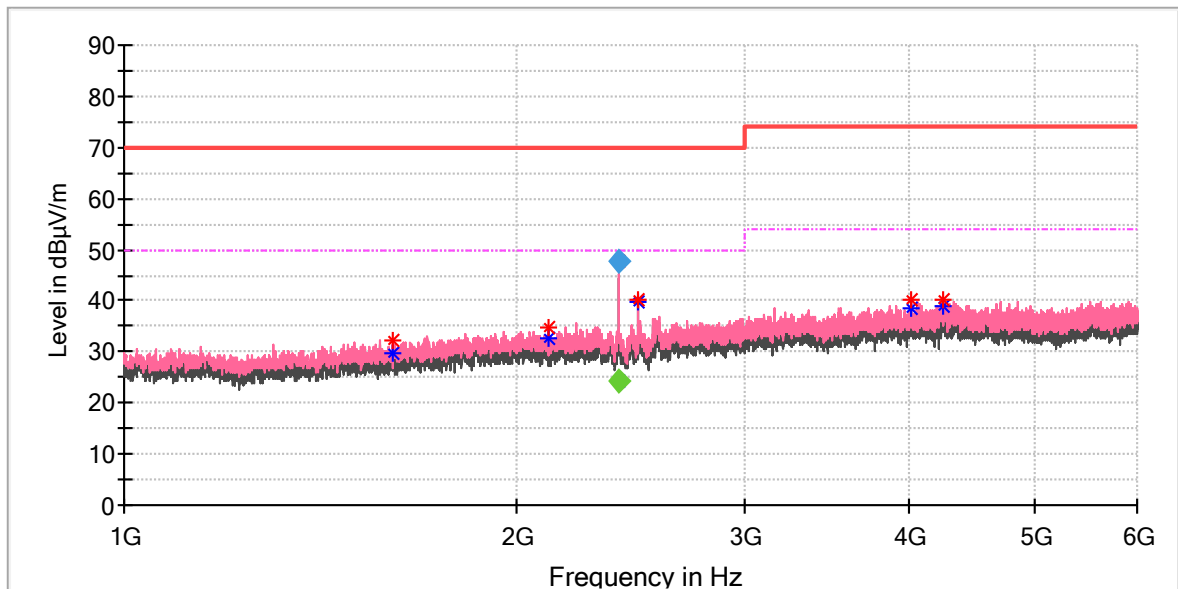
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Normal working with BLE Connecting
Test Voltage: Battery
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1611.500000	---	29.71	50.00	20.29	100.0	V	9.0	-9.3
1611.500000	32.32	---	70.00	37.68	100.0	V	9.0	-9.3
2120.500000	---	32.58	50.00	17.42	100.0	V	149.0	-7.1
2120.500000	34.87	---	70.00	35.13	100.0	V	149.0	-7.1
2401.900000	---	24.45	50.00	25.55	100.0	V	182.0	-6.3
2401.900000	47.61	---	70.00	22.39	100.0	V	182.0	-6.3
2480.000000	---	39.94	50.00	10.06	100.0	V	182.0	-5.6
2480.000000	40.21	---	70.00	29.79	100.0	V	182.0	-5.6
4015.500000	---	38.40	54.00	15.60	100.0	V	318.0	0.1
4015.500000	40.19	---	74.00	33.81	100.0	V	318.0	0.1
4250.000000	---	38.76	54.00	15.24	100.0	V	57.0	1.1
4250.000000	40.08	---	74.00	33.92	100.0	V	57.0	1.1

Prüfbericht - Nr.:
Test Report No.:

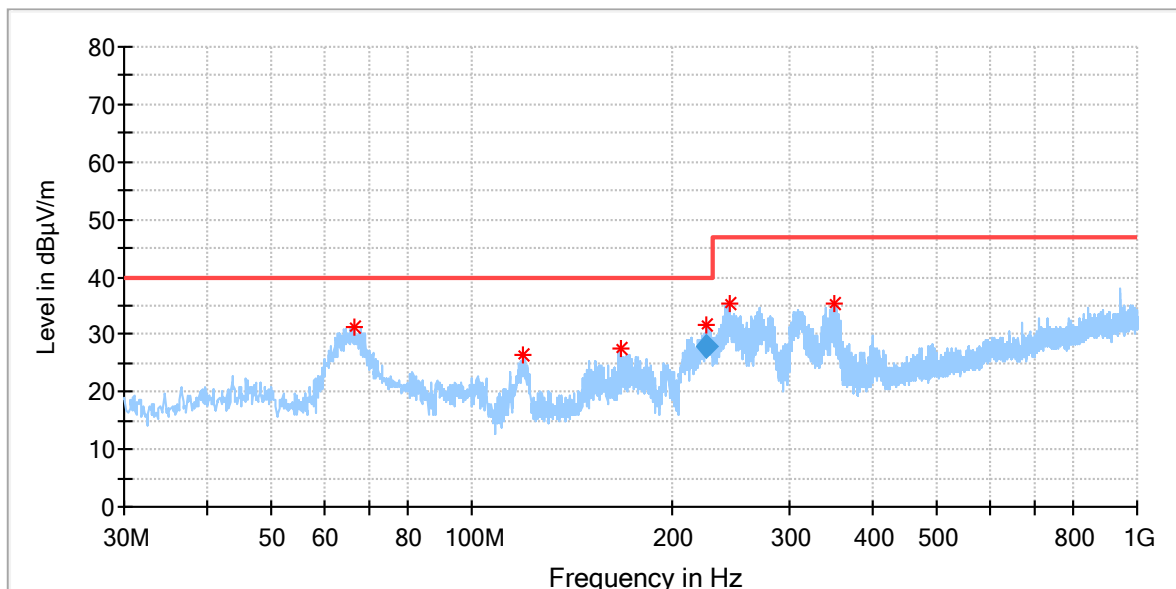
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Charging Mode with BLE Connecting:

EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Charging Mode
Test Voltage: AC 230V/50Hz
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
66.472000	31.19	40.00	8.81	200.0	H	18.0	19.1
119.240000	26.28	40.00	13.72	200.0	H	146.0	18.3
166.964000	27.62	40.00	12.38	200.0	H	163.0	20.6
225.586000	31.50	40.00	8.50	200.0	H	151.0	18.0
243.303000	35.18	47.00	11.82	100.0	H	191.0	19.5
349.615000	35.34	47.00	11.66	200.0	H	76.0	22.7

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
225.586000	27.91	40.00	12.09	1000.0	120.000	200.0	H	151.0	18.0

Prüfbericht - Nr.:

Test Report No.:

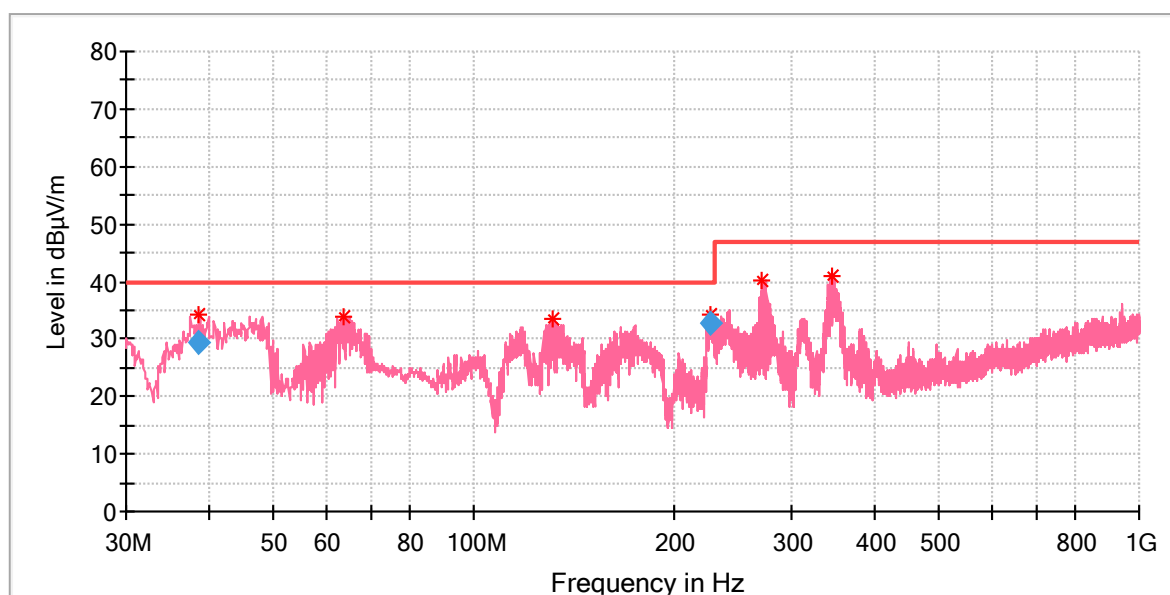
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Charging Mode
Test Voltage: AC 230V/50Hz
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
38.570000	34.09	40.00	5.91	100.0	V	211.0	20.0
63.756000	33.89	40.00	6.11	200.0	V	31.0	19.5
131.559000	33.36	40.00	6.64	300.0	V	137.0	19.5
227.075000	34.27	40.00	5.73	100.0	V	90.0	18.1
271.627000	40.25	47.00	6.75	300.0	V	149.0	20.6
345.056000	40.91	47.00	6.09	100.0	V	114.0	22.7

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
38.570000	29.26	40.00	10.74	1000.0	120.000	100.0	V	211.0	20.0
227.075000	32.57	40.00	7.43	1000.0	120.000	100.0	V	90.0	18.1

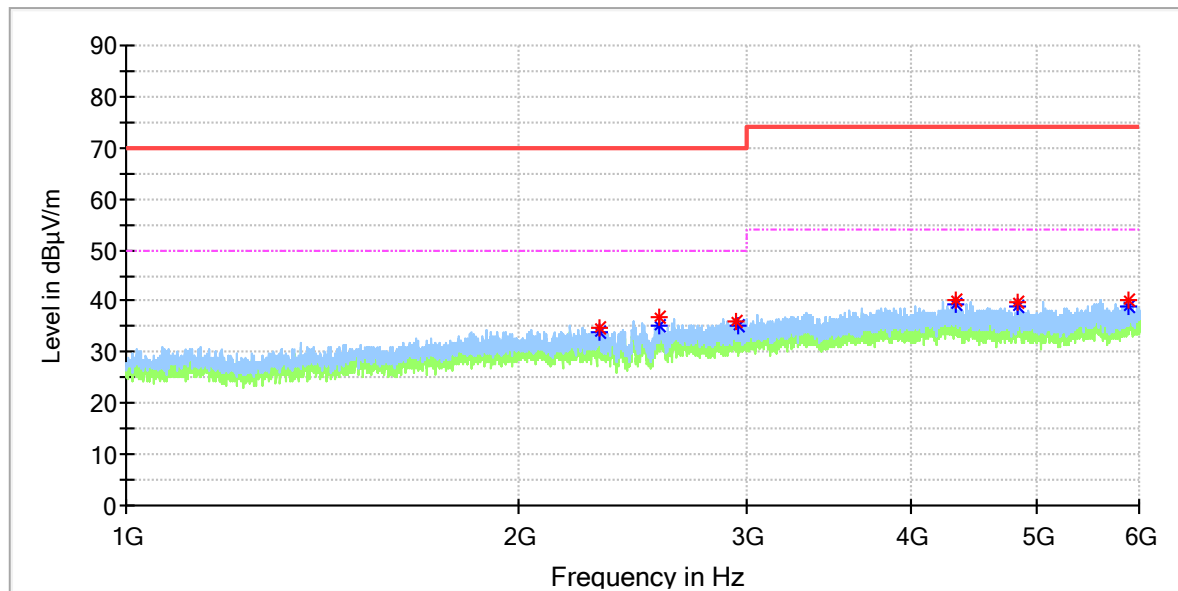
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Charging Mode
Test Voltage: AC 230V/50Hz
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2310.500000	---	33.97	50.00	16.03	100.0	H	110.0	-6.4
2310.500000	34.58	---	70.00	35.42	100.0	H	110.0	-6.4
2572.500000	36.80	---	70.00	33.20	100.0	H	276.0	-4.8
2572.500000	---	35.13	50.00	14.87	100.0	H	276.0	-4.8
2946.500000	35.80	---	70.00	34.20	100.0	H	6.0	-3.7
2954.000000	---	35.19	50.00	14.81	100.0	H	114.0	-3.6
4338.000000	---	39.51	54.00	14.49	100.0	H	142.0	1.1
4338.000000	40.22	---	74.00	33.78	100.0	H	142.0	1.1
4846.500000	---	38.79	54.00	15.21	100.0	H	147.0	1.3
4846.500000	39.58	---	74.00	34.42	100.0	H	147.0	1.3
5890.000000	40.33	---	74.00	33.67	100.0	H	0.0	3.6
5890.000000	---	38.93	54.00	15.07	100.0	H	0.0	3.6

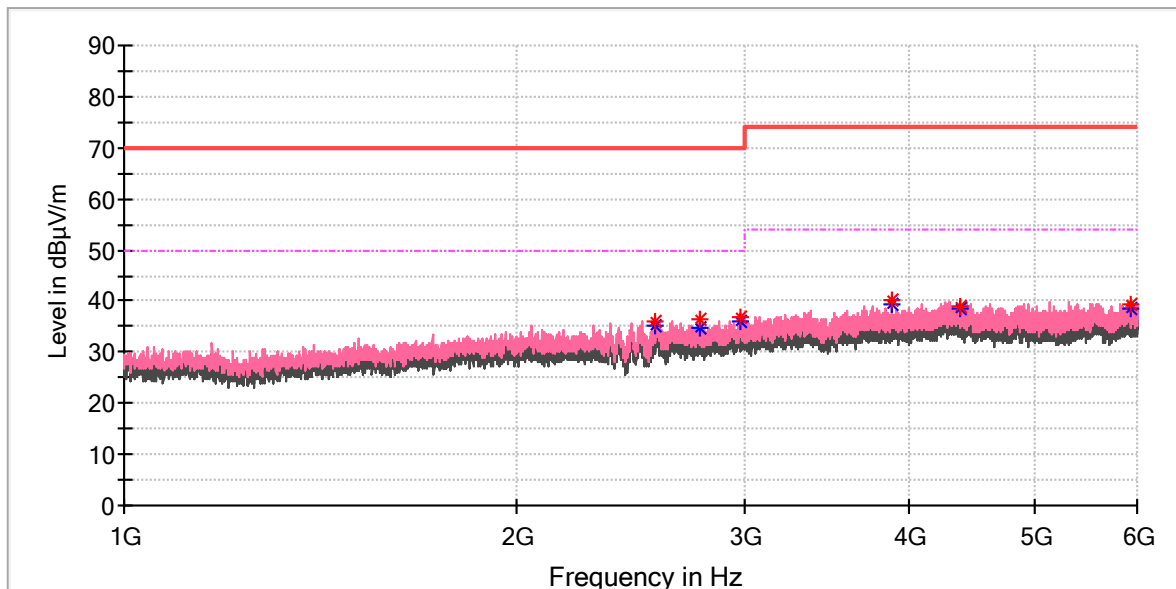
Prüfbericht - Nr.:
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804
Model: DDHBC45ZM
Test Mode: Charging Mode
Test Voltage: AC 230V/50Hz
Test Standard: EN 301489-1
Test By:/Review By: Birch Zhang / Shower Dai
Tem./Hum./Pressure: 24.1°C/51.2%/101kPa
Remark: 3m chamber



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2560.500000	---	35.08	50.00	14.92	100.0	V	112.0	-4.8
2560.500000	36.02	---	70.00	33.98	100.0	V	112.0	-4.8
2770.000000	36.42	---	70.00	33.58	100.0	V	0.0	-4.8
2770.000000	---	34.80	50.00	15.20	100.0	V	0.0	-4.8
2972.500000	---	35.86	50.00	14.14	100.0	V	262.0	-3.4
2972.500000	36.97	---	70.00	33.03	100.0	V	262.0	-3.4
3881.500000	---	39.29	54.00	14.71	100.0	V	307.0	-0.4
3881.500000	40.15	---	74.00	33.85	100.0	V	307.0	-0.4
4383.500000	39.10	---	74.00	34.90	100.0	V	160.0	0.3
4383.500000	---	38.71	54.00	15.29	100.0	V	160.0	0.3
5936.500000	39.39	---	74.00	34.61	100.0	V	330.0	3.2
5936.500000	---	38.46	54.00	15.54	100.0	V	330.0	3.2

5.1.4 Conducted Emission on AC Mains

RESULT:
 Pass

Test Specification

Test standard	: EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN IEC 61000-6-3:2021
Basic standard	: EN 55032:2015 CISPR 14-1
Test requirement	: EN 301 489-1 V2.2.3, Clause 8.4 EN IEC 61000-6-3:2021, Clause 11
Frequency range	: 150 KHz - 30 MHz
Kind of test site	: Shielded Room
Limit	: EN 301 489-1 V2.2.3, Clause 8.4.3.2 EN IEC 61000-6-3:2021, Table 4

Test Setup

Date of testing	: 2024-06-27
Test voltage	: AC 230V@50Hz by adapter
Operation mode	: B
Test ports	: AC mains terminals
Earthing	: Not connected
Test configuration	: Floor-standing
Ambient temperature	: 24.6 °C
Relative humidity	: 52.6 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the following test plots.

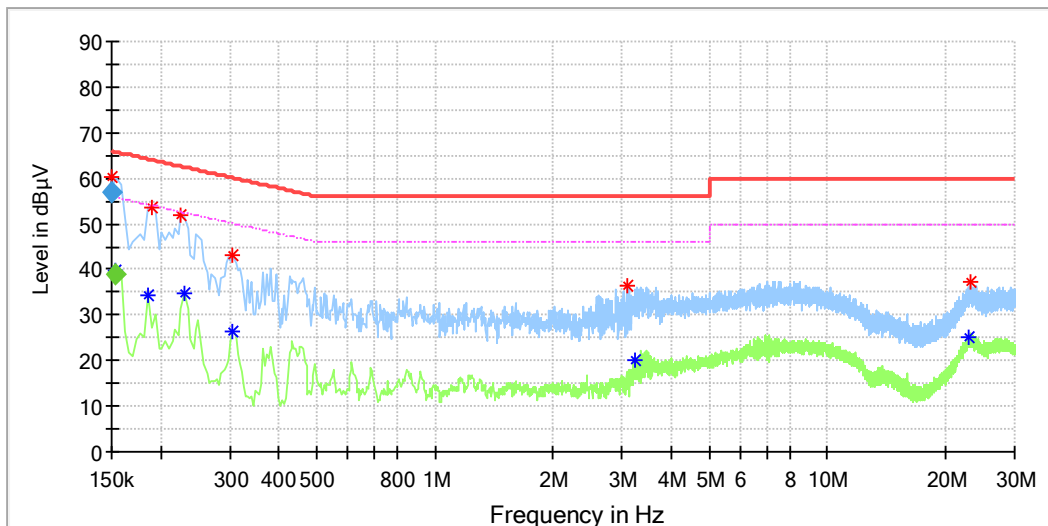
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804 (P01519267)
Model: DDHBC45ZM
Test Mode: Charging Mode with BLE Connecting
Test Voltage: AC 230V/50Hz
Test Standard: EN 301489-1
Test By:/Review By: Steve Lan/ Shower Dai
Tem./Hum./Pressure: 23.4°C/51.2%/101kPa
Remark: SR2



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.150000	60.19	---	65.78	5.59	L1	9.9
0.153500	---	39.97	55.57	15.60	L1	9.9
0.186000	---	34.40	54.21	19.81	L1	9.9
0.190000	53.40	---	64.04	10.64	L1	9.9
0.226000	51.79	---	62.60	10.80	L1	9.9
0.230000	---	34.80	52.45	17.64	L1	9.9
0.306000	---	26.47	50.08	23.61	L1	9.9
0.306000	43.20	---	60.08	16.87	L1	9.9
3.078000	36.46	---	56.00	19.54	L1	10.2
3.238000	---	20.17	46.00	25.83	L1	10.2
22.950000	---	25.25	50.00	24.75	L1	10.4
23.254000	37.27	---	60.00	22.73	L1	10.4

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	56.83	---	66.00	9.17	1000.0	9.000	L1	9.9
0.153500	---	38.86	55.81	16.95	1000.0	9.000	L1	9.9

Prüfbericht - Nr.:

Test Report No.:

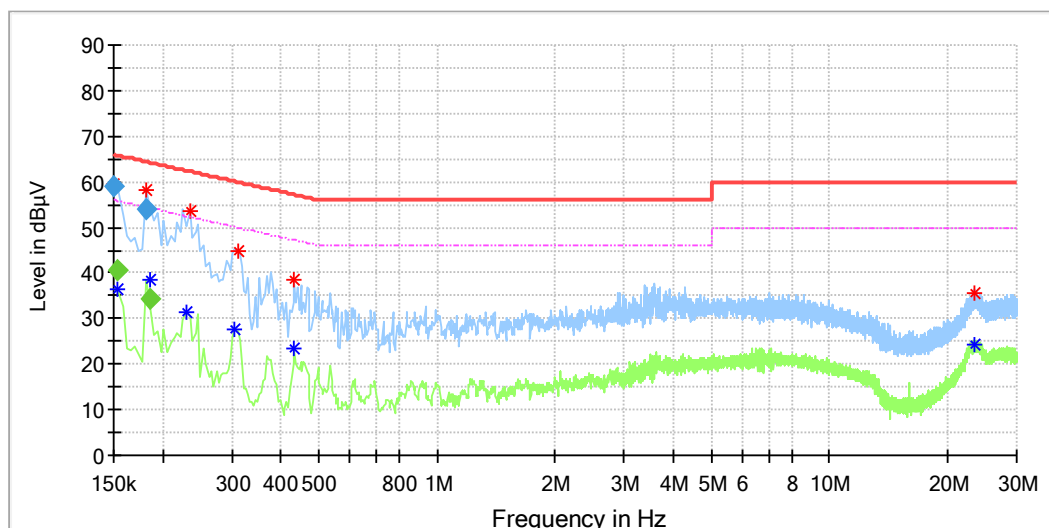
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EUT Information

EUT Name: Xiaomi Electric Scooter 5 Pro
Order Number: 190157804 (P01519267)
Model: DDHBC45ZM
Test Mode: Charging Mode with BLE Connecting
Test Voltage: AC 230V/50Hz
Test Standard: EN 301489-1
Test By:/Review By: Steve Lan/ Shower Dai
Tem./Hum./Pressure: 23.4°C/51.2%/101kPa
Remark: SR2



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	59.25	---	66.00	6.75	N	9.8
0.154000	---	36.38	55.78	19.40	N	9.8
0.181500	58.34	---	64.39	6.06	N	9.8
0.185500	---	38.43	54.39	15.96	N	9.8
0.230000	---	31.49	52.45	20.96	N	9.8
0.234000	53.57	---	62.31	8.74	N	9.8
0.306000	---	27.44	50.08	22.64	N	9.8
0.310000	44.87	---	59.97	15.10	N	9.8
0.434000	---	23.37	47.18	23.81	N	9.8
0.434000	38.36	---	57.18	18.81	N	9.8
23.318000	---	24.38	50.00	25.62	N	10.3
23.550000	35.48	---	60.00	24.52	N	10.3

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	59.05	---	66.00	6.95	1000.0	9.000	N	9.8
0.154000	---	40.65	55.78	15.13	1000.0	9.000	N	9.8
0.181500	53.92	---	64.42	10.49	1000.0	9.000	N	9.8
0.185500	---	34.26	54.24	19.97	1000.0	9.000	N	9.8

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5.1.5 Discontinuous Disturbance

RESULT:

Not applicable

Test Specification

Test standard	: EN IEC 61000-6-3:2021
Frequency range	: 150KHz - 30MHz
Limit	: EN IEC 61000-6-3:2021, Table C.1
Kind of test site	: Shielded Room

Exemption Conditions:

The EUT does not contain components that might produce discontinuous radio interference voltages on AC Mains, hence this requirement is not applicable.

5.2 Test Results of IMMUNITY

5.2.1 Power-Frequency Magnetic Field

RESULT: Pass

Test Specification

Test standard : EN IEC 61000-6-1:2019
 Basic standard : EN 61000-4-8: 2010
 Test requirement : EN IEC 61000-6-1:2019, Table 1
 Frequency range : 50 Hz, 60Hz
 Test level : 3 A/m
 Performance criteria : A (Transmitters: CT & Receivers: CR)

Test Setup

Date of testing : 2024-06-26 to 2024-06-30
 Test voltage : AC 230V@50Hz by adapter
 Operation mode : A
 Test Ports : Enclosure
 Ambient temperature : 23.8 °C
 Relative humidity : 53.2 %
 Atmospheric pressure : 101 kPa

Table 5: Test Result of Power-Frequency Magnetic Field (PFMF)

Test Mode	Duration	Test Port	Frequency range	Test Level	Actual Performance
A	Continuous	Enclosure	50Hz, 60Hz	3 A/m	A*

*Remark: No degradation was observed during and after the tests.

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5.2.2 Radio Frequency Electromagnetic Fields (RS)

RESULT:

Pass

Test Specification

Test standard	:	EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN IEC 61000-6-1:2019
Basic standard	:	EN 61000-4-3: 2006+A1+A2
Test requirement	:	EN 301 489-1 V2.2.3, Clause 9.2 EN IEC 61000-6-1:2019, Table 1
Frequency range	:	80 MHz to 6000 MHz
Test level	:	3 V/m (unmodulated, r.m.s)
Modulation	:	80% AM by a sinusoidal signal of 1KHz
Kind of test site	:	3m Full-anechoic Chamber
Performance criteria	:	A (Transmitters: CT & Receivers: CR)

Test Setup

Date of testing	:	2024-06-26 to 2024-06-30
Test voltage	:	AC 230V@50Hz by adapter DC 36V by internal Battery
Operation mode	:	A, B
Test Ports	:	Enclosure
Ambient temperature	:	24.2 °C
Relative humidity	:	52.3 %
Atmospheric pressure	:	101 kPa

Table 6: Test Result of Radio Frequency Electromagnetic Fields (RS)

Test Mode	Test Frequency Band	Test Port	Polarity	Location	Actual Performance
A, B	80 – 6000MHz @3 V/m	Enclosure	Vertical / Horizontal	Front	A*
				Rear	A*
				Left	A*
				Right	A*
	80 – 1000MHz & 1400 - 6000MHz @3 V/m	Enclosure	Vertical / Horizontal	Front	A*
				Rear	A*
				Left	A*
				Right	A*

*Remark: No degradation was observed during and after the tests.

5.2.3 Radio Frequency Continuous Conducted (CS)

RESULT: Pass

Test Specification

- Test standard
- : EN 301 489-1 V2.2.3
- EN 301 489-17 V3.2.4
- EN IEC 61000-6-1:2019
- Basic standard
- : EN 61000-4-6: 2009
- Test requirement
- : EN 301 489-1 V2.2.3, Clause 9.5
- EN IEC 61000-6-1:2019, Table 4
- Frequency range
- : 0.15 - 80 MHz
- Source impedance
- : 150 Ω
- Test level
- : 3V (unmodulated, r.m.s.)
- Modulation
- : AM 80%, 1 KHz sine-wave
- Sweep mode
- : Automatic
- Sweep rate
- : < 1.5×10⁻³ decade / sec.
- Performance criteria
- : A (Transmitters: CT & Receivers: CR)

Test Setup

- Date of testing
- : 2024-06-26 to 2024-06-30
- Input voltage
- : AC 230V@50Hz by adapter
- Operation mode
- : B
- Test Ports
- : AC mains power port
- Earthing
- : Not connected
- Ambient temperature
- : 24.2 °C
- Relative humidity
- : 53.8 %
- Atmospheric pressure
- : 101 kPa

Table 7: Test Result of Radio Frequency Continuous Conducted (CS)

Test Mode	Coupling Method	Test Port	Test Level	Actual Performance
B	Direct Injection	AC mains power port	3.0 V	A*

*Remark: No degradation was observed during and after the tests.

5.2.4 Electrostatic Discharge (ESD)

RESULT:

Pass

Test Specification

Test standard	:	EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN IEC 61000-6-1:2019
Basic standard	:	EN 61000-4-2: 2009
Test requirement	:	EN 301 489-1 V2.2.3, Clause 9.3 EN IEC 61000-6-1:2019, Table 1
Discharge impedance	:	330 Ω / 150 pF
Test level	:	Air discharge: ± 2 kV, ± 4 kV, ± 8 kV Contact discharge: ± 2 kV, ± 4 kV HCP & VCP: ± 2 kV, ± 4 kV
Position	:	All exposed surfaces
Performance criteria	:	B (Transmitters: TT & Receivers: TR)

Test Setup

Date of testing	:	2024-06-26 to 2024-06-30
Input voltage	:	AC 230V@50Hz by adapter DC 36V by internal Battery
Operation mode	:	A, B
Test Ports	:	Enclosure
Earthing	:	Not connected
Ambient temperature	:	24.6 °C
Relative humidity	:	53.6 %
Atmospheric pressure	:	101 kPa

Table 8: Test Result of Electrostatic Discharge (ESD)

Test Mode	Test Level	Location	Actual Performance
A, B	± 2.0kV, ± 4.0 kV / Contact	VCP	A*
		Conducted Enclosure	A*
	± 2.0kV, ± 4.0kV, ± 8.0kV / Air	Non-conducted Enclosure	A*
		Button	A*
		Slot	A*

*Remark: No degradation was observed during and after the tests.

5.2.5 Electrical Fast Transients (EFT)

RESULT:

Pass

Test Specification

Test requirement	:	EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN IEC 61000-6-1:2019
Basic standard	:	EN 61000-4-4: 2012
Test requirement	:	EN 301 489-1 V2.2.3, Clause 9.4 EN IEC 61000-6-1:2019, Table 4
Test level	:	± 1.0 kV on AC
Test duration	:	2 minute per level & polarity
Rise time	:	5/50ns
Repetition frequency	:	5 KHz
Performance criteria	:	B (Transmitters: TT & Receivers: TR)

Test Setup

Date of testing	:	2024-06-26 to 2024-06-30
Input voltage	:	AC 230V@50Hz by adapter
Operation mode	:	B
Test Ports	:	AC mains power input ports
Earthing	:	Not connected
Ambient temperature	:	24.7 °C
Relative humidity	:	53.8 %
Atmospheric pressure	:	101 kPa

Table 9: Test Result of Electrical Fast Transients (EFT)

Test Mode	Coupling Method	Coupling Port	Test Level	Actual Performance
B	Direct Injection	Live + Neutral	± 1.0 kV on AC	A*

*Remark: No degradation was observed during and after the tests.

5.2.6 Surge

RESULT: Pass

Test Specification

- Test standard
- : EN 301 489-1 V2.2.3
- EN 301 489-17 V3.2.4
- EN IEC 61000-6-1:2019
- Basic standard
- : EN 61000-4-5: 2006
- Test requirement
- : EN 301 489-1 V2.2.3, Clause 9.8
- EN IEC 61000-6-1:2019, Table 4
- Test level
- : ± 1.0 kV line to line
- Repetition rate
- : Max. 1/min
- Performance criteria
- : B (Transmitters: TT & Receivers: TR)

Test Setup

- Date of testing
- : 2024-06-26 to 2024-06-30
- Input voltage
- : AC 230V@50Hz by adapter
- Operation mode
- : B
- Test Ports
- : ± 1.0 kV line to line on AC
- T_r / T_h
- : 1,2 / 50 μs
- Earthing
- : Not connected
- Ambient temperature
- : 24.7 °C
- Relative humidity
- : 54.8 %
- Atmospheric pressure
- : 101 kPa

Table 10: Test Result of Surge

Test Mode	Coupling Port	Test Level (±kV)	Coupling Phase	Actual Performance
B	AC mains power port	± 1.0 kV line to line	0	A*
			π/2	A*
			π	A*
			3π/2	A*

*Remark: No degradation was observed during and after the tests.

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5.2.7 Voltage Dips and Interruptions

RESULT:

Pass

Test Specification

Test requirement	: EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN IEC 61000-6-1:2019
Basic standard	: EN 61000-4-11: 2004
Test requirement	: EN 301 489-1 V2.2.3, Clause 9.7 EN IEC 61000-6-1:2019, Table 4
Test level	: Voltage dips: ☒ 0 % residual voltage for 0,5 cycle ☒ 0 % residual voltage for 1 cycle ☒ 70 % residual voltage for 25 cycles (at 50 Hz) Voltage interruptions: ☒ 0 % residual voltage for 250 cycles (at 50 Hz).
Performance criteria	: B (Transmitters: TT & Receivers: TR) C (Transmitters: TT & Receivers: TR) for 250 cycles

Test Setup

Date of testing	: 2024-06-26 to 2024-06-30
Input voltage	: AC 230V@50Hz by adapter
Operation mode	: B
Test Ports	: AC mains power port
Earthing	: Not connected
Ambient temperature	: 24.7 °C
Relative humidity	: 49.8 %
Atmospheric pressure	: 101 kPa

Table 11: Test Result of Voltage Dips and Interruptions

Test Mode	Coupling Port	Test Level U_T (%)	Reduction Duration (in Period)	Actual Performance
B	AC mains power port	0%	0.5(50Hz)	A*
		40%	10(50Hz)	A*
		70%	25(50Hz)	A*
		0%	250(50Hz)	B**
		0%	0.5(60Hz)	A*
		40%	12(60Hz)	A*
		70%	30(60Hz)	A*
		0%	300(60Hz)	B**

*Remark: No degradation was observed during and after the tests.

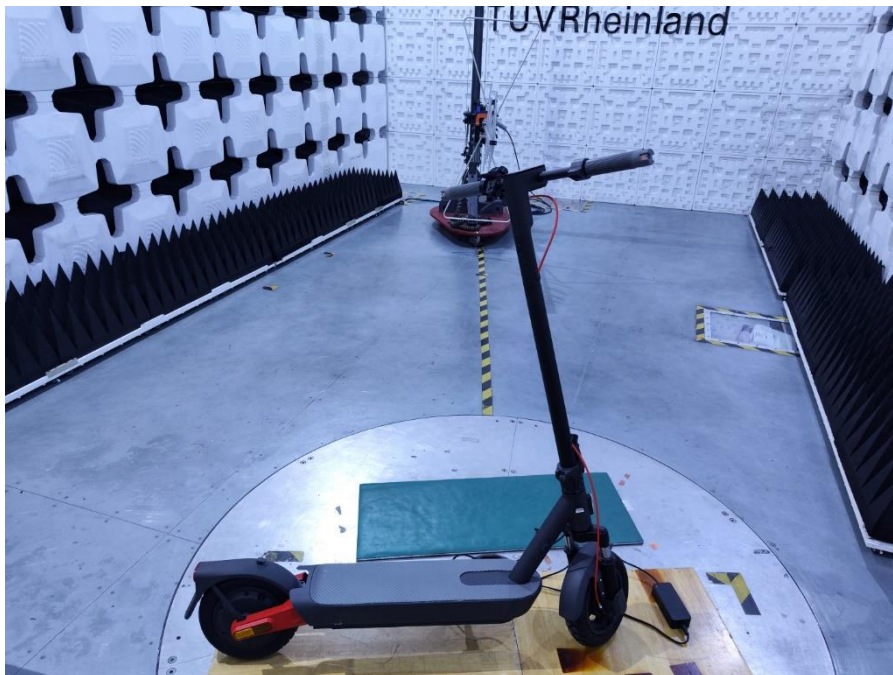
**Remark: During the test, The EUT stops charging. However, it could automatically restore after test.

6 Photographs of the Test Set-Up

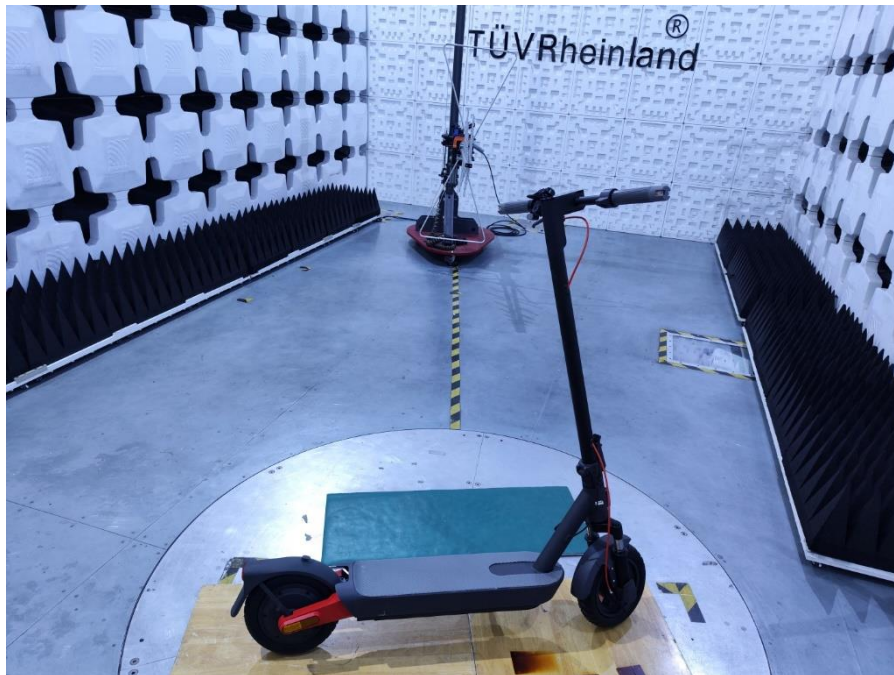
Photograph 1: Set-up for Voltage Fluctuations and Current Harmonics



Photograph 2: Set-up for Radiated Emission, 30 MHz -- 1 GHz

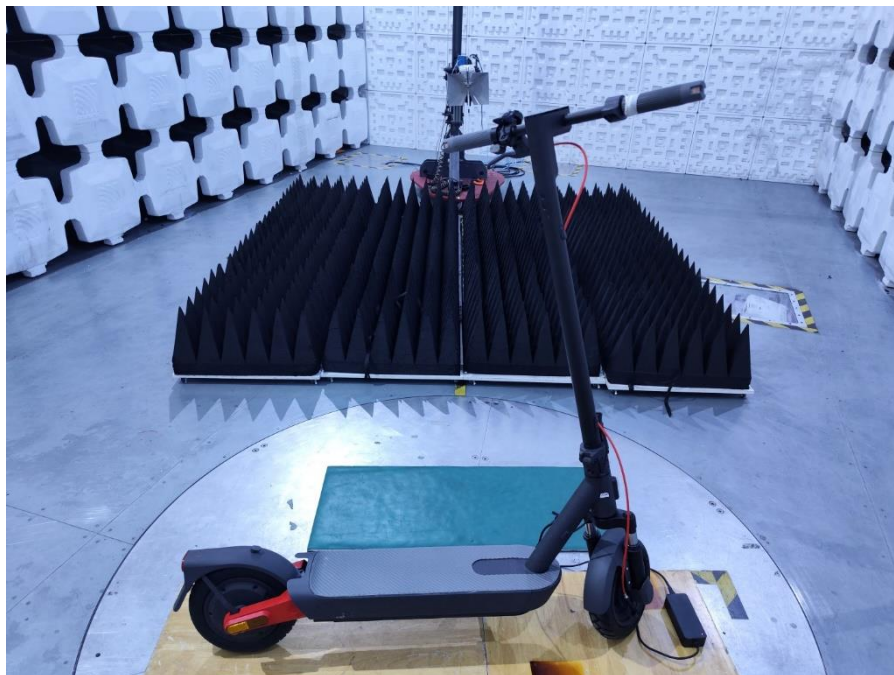


Charging mode

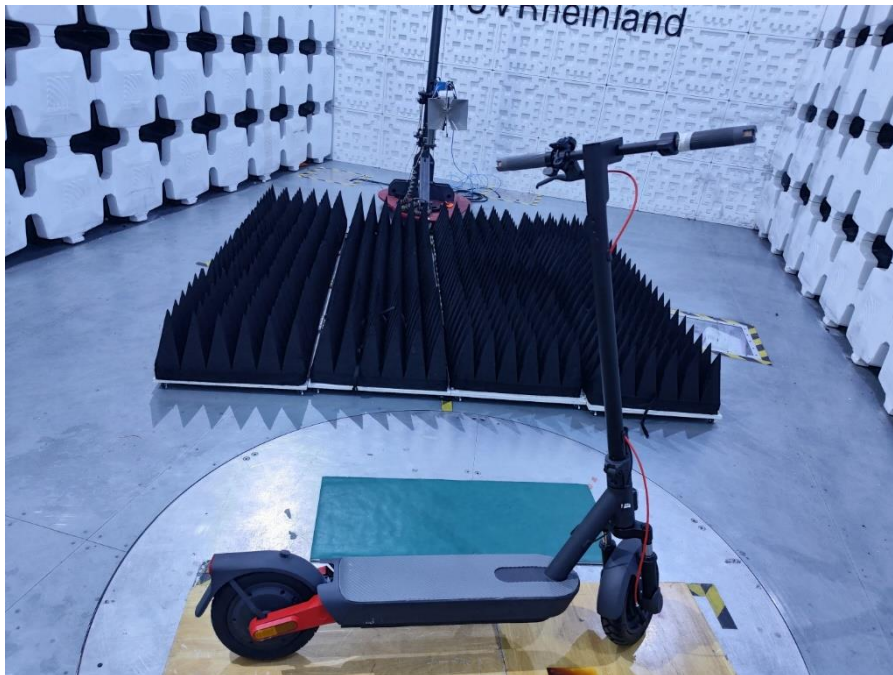


Normal working mode

Photograph 3: Set-up for Radiated Emission, Above 1GHz

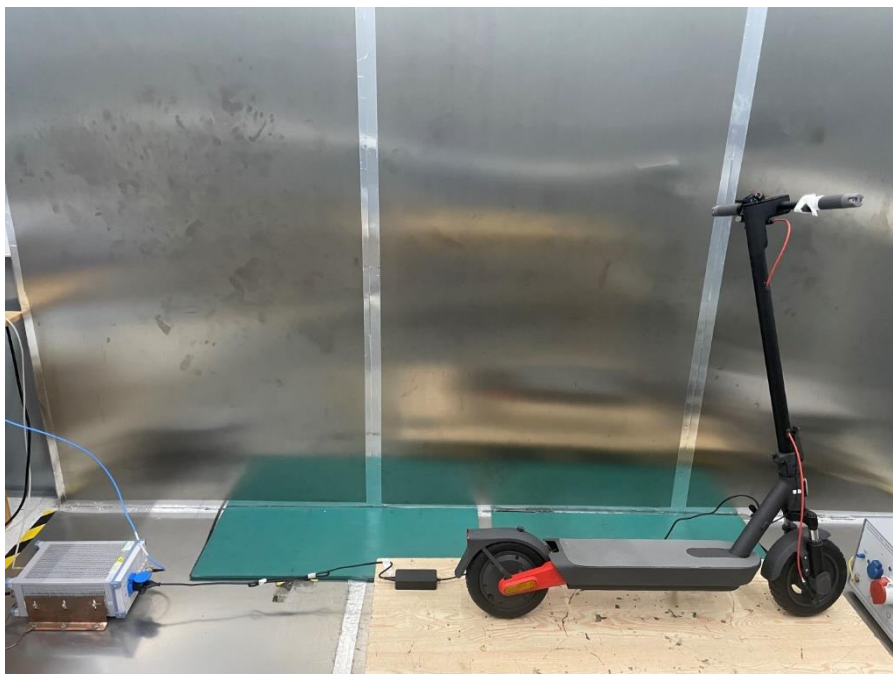


Charging mode



Normal working mode

Photograph 4: Set-up for Conducted Emission on AC Mains



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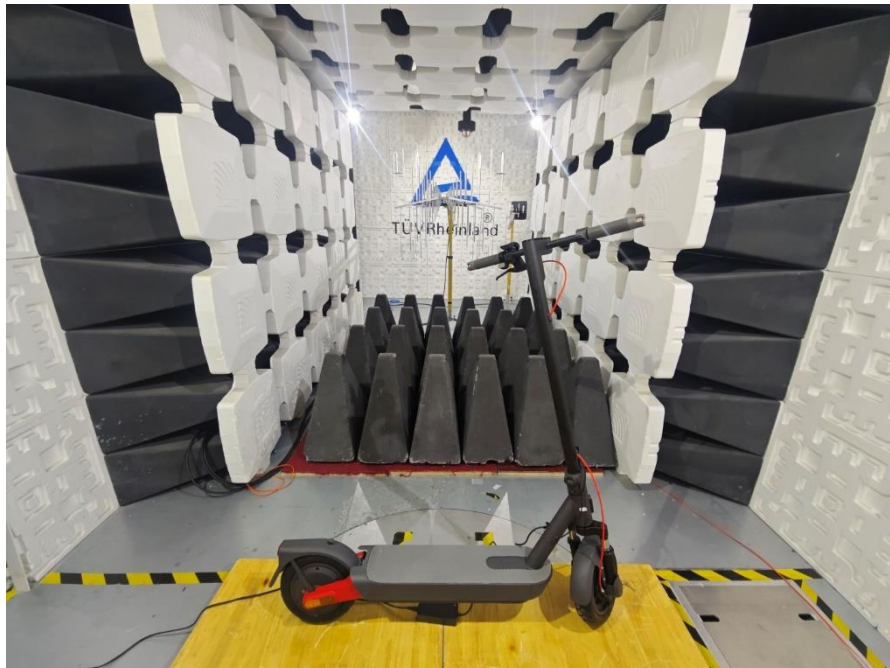
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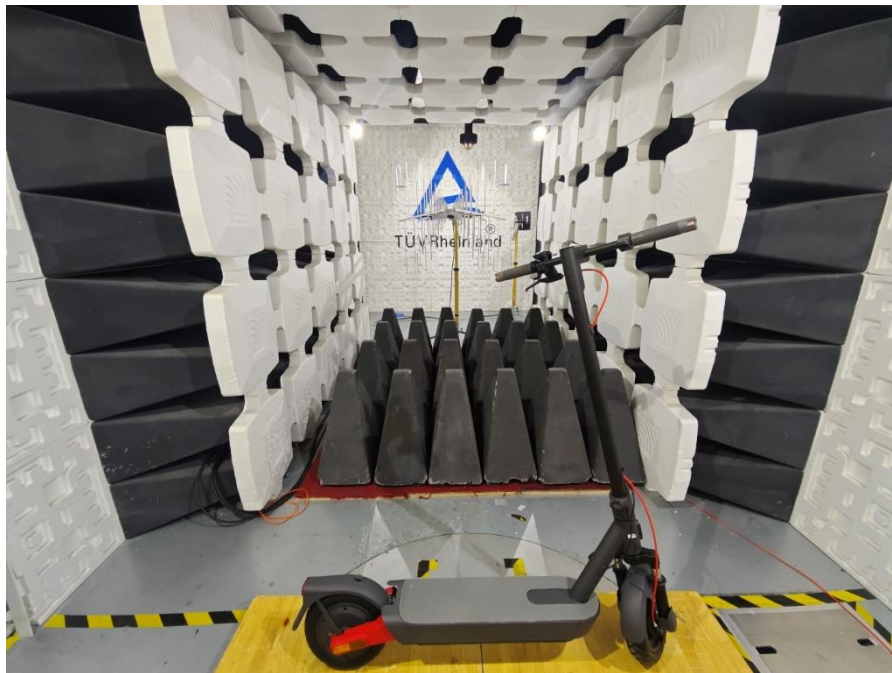
Photograph 5: Set-up for Power-Frequency Magnetic Field



Photograph 6: Set-up for Radio Frequency Electromagnetic Fields (RS), Below 1GHz

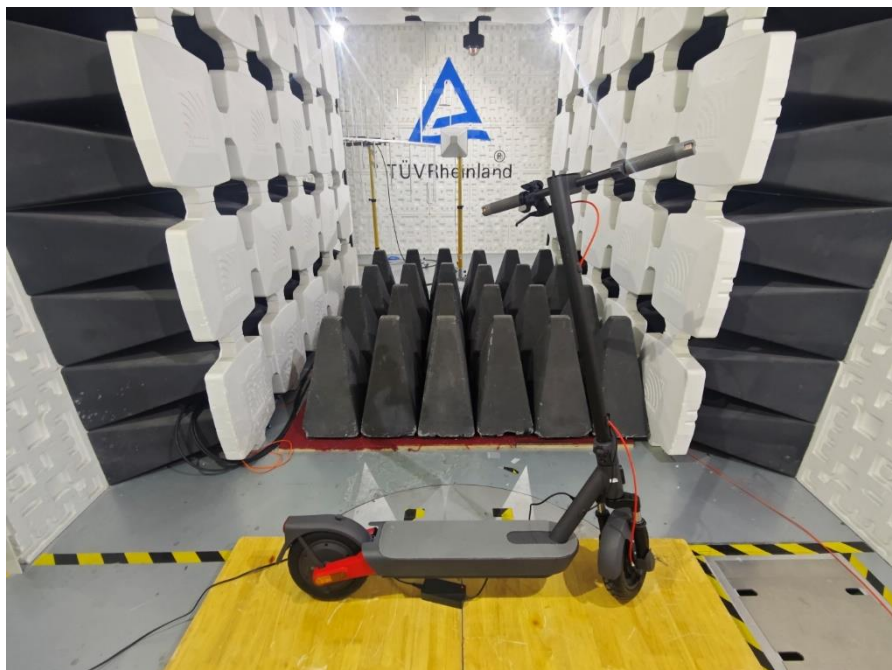


Charging mode



Normal working mode

Photograph 7: Set-up for Radio Frequency Electromagnetic Fields (RS), Above 1GHz

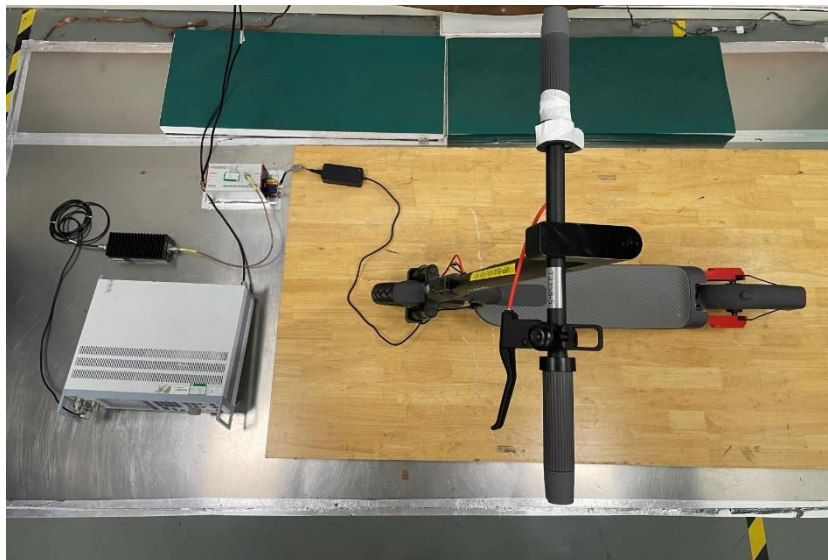


Charging mode



Normal working mode

Photograph 8: Set-up for Radio Frequency Continuous Conducted (CS)

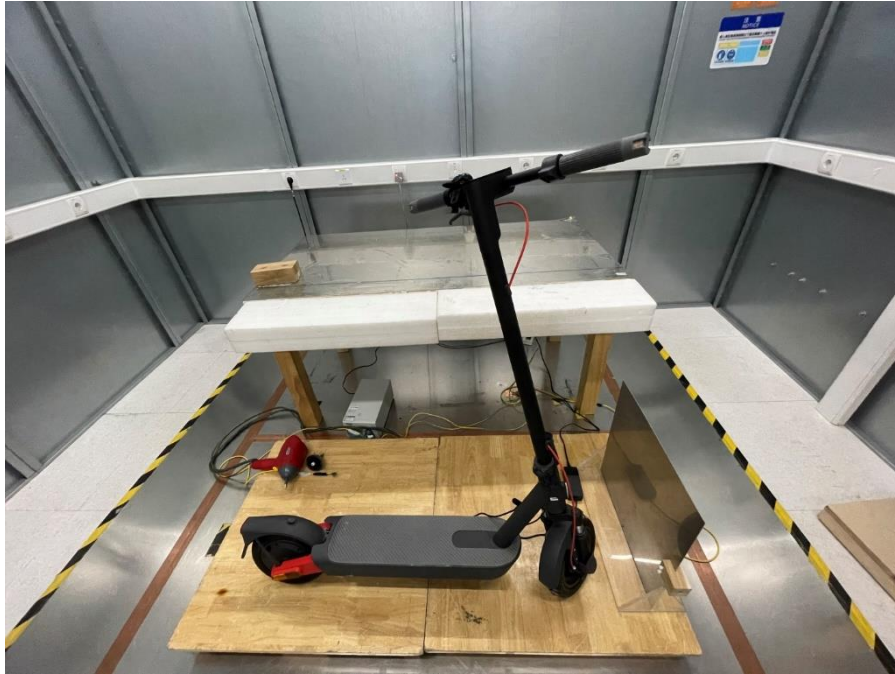


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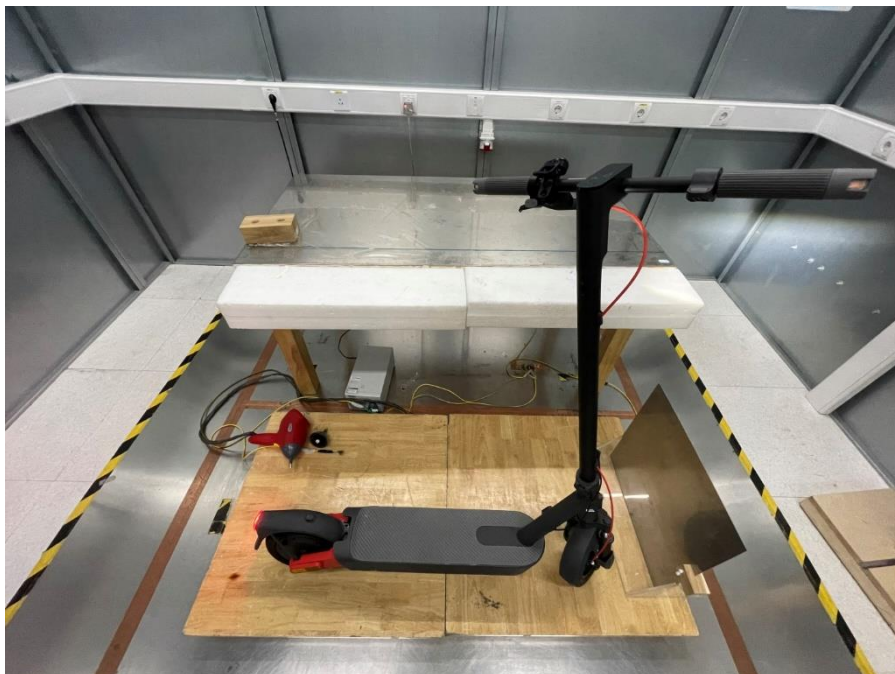
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Photograph 9: Set-up for Electrostatic Discharges (ESD)



Charging mode



Normal working mode

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Photograph 10: Set-up for EFT & Surge & Voltage Dips and Interruptions



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