EMC TEST REPORT
For
E-LINK TECHNOLOGY CO., LTD.

Electric BIKES

Model No.		EL-X7,EL-X7LE,EL-X7L,EL-X7E,EL-M24,EL-M25,EL-M24E,EL-25E,X7LE
Prepared for	:	E-LINK TECHNOLOGY CO., LTD.
Address	:	5 Floor, BL.B Tongwei Optoelectronics Factory Area, No.8, Gongye 2nd Road, Shilong, Shiyan Street 518108, Bao'an district, Shenzhen, CHINA
Prepared by		DONGGUAN JUN'AN TESTING AND CERTIFICATION CO., LTD.
Address		Room 303, Building 1, No.316, Renzhou Road, Shatian Town, Dongguan City, Guangdong Province, China

Report Number	:	*JAT25102402536*ER-1
Date of Test	:	2025-10-11 to 2025-10-11
Date of Report	:	2025-10-19

TEST REPORT DESCRIPTION

Applicant	:	**E-LINK TECHNOLOGY CO., LTD.**
Manufacturer	:	**E-LINK TECHNOLOGY CO., LTD.**
Trade Mark	:	MACFOX
EUT	:	**Electric BIKES**
Testing Model No.	:	**X7LE**

Measurement Procedure Used:

EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

The device described above is tested by DONGGUAN JUN'AN TESTING AND CERTIFICATION CO., LTD.. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and DONGGUAN JUN'AN TESTING AND CERTIFICATION CO., LTD. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the EN 61000-6-2 and EN 61000-6-4 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of DONGGUAN JUN'AN TESTING AND CERTIFICATION CO., LTD.

Date of Test	:	2025-10-11 to 2025-10-19
Prepared by	:	Tanac /Editor
Reviewer	:	Roger Zheng /Supervisor
Approved & Authorized Signer	:	Tim You /Manager

1. SUMMARY OF TEST RESULT

Test	Test Requirement	Test Method	Class / Severity	Result
Conducted Emission on AC Main Port (150K to 30MHz)	EN 61000-6-4	CISPR 16-2-1, 7.4.1 CISPR 16-1-2, 4.3	Table 1	N/A**
Radiated Emission (30MHz to 1000MHz)	EN 61000-6-4	CISPR 16-2-3	Table 1	PASS
Harmonic Current Emission on AC, up to 2kHz	EN 61000-6-4	EN 61000-3-2:2014	Clause 7 of IEC 61000-3-2	PASS
Voltage Fluctuation and Flicker on AC	EN 61000-6-4	EN 61000-3-3:2013	Clause 5 of IEC 61000-3-3	PASS
Electrostatic discharge(ESD)	EN 61000-6-2	EN 61000-4-2:2009	Contact ±4 kV Air ±8 kV	PASS
Radio-frequency electromagnetic field	EN 61000-6-2	EN 61000-4-3:2006 +A1:2008+A2:2010	80MHz-1GHz: 3V/m 1.4GHz-2GHz: 3V/m 2.0GHz-2.7GHz: 1V/m	PASS
Electrical Fast Transients (EFT) on AC	EN 61000-6-2	EN 61000-4-4:2012	±1kV	N/A***
Surges on AC	EN 61000-6-2	EN 61000-4-5:2014 +A1:2017	±1kV D.M.† ±2kV C.M.†	N/A
Radio-Frequency Common Mode on AC, 150kHz to 80MHz	EN 61000-6-2	EN 61000-4-6:2014 +AC:2015	3Vrms (emf), 80%, 1kHz Amp. Mod.	N/A***
Power-frequency magnetic field	EN 61000-6-2	EN 61000-4-8:2010	50 Hz, 60 Hz 3A/m	N/A****
Voltage Dips and Interruptions on AC	EN 61000-6-2	EN 61000-4-11:2004 +A1:2017	**For 50Hz:** 0 % UT* for 0.5per 0 % UT* for 1per 70 % UT* for 25per 0 % UT* for 250per **For 60Hz:** 0 % UT* for 0.5per 0 % UT* for 1per 70 % UT* for 30per 0 % UT* for 300per	N/A

Remark:

* UT is the nominal supply voltage.

† D.M. – Differential Mode.

† C.M. – Common Mode.

Ψ N/A –Not Applicable

Note1: **Applicable only to ports intended for connection to a local AC power network or a remote local battery by a connecting cable exceeding a length of 30 m, according to EN 61000-6-4.

Note2: *** Applicable only to ports interfacing with cables whose total length according to the manufacturers functional specification may exceed 3m, according to EN 61000-6-2.

Note 3: **** The Power-frequency magnetic field immunity test will not apply to the quipment containing no components susceptible to magnetic fields, such as Hall elements or magnetic field sensors, according to EN 61000-6-1.

2. CONTENTS

3. GENERAL INFORMATION

3.1. Client Information

Applicant	:	E-LINK TECHNOLOGY CO., LTD.
Address of Applicant	:	5 Floor, BL.B Tongwei Optoelectronics Factory Area, No.8, Gongye 2nd Road, Shilong, Shiyan Street 518108, Bao'an district, Shenzhen, CHINA
Manufacturer	:	E-LINK TECHNOLOGY CO., LTD.
Address of Manufacturer	:	5 Floor, BL.B Tongwei Optoelectronics Factory Area, No.8, Gongye 2nd Road, Shilong, Shiyan Street 518108, Bao'an district, Shenzhen, CHINA

3.2. General Description of E.U.T.

EUT Name	:	Electric BIKES
Model No.	:	X7LE
Serial No.	:	--

3.3. Details of E.U.T.

Power Supply	:	48VDC
Power Cord	:	N/A

3.4. Description of Support Units

Name / Function	Model No.	Remark
AC	N/A	N/A

3.5. Standards Applicable for Testing

The customer requested EMC tests for Motor.
The standards used were EN 61000-6-2:2019 and EN 61000-6-4:2019.

Table 1: Tests Carried Out Under EN 61000-6-4:2019

Standard		Status
CISPR 16-2-1, 7.4.1& CISPR 16-1-2, 4.3	Conducted Emissions on AC Main Port	×
CISPR 16-2-3	Radiated Emission	√
EN 61000-3-2:2014	Harmonic Current Emission on AC	×
EN 61000-3-3:2013	Voltage Fluctuation and Flicker on AC	×

× Indicates that the test is not applicable
√ Indicates that the test is applicable

Table 2: Tests carried out under EN 61000-6-2:2019

Standard		Status
EN 61000-4-2:2009	Electrostatic discharge	√
EN 61000-4-3:2006+A1:2008+A2:2010	Radio-frequency electromagnetic field	√
EN 61000-4-4:2012	Fast transients	×
EN 61000-4-5:2014+A1:2017	Surges	×
EN 61000-4-6:2014+AC:2015	Radio-frequency common mode	×
EN 61000-4-8:2010	Power-frequency magnetic field	×
EN 61000-4-11:2004+A1:2017	Voltage Dips and interruptions	×

× Indicates that the test is not applicable
√ Indicates that the test is applicable

3.6. Deviation from Standards

All Immunity tests to the product standard were performed in accordance with EN 61000-4-x and not IEC 61000-4-x. (x=2,3,4,5,6,8,11).

3.7. Abnormalities from Standard Conditions

None

3.8. Monitoring of EUT for All Immunity Test

Visual

3.9. Measurement Uncertainty

According to CISPR 16-4-2.

Test Item	Frequency Range	Measurement Uncertainty
Conducted Emission	150KHz – 30MHz	3.5dB
Disturbance Power	30MHz – 300MHz	3.4dB
Radiated Emission	30MHz – 1000MHz	4.0dB

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4. EQUIPMENTS USED DURING TEST

Radiated Emission

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESU40	100109	2025-08-01	2026-07-31
2	Antenna	SCHWARZBECK	VULB9168	9168-313	2025-08-01	2026-07-31
3	CONTROLLER	INNCO	CO200	474	/	/
4	Antenna	SCHWARZBECK	BBHA9120D	9120D-679	2025-08-01	2026-07-31
5	Antenna	SCHWARZBECK		9170-373	2025-08-01	2026-07-31

Electrostatic Discharge Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	ESD Simulator	TESEQ	NLX SCCD PRO 437	468	2025-08-01	2026-07-31

Radiated Immunity

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	Ultra broadband antenna	Rohde & Schwarz	HL562	100227	2025-08-01	2026-07-31
2	amplifier	AR	30W1000B	0327284	--	--
3	amplifier	AR	30S1G3	0324978	--	--
4	power meter	Rohde & Schwarz	NRP	101641	2025-08-01	2026-07-31
5	Signal generator	Rohde & Schwarz	SMR40	100555	2025-08-01	2026-07-31

General Equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	Digital pressure meter	YONGZHI	DYM3-01	101012	2025-08-01	2026-07-31
2	Digital Multimeter	FLUKE	17B	10560713	2025-08-01	2026-07-31
3	Temperature& humidity recorder	ShangHai weather meter work	ZJ 1-2B	0805126	2025-08-01	2026-07-31

5. TEST PROCEDURE

5.1. Radiated Emission

Test Requirement	:	EN 61000-6-4:2019
Test Method	:	CISPR 16-2-3
Test Date	:	2025-10-11
Meaurement distance	:	3m
Class	:	N/A
Frequency Range	:	30MHz to 1GHz
Limit	:	40.0 dBμV/m between 30MHz & 230MHz 47.0 dBμV/m between 230MHz & 1GHz
Result	:	**PASS**

5.1.1. E.U.T. Operation

Operating Environment:

Temperature: 24.0°C

Humidity :52 %RH

Atmospheric Pressure: 1006 mbar

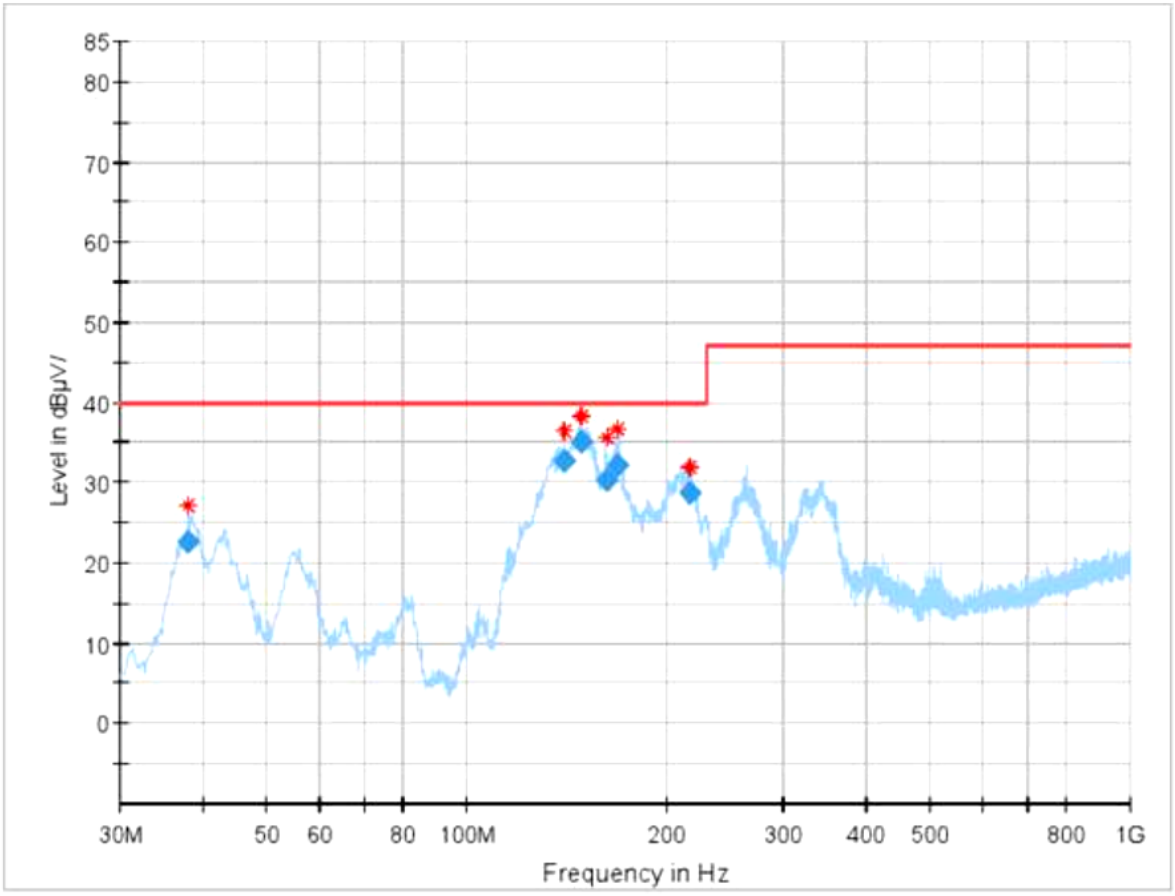
EUT Operation: Test in on mode. Keep the motor running.

5.1.2. Measurement Data

An initial pre-scan was performed in peak detection mode. Quasi-Peak was performed at the frequencies with maximized peak emission were detected.

Horizontal:

H (Site 10m)

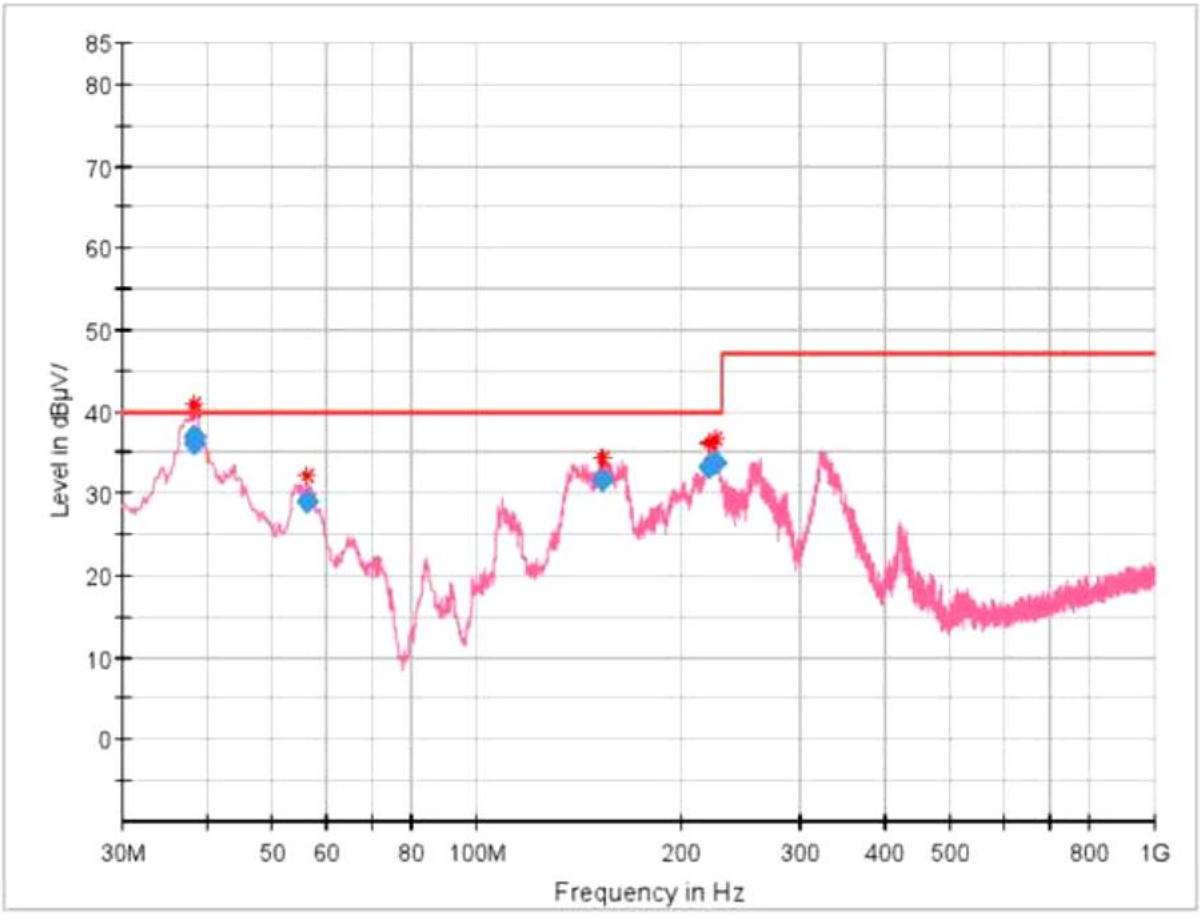


Final_Result

Frequency (MHz)	QuasiPeak (dBµ V/m)	Limit (dBµ	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)
37.923333	22.77	40.00	17.23	120.000	208.0	H	-15.3
140.771852	32.76	40.00	7.24	120.000	308.0	H	-18.9
149.174444	35.20	40.00	4.80	120.000	308.0	H	-18.3
162.147778	30.26	40.00	9.74	120.000	308.0	H	-17.8
169.292222	32.09	40.00	7.91	120.000	308.0	H	-17.1
216.934074	28.78	40.00	11.22	120.000	308.0	H	-13.9

Vertical:

V (Site 10m)



Final_Result

Frequency (MHz)	QuasiPeak (dBµ V/m)	Limit (dBµ	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)
38.143704	36.87	40.00	3.13	120.000	298.0	V	-15.2
38.342222	36.17	40.00	3.83	120.000	302.0	V	-15.2
56.206296	29.03	40.00	10.97	120.000	208.0	V	-14.8
153.745185	31.75	40.00	8.25	120.000	108.0	V	-18.2
220.467037	33.26	40.00	6.74	120.000	108.0	V	-13.6
225.436296	33.91	40.00	6.09	120.000	103.0	V	-13.1

6. IMMUNITY TEST RESULTS

6.1. Performance Criteria Description in Clause 4 of EN 61000-6-2: 2007

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

Criterion B : 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 specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed. 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, either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

Criterion C : Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls.

6.2. ESD

Test Requirement	:	EN 61000-6-2:2019	
Test Method	:	EN 61000-4-2:2009	
Test Date	:	2025-10-11	
Discharge Impedance	:	330 Ω / 150 pF	
Discharge Voltage	:	Air Discharge	±8 kV
		Contact Discharge	±4 kV
		HCP	±4 kV
		VCP	±4 kV
Polarity	:	Positive & Negative	
Number of Discharge	:	Minimum 10 times at each test point for Contact, HCP and VCP Discharge; Minimum 10 times at each test point for Air Discharge.	
Discharge Mode	:	Single Discharge	
Discharge Period	:	1 second minimum	
Result	:	**PASS**	

6.2.1. E.U.T. Operation

Operating Environment:

Temperature: 23.0°C

Humidity :55 %RH

Atmospheric Pressure: 1011 mbar

EUT Operation: Test in on mode. Keep the motor running.

6.2.2.Direct Application Test Results

Observations: Test Point:
1. All insulated enclosure & seams around EUT.
2. All touchable metal material of EUT

Direct Application			Test Results	
Discharge Level (kV)	**Polarity (+/-)**	**Test Points**	**Contact Discharge**	**Air Discharge**
8	+/-	1	N/A	A
4	+/-	2	A	N/A

Indirect Application Test Results

Observations: Test Point: 1. All sides.

Indirect Application			Test Results	
Discharge Level (kV)	**Polarity (+/-)**	**Test Points**	**Horizontal Coupling**	**Vertical Coupling**
4	+/-	1	A	A

Results:

N/A: Not applicable (not required in the standard or floor mounted the EUT)

6.3. Radio-Frequency electromagnetic field

Test Requirement : EN 61000-6-2:2019
Test Method : EN 61000-4-3:2006+A1:2008+A2:2010
Test Date : 2025-10-11
Frequency Range : up to 2.7GHz
Test level : 80M – 1GHz: 3V/m
1.4G – 2GHz: 3V/m
2.0G-2.7GHz: 1V/m
Modulation : 80%, 1kHz Amplitude Modulation
Criteria : Performance criteria A
Result : **PASS**

6.3.1.E.U.T. Operation

Operating Environment:

Temperature: 22.0°C

Humidity :49 %RH

Atmospheric Pressure: 1011 mbar

EUT Operation: Test in on mode. Keep the motor running.

6.3.2.Test Results

PASS

7. PHOTOGRAPHS


SPEED
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km


MACFOX


MACFOX


PY48V20"250W
25040127


Li-ion Battery Charger
MODEL:BC2675460
INPUT:100-240V~2.8A (MAX.)
50/60Hz
OUTPUT:54.6V⎓2.0A
RoHS
CAUTION


BRUSHLESS MOTOR CONTROLLER
MODEL: ESH-A6
TC-YLK-M24-PV-2
Battery Voltage: 48V
Cutoff Voltage : 39V
Current Limit : 18A
Display Metrt : 6S
ELKM25X25060081


WARNING
Use only original MACFOX batteries and charger.
Non-original batteries or charger may cause fire or injury.
User assumes all responsibility.


MACFOX
WARNING
Model: EL-BP-07
LI-Ion BATTERY PACK
48V ⎓ 20.0Ah 960Wh
• Do not expose to temperature <-4°F(-20°C) or >122°F(50°C). Fully charge the battery and store separately if not in use for over 30 days. Fully charge it every 90 days, or the battery may self-discharge and be damaged.
• This damage is not covered by the Limited Warranty.
• Do not touch the terminals. Do not open/puncture. Avoid contacting with contents.
• Do not place in fire or puncture.
• Recycle or dispose of in accordance with local regulations.
• Charge with the original charger only.
• WARNING-To reduce the risk of injury, user must read instruction manual.
• AVERTISSEMENT-Pour prévenir les blessures, l'utilisateur doit lire le manuel d'utilisation.
EL-EDS1013-00100
E-Link Technology co., Ltd
Made in China


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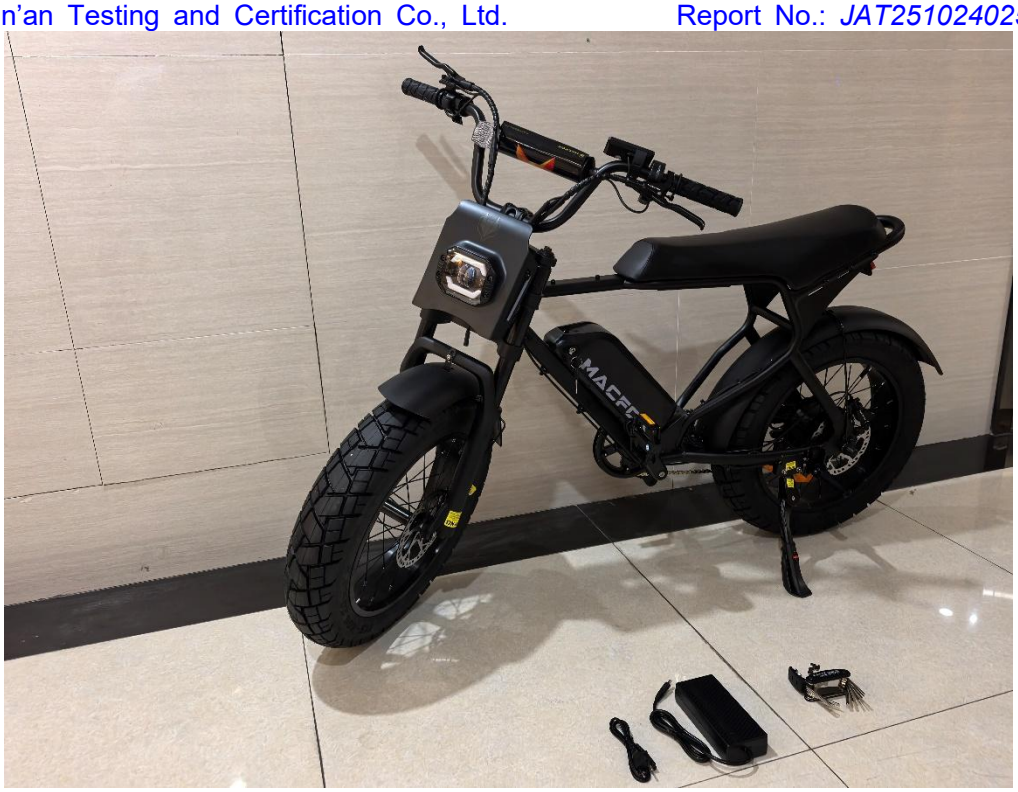

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