TEST REPORT

Applicant:	Xuancheng Luxshare Precision Industry Co., Ltd.
Address:	No.5, Baishou Road, Hi - Tech Industrial Development Zone, Xuancheng, Anhui Province, P.R. China
Equipment Type:	Wireless Charging Module
Model Name:	WCM
Brand Name:	LuXshare
FCC ID:	2BBAQ-WCM
Test Standard:	47 CFR Part 1 (refer to section 3.1)
Sample Arrival Date:	Oct. 23, 2024
Test Date:	Nov. 12, 2024
Date of Issue:	Nov. 27, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xu Rui **Checked by:** Liyao Zong **Approved by:** Tolan Tu (Testing Director)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	Nov. 27, 2024	Initial Issue

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1 GENERAL INFORMATION

1.1 Test Laboratory

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

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☑ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Xuancheng Luxshare Precision Industry Co., Ltd.
Address	No.5, Baishou Road, Hi - Tech Industrial Development Zone, Xuancheng, Anhui Province, P.R. China

2.2 Manufacturer Information

Manufacturer	Xuancheng Luxshare Precision Industry Co., Ltd.
Address	No.5, Baishou Road, Hi - Tech Industrial Development Zone, Xuancheng, Anhui Province, P.R. China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Wireless Charging Module
Model Name Under Test	WCM
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Note: Not applicable.

2.5 Technical Information

Network and Wireless connectivity	Qi

The requirement for the following technical information of the EUT was tested in this report:

Modulation Type	ASK	
Frequency Range	122 kHz -132 kHz	
Antenna Type	Coil Antenna	
Exposure Category	Mobile Device	
EUT Type	☒ Production unit	☐ Identical prototype

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 1	Practice and Procedure
2	KDB 680106 D01 v04	EQUIPMENT AUTHORIZATION OF WIRELESS POWER TRANSFER DEVICES
3	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01

3.2 Radiofrequency Radiation Exposure Limit

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW / cm ^{2})	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f^2	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30
*f = frequency in MHz * = Plane-wave equivalent power density*				

NOTE:

Limits: According KDB 680106 D01, emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.

General Population/Uncontrolled Exposure: Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Occupational/Controlled Exposure: Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure. In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

3.3 Measurement Uncertainly

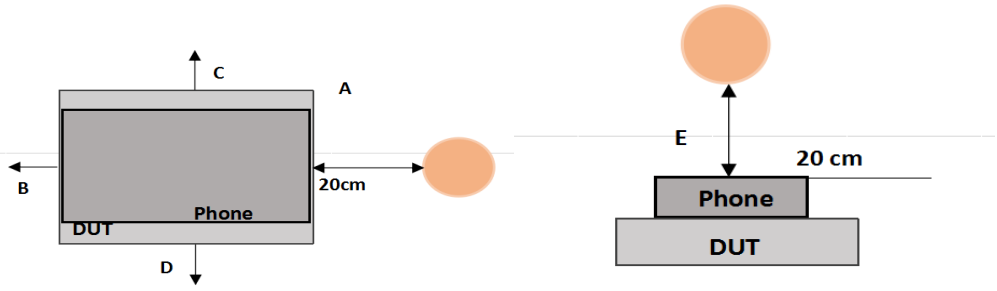
Measurement uncertainly evaluation for electric filed strength and magnetic filed strength test
This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Magnetic Filed Strength	1.18 dB
Electric Filed Strength	1.13 dB

4 DEVICE CATEGORY AND LEVELS LIMITS

4.1 Test Setup Photo

Maximum H-field and E-filed measurements were made on each of five sides of the EUT that could come in contact with a user. The five sides are defined as follows: A, B, C, D, E. Refer to the test position diagram below.



4.2 Measurement procedure

1. The RF exposure test was performed in anechoic chamber.
2. The measurement probe was placed at test distance 20 cm for A, B, C, D and E which is between the edge of the charger and the geometric edge of probe.
3. The highest emission level was recorded and compared with limit as soon as measurement of each points were completed.
4. The EUT was measured according the dictates of KDB 680106 D01v04.

4.3 Mobile Condition

Probe	Condition	Test Distance (cm) A, B, C, D, E
E&H-field	Mobile	20

4.4 Equipment Approval Considerations item 5.2 of KDB 680106 D01 v04.

1. Power transfer frequency is less than 1 MHz.
   - The device operates at a frequency 122 kHz ~ 132 kHz

2. Output power from each primary coil is less than or equal to 15 watts.
   - Output power from primary coil 15 watts.

3. Client device is placed directly in contact with the transmitter.
   - Client device is placed directly in contact with the transmitter.

4. Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
   - According safety guide, on the wireless power sharing function this this DUT should be operate with a minimum distance of 20cm between the DUT and human body, so this EUT only support mobile exposure condition.

5. The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit.
   - Refer to following test results.
   The EUT E-Field Strength levels at 20 cm< 50 % of the MPE E-Field Strength limit
   19.253 V/m (Max. at 20 cm) < 307 V/m
   The EUT H-Field Strength levels at 20 cm< 50 % of the MPE H-Field Strength limit
   0.471 A/m (Max. at 20 cm) < 0.815 A/m

4.5 Test Equipment

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
PC	Lonovo	E4-ARR	MP1K4PCW	N/A	N/A
Test Software	Narda	WinEP600	N/A	N/A	N/A
E-Field Probe	Narda	EP 602	611WX80276	2024/10/15	2025/10/14
E&H-field Probe	Wavecontrol	WP400	22WP100980	2024/09/02	2025/09/01
Anechoic Chamber	Yiheng	9m*6m*6m	N/A	2024/05/12	2027/05/11
Phone	huawei	Mate-40E	N/A	N/A	N/A

4.6 Test Configuration

To check all kinds of possible modes, the EUT was support reverse charging function, so the EUT was evaluated in reverse charge mode with appropriate client and under each charging condition as the below table:

Test Mode No.	Description
1	EUT (reverse charging mode) + Mobile Phone which has Less than 10 % of battery
2	EUT (reverse charging mode) + Mobile Phone which has Less than 50 % of battery
3	EUT (reverse charging mode) + Mobile Phone which has 90 % of battery

5 TEST RESULT

5.1 E-field

Distance (cm)	Test Mode	EUT Edges					Limit (V/m)
		A (V/m)	B (V/m)	C (V/m)	D (V/m)	E (V/m)	
20	1	19.253	19.116	18.863	18.974	18.853	614.00
20	2	19.141	18.952	18.445	18.623	18.541	614.00
20	3	19.202	18.974	18.533	18.742	18.443	614.00

5.2 H-field

Distance (cm)	Test Mode	EUT Edges					Limit (A/m)
		A (A/m)	B (A/m)	C (A/m)	D (A/m)	E (A/m)	
20	1	0.441	0.413	0.432	0.456	0.471	1.63
20	2	0.432	0.404	0.428	0.447	0.456	1.63
20	3	0.434	0.411	0.426	0.438	0.462	1.63

6 Test Conclusion

6.1 E-field

Distance (cm)	Worst-case Test Mode	EUT Edge (V/m)	Limit (V/m)	50% Limit (V/m)	Verdict
20	1	19.253	614.00	307	Pass

According KDB 680106 D01v04, the EUT is compliant with the 50% of the MPE limits, And this confirmed that the device comply with FCC KDB 447498 D04.

6.2 H-field

Distance (cm)	Worst-case Test Mode	EUT Edge (A/m)	Limit (A/m)	50% Limit (A/m)	Verdict
20	1	0.471	1.63	0.815	Pass

According KDB 680106 D01v04, the EUT is compliant with the 50% of the MPE limits, and this confirmed that the device comply with FCC KDB 447498 D04.

Note: Test setup photos please refer the document “BL-SH24A0776-AS.pdf”.

Statement

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--END OF REPORT--