FCC MPE TEST REPORT

FCC ID: 2A4FX-A5

Sample：	Car wireless charging bracket
Trade Mark：	N/A
Main Model：	A5
Additional Model：	A5S, A6, A6S, A9, A9S
Report No.：	UNIA23112404ER-62

Prepared for

Shenzhen Leiden Digital Technology Co., Ltd

Room 602A, Building F, Second Industrial Zone, No.131 Bulan Road, Shanglilang Community, Nanwan, Longgang District, Shenzhen, Guangdong China

Prepared by

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TEST RESULT CERTIFICATION

Applicant	:	Shenzhen Leiden Digital Technology Co., Ltd
Address	:	Room 602A, Building F, Second Industrial Zone, No.131 Bulan Road, Shanglilang Community, Nanwan, Longgang District, Shenzhen, Guangdong China
Manufacturer	:	Shenzhen Leiden Digital Technology Co., Ltd
Address	:	Room 602A, Building F, Second Industrial Zone, No.131 Bulan Road, Shanglilang Community, Nanwan, Longgang District, Shenzhen, Guangdong China

Product description

Product	:	Car wireless charging bracket
Trade Mark	:	N/A
Model Name	:	A5, A5S, A6, A6S, A9, A9S
Standards	:	FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

This device described above has been tested by Shenzhen United Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Date (s) of performance of tests	:	Nov. 24, 2023 ~ Nov. 30, 2023
Date of Issue	:	Nov. 30, 2023
Test Result	:	Pass

Prepared by: Jason Ye

Jason Ye/Editor

Reviewer: Kelly Cheng

Kelly Cheng/Supervisor

Approved & Authorized Signer: Liuze

Liuze/Manager

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1 TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03

FCC CFR 47			
Standard Section	**Test Item**	**Result**	**Remark**
FCC CFR 47 part1, 1.1310 KDB680106 D01 v03(3)(3)	Magnetic Field Strength (H) (A/m)	PASS	--

Compliant with KDB680106 D01 RF Exposure Wireless Charging Apps v03 section 5, b:

a) Power transfer frequency is less than 1MHz.
Yes, the working frequency is: 110-205kHz.

b) Output power from each primary coil is less than or equal to 15 watts.
Yes, the maximum output power is 15 watts.

c) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
Yes, the transfer system includes only single primary coil.

d) Client device is placed directly in contact with the transmitter.
Yes, client device is placed directly in contact with the transmitter.

e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
Yes, EUT is for mobile exposure conditions only.

f) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
Yes, EUT h-field strengths levels are less than 50% of the MPE limit.

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1.2 TEST FACILITY

Test Firm	:	Shenzhen United Testing Technology Co., Ltd.
Address	:	D101&D401, No. 107, Kaicheng High-Tech Park, Taoyuan Community, Dalang Sub-District, Longhua District, Shenzhen, Guangdong, China

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.The testing quality system of our laboratory meets with ISO/IEC-17025 requirements. This approval result is accepted by MRA of APLAC.

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

A2LA Certificate Number: 4747.01

The EMC Laboratory has been accredited by A2LA, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

FCC Registration Number: 674885

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission.

IC Registration Number: 31584

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada.

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1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Radiated Measurement (9KHz-30MHz)	±2.50dB
2	Temperature	±0.5°C
3	Humidity	±2%

1.4 ENVIRONMENTAL CONDITIONS

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

Temperature:	15~35 °C
Relative Humidity:	30~60 %
Air Pressure:	950~1050 hPa

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2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product:	Car wireless charging bracket
Trade Mark:	N/A
Main Model:	A5
Additional Model:	A5S, A6, A6S, A9, A9S
Model Difference:	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: A5.
FCC ID:	2A4FX-A5
Operation Frequency:	110-205kHz
Number of Channels:	1CH
Modulation Type:	ASK
Antenna Type:	Coil Antenna
Antenna Gain:	0dBi
Battery:	N/A
Adapter:	N/A
Power Source:	DC 5V or 9V by adapter

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2.2 CARRIER FREQUENCY OF CHANNELS

Channel List	
Channel	Frequency (KHz)
01	128.8

2.3 TEST MODE

NO.	TEST MODE DESCRIPTION
1	Wireless charging Mode(Full load) (Connect to adapter)
2	Wireless charging Mode(Half load) (Connect to adapter)
3	Wireless charging Mode(Null load) (Connect to adapter)
Note: The mode 1 was the worst case and only the data of the worst case record in this report.	

2.4 TEST INSTRUMENTS

Description	Brand	Model No.	Frequency Range	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	—	Jan. 01, 2024
Magnetic Field Meter	NARDA	ELT-400	1–400kHz	Jan. 01, 2024
Magnetic Probe	NARDA	HF-3061	300kHz–30MHz	Jan. 01, 2024
Magnetic Probe	NARDA	HF-0191	27–1000MHz	Jan. 01, 2024
Broadband Field Meter	NARDA	NBM-550	—	Jan. 01, 2024
Electric Field Meter	COMBINOVA	EFM 200	5Hz–400kHz	Jan. 01, 2024
E-Field Probe	NARDA	EF-0391	100kHz–3GHz	Jan. 01, 2024
E-Field Probe	NARDA	EF-6091	100MHz–60GHz	Jan. 01, 2024

NOTE: The calibration interval of the above test instruments is 12 month.

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3 MAXIMUM PERMISSIBLE EXPOSURE

3.1 MAXIMUM PERMISSIBLE EXPOSURE

Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6
Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180 / f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density.

2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03.

3: 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. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

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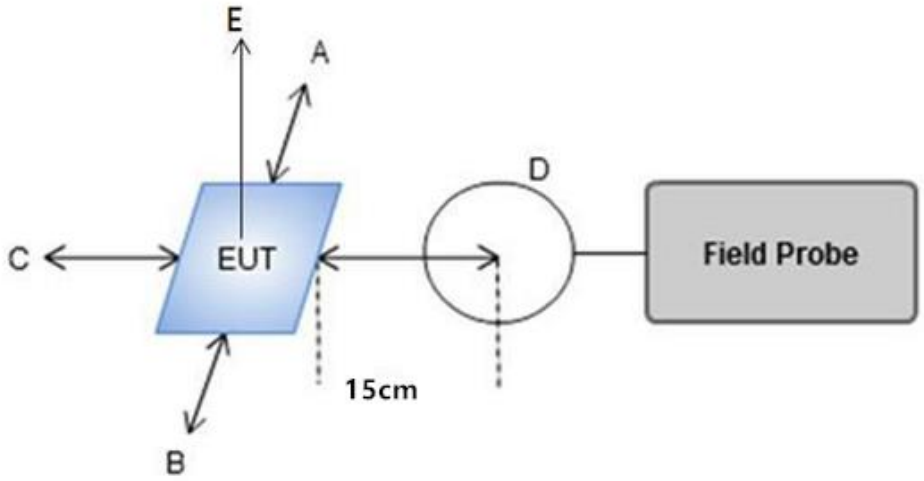
3.2 TEST PROCEDURE

For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be at 15 cm surrounding the device and 20 cm above the top surface. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair at 15 cm surrounding the device and 20 cm above the top surface.

3.3 TEST SETUP



Note: Position A: Front of EUT; Position B: Left of EUT; Position C: back of EUT; Position D: Right of EUT; Position E: Top of EUT(20 cm measure distance)

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3.4 RESULT OF MAXIMUM PERMISSIBLE EXPOSURE

For Full load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.17	0.16	0.19	0.18	0.15	/	/
A/m	0.14	0.13	0.15	0.14	0.12	0.815	1.63

Note: Calculation: A/m=uT/1.25

For Half load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.15	0.19	0.18	0.16	0.18	/	/
A/m	0.12	0.15	0.14	0.13	0.14	0.815	1.63

Note: Calculation: A/m=uT/1.25

For No load mode:

H-Filed Strength at 15 cm surrounding the device and 20 cm above the top surface (A/m)

Filed Strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
uT	0.16	0.15	0.19	0.21	0.17	/	/
A/m	0.13	0.12	0.15	0.17	0.14	0.815	1.63

Note: Calculation: A/m=uT/1.25

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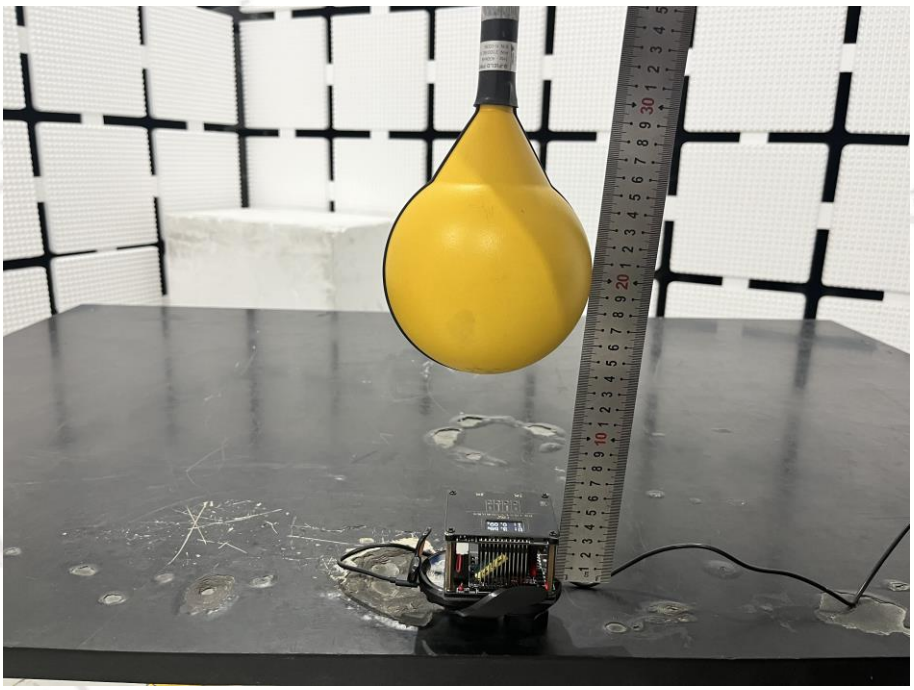
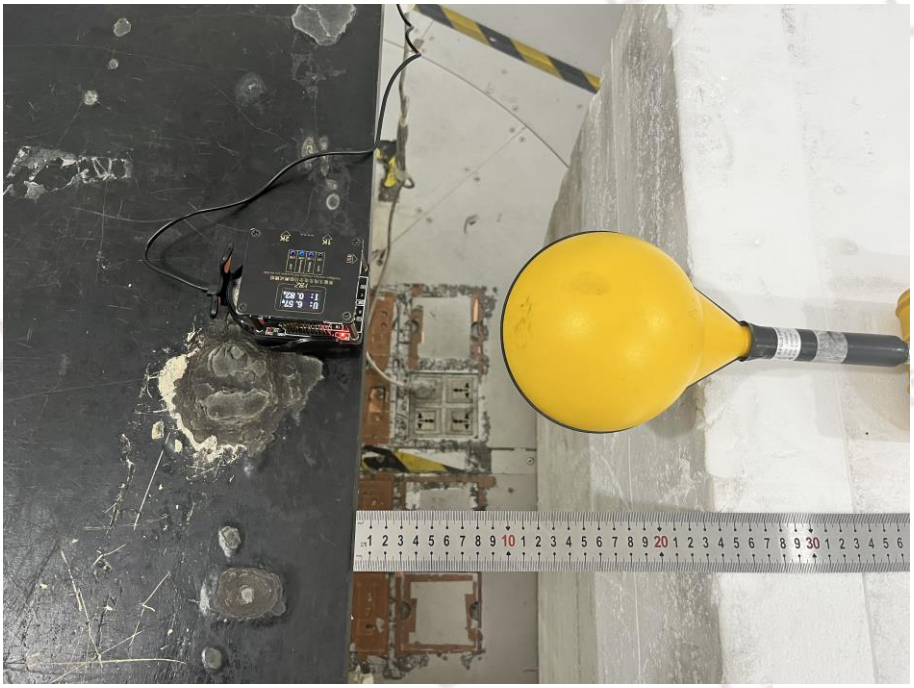
3.5 TEST PHOTO





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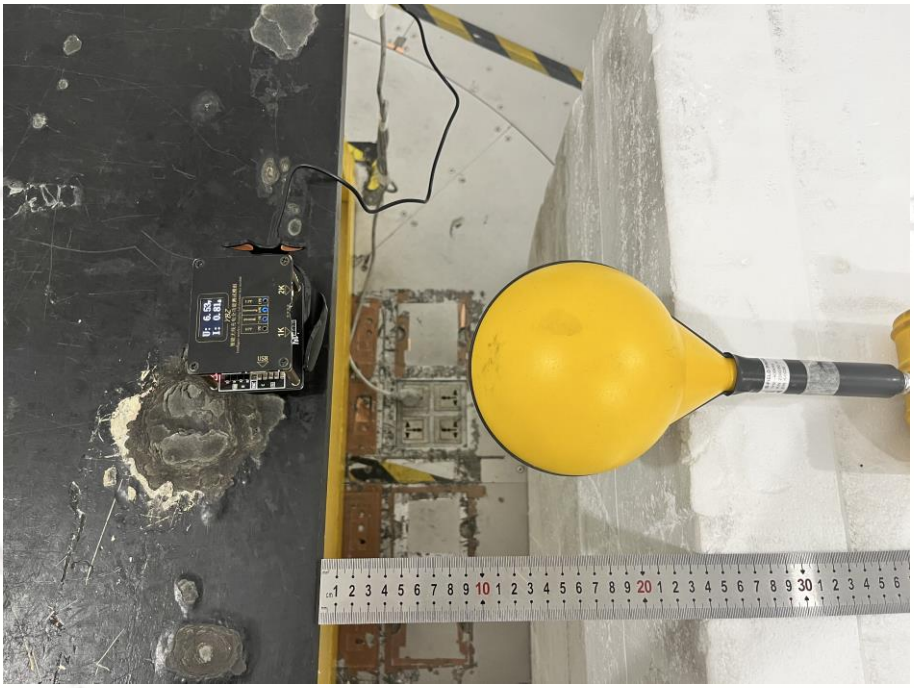

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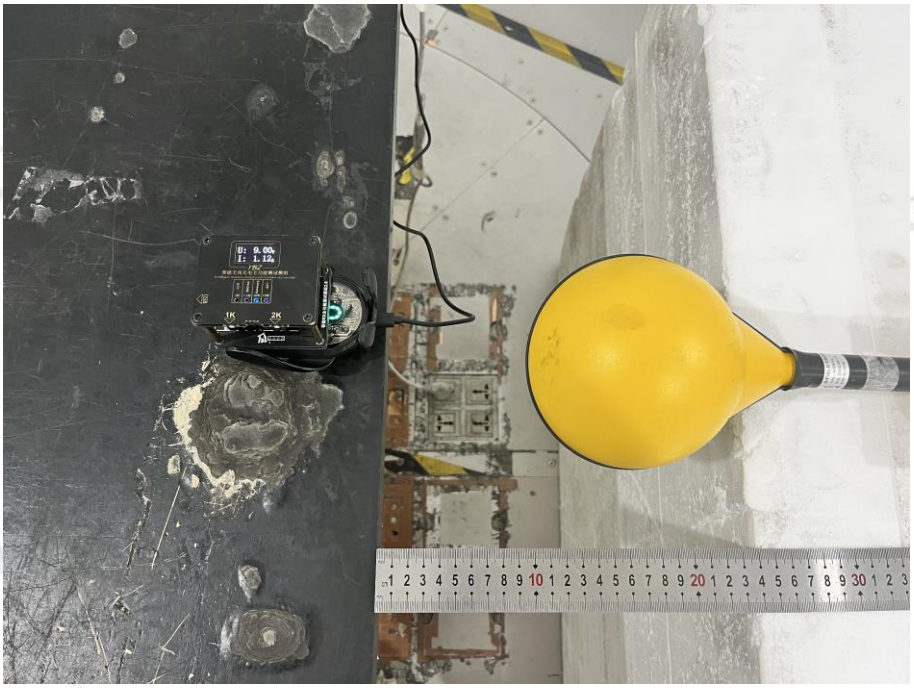

***End of Report**

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