

# Xiamen Linkpower Tech. Co., Ltd

## MPE ASSESSMENT REPORT

**Report Type:**

FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

**Model:**

CSxxx-xxA/xx/xx/xxC/xx,  
HSxxx-xxA/xx/xx/xxC/xx

**REPORT NUMBER:**

2305A0778SHA-002

**ISSUE DATE:**

January 4, 2024

**DOCUMENT CONTROL NUMBER:**

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**Manufacturer:** Xiamen Linkpower Tech. Co., Ltd  
4th Floor, Building 3, No.29 Xinle Road, Haicang District, Xiamen,  
Fujian, 361026, China

**Manufacturing Site:** Xiamen Linkpower Tech. Co., Ltd  
4th Floor, Building 3, No.29 Xinle Road, Haicang District, Xiamen,  
Fujian, 361026, China

**Product Name:** Electric Vehicle Supply Equipment

**Type/Model:** CSxxx-xxA/xx/xx/xxC/xx, HSxxx-xxA/xx/xx/xxC/xx

**FCC ID:** 2BBSV-L2

**SUMMARY:**

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06  
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

**PREPARED BY:**

**REVIEWED BY:**



Project Engineer  
Dylan Tang

Reviewer  
Wakeyou Wang

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### Revision History

Report No.	Version	Description	Issued Date
2305A0778SHA-002	Rev. 01	Initial issue of report	January 4, 2024

## 1 GENERAL INFORMATION

### 1.1 Description of Equipment Under Test (EUT)

Product name:	Electric Vehicle Supply Equipment
Type/Model:	CSxxx-xxA/xx/xx/xxC/xx, HSxxx-xxA/xx/xx/xxC/xx "xxx" denotes Appearance, can be 100=100type, 300=300 type "xxA" denotes Wattage, can be 16=16A, 32=32A, 40=40A, 48=48A "xx" denodenotes Functions, can be 01=WiFi, 02=WiFi+4G, 03=WiFi+ISO15118,04=WiFi+4G+ISO15118 "xx" denotes Screen, can be 5S=5 inch screen, 7S=7 inch screen "xxC" denotes Outlet type, can be 18C=18ft, 25C=25ft "xx" denotes Colour, can be BK=Black, WT=White, BL=Blue, SR=Sliver, GR=Grey
Description of EUT:	The EUT is Electric Vehicle Supply Equipment with RFID Function, it Supports WIFI and LTE function, the wireless modular FCC ID is 2AC7Z-ESP32WROOM32U and XMR201909EC25AFX. There are some series model. And they are same except the appearance. So choose CSxxx-xxA/xx/xx/xx/xxC/xx to test as representative.
Rating:	208-240Vac, 60Hz
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	V7.0
Hardware Version:	C13
Sample received date:	May 30, 2023
Date of test:	May 30, 2023 ~ January 4, 2024

### 1.2 Technical Specification

Frequency Range:	13.56 MHz ~ 13.56 MHz
Modulation:	AM 100%

**TEST REPORT**

**1.3 Description of Test Facility**

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

## 2 MPE Assessment

Test result: Pass

### 2.1 MPE Assessment Limit

**Mobile device exposure for standalone operations:**

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Note: Limit for 13.56MHz is 60.77 V/m

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

**TEST REPORT**

**2.2 Assessment Results**

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm<sup>2</sup>

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 2305A0778SHA-001:

$$62.4\text{dBuV/m}@3\text{m}, @20\text{cm}=@3\text{m}+40\log(3/0.2)=108.8\text{dBuV/m}=0.296\text{V/m}<60.77.$$

The power for WIFI modular refer certificate of FCC ID: 2AC7Z-ESP32WROOM32U

The power for LTE modular refer certificate of FCC ID: XMR201909EC25AFX

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

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Frequency band (MHz)	Power		Antenna Gain		R (cm)	S (mW/cm <sup>2</sup> )	Limits (mW/cm <sup>2</sup> )
	dBm	mW	dBi	(Numeric)			
2412 - 2462	15.90	38.905	2	1.58	20	0.0122	1
2402 -2480	1.08	1.282	2	1.58	20	0.0004	1
LTE Band 71	25.00	316.23	2	1.58	20	0.0995	0.45

Note: 1 mW/cm<sup>2</sup> from 1.310 Table 1.

RFID ,BLE and LTE Module can simultaneous transmitting, so the maximum rate of MPE is,  
 $0.296/60.77+0.0004/1+0.0995/0.45=0.2264<1.0.$

RFID ,WIFI and LTE Module can simultaneous transmitting, so the maximum rate of MPE is,  
 $0.296/60.77+0.0122/1+0.0995/0.45=0.2386<1.0.$

**Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

\*\*\*\*\*END\*\*\*\*\*