

Longkou Dongli Wire And Cable Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCCC MPE assessment report

MODEL:
WEVC-40

REPORT NUMBER:
230701235SHA-003

ISSUE DATE:
March 18, 2024

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Applicant: Longkou Dongli Wire And Cable Co., Ltd.
413 BeiHuan Rd, Huangcheng Longkou, ShanDong, China

Manufacturer: Longkou Dongli Wire And Cable Co., Ltd.
413 BeiHuan Rd, Huangcheng Longkou, ShanDong, China

Factory: Longkou Dongli Wire And Cable Co., Ltd.
413 BeiHuan Rd, Huangcheng Longkou, ShanDong, China

FCC ID: 2BCHB-WEVC40

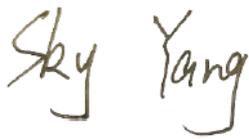
SUMMARY:

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
Sky Yang

Reviewer
Eric Li

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Revision History

Report No.	Version	Description	Issued Date
230701235SHA-003	Rev. 01	Initial issue of report	March 18, 2024

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	AC Electric Vehicle Supply Equipment
Type/Model:	WEVC-40
Description of EUT:	The EUT is a wall-mounted electric vehicle AC charger.
Rating:	Input: 240VAC, 60Hz, 40A Max Output: 240VAC, 60Hz, 40A Max
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	-
Hardware Version:	-
Sample received date:	September 25, 2023
Date of test:	October 17, 2023 ~ October 25, 2023

1.2 Technical Specification

Frequency Range:	13.56 MHz ~ 13.56 MHz
Modulation:	ASK
Antenna:	PCB antenna

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 Member No.: 3598 (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 ²)	Averaging time (minutes)
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
300-1500	/	/	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**

2.2 Assessment Results

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

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

Where S = power density in mW/cm²

P = Radiated transmit power in mW

R = distance (cm)

As we can see from the test report 230701235SHA-002:

$$58.7\text{dBuV/m}@3\text{m}, @20\text{cm}=@3\text{m}+40\log(3/0.2)=105.74\text{dBuV/m}=0.194\text{V/m}<60.77.$$

The power for WIFI/Bluetooth module refers to certificate of FCC ID: 2AC7Z-ESP32WROVERE

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.

Frequency Range (MHz)	EIRP		Antenna Gain (dBi)	R (cm)	S (mW/cm ²)	Limits (mW/cm ²)
	(dBm)	(mW)				
2.4G WIFI	27	501.19	3.4	20	0.218	1
BLE	7	5.01	3.4	20	0.002	1
BT	9	7.94	3.4	20	0.003	1

Note: 1 mW/cm² from 1.310 Table 1.

RFID and WIFI can transmit simultaneously, so the maximum rate of MPE is,
 $0.194/60.77+0.218/1=0.221 < 1.0.$

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*****