Qingdao Xingbang Kitchen And Bathroom Appliances Co., Ltd

MPE ASSESSMENT REPORT

Report Type:
FCCC MPE assessment report

Model:
UEVC1L-16**-R***, UEVC1L-32**-R***,
UEVC1L-40**-R***, UEVC1L-48**-R***

REPORT NUMBER:
230500624SHA-003

ISSUE DATE:
November 10, 2023

DOCUMENT CONTROL NUMBER:
TTRFFCCMPE-01_V1

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TEST REPORT

Report no.: 230500624SHA-003

Applicant:	Qingdao Xingbang Kitchen And Bathroom Appliances Co., Ltd No. 2012 Kunlun Shan South Road, Huangdao District, Qingdao, Shandong, China
Manufacturer:	Qingdao Xingbang Kitchen And Bathroom Appliances Co., Ltd No. 2012 Kunlun Shan South Road, Huangdao District, Qingdao, Shandong, China
Factory:	Qingdao Xingbang Kitchen And Bathroom Appliances Co., Ltd No. 2012 Kunlun Shan South Road, Huangdao District, Qingdao, Shandong, China
FCC ID:	2BBROUEVC1L

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
230500624SHA-003	Rev. 01	Initial issue of report	November 10, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Electric Vehicle Charger
Type/Model:	UEVC1L-16**-R***, UEVC1L-32**-R***, UEVC1L-40**-R***, UEVC1L-48**-R*** the first two ** can be 10 or blank, the third * can be L or blank, the fourth * can be 4 or blank, the fifth * can be W or blank
Description of EUT:	The EUT is an electric vehicle AC charger with RFID function and optional WIFI, LTE function. The WIFI and LTE function use the certified module. All models are electric identical except the rated power.
Rating:	UEVC1L-16**-R***: AC208-240V, 50/60Hz, 16A Max UEVC1L-32**-R***: AC208-240V, 50/60Hz, 32A Max UEVC1L-40**-R***: AC208-240V, 50/60Hz, 40A Max UEVC1L-48**-R***: AC208-240V, 50/60Hz, 48A Max
EUT type:	☒ Table top ☐ Floor standing
Software Version:	-
Hardware Version:	-
Sample received date:	September 7, 2023
Date of test:	September 8, 2023 ~ September 15, 2023

1.2 Technical Specification

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

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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/f2)	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**

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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/cm^2
P = Radiated transmit power in mW
R = distance (cm)

As we can see from the test report 230500624SHA-002:
61.7dBuV/m@3m, @20cm=@3m+40log(3/0.2)=108.74dBuV/m=0.274V/m<60.77.

The power for WIFI module refers to certificate of FCC ID: 2ANDL-WBR3
The power for LTE module refers to 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.

Frequency Range	EIRP		Antenna Gain	R	S	Limits
(MHz)	(dBm)	(mW)	(dBi)	(cm)	(mW/cm2)	(mW/cm2)
Bluetooth LE	11.5	14.13	2.5	20	0.00281	1
WIFI 2.4G	26.83	481.95	2.5	20	0.0959	1
WCDMA Band II	29	794.33	4	20	0.158	1
WCDMA Band IV	29	794.33	4	20	0.158	1
WCDMA Band V	29	794.33	4	20	0.158	0.55
LTE Band 2	29	794.33	4	20	0.158	1
LTE Band 4	29	794.33	4	20	0.158	1
LTE Band 5	29	794.33	4	20	0.158	0.55
LTE Band 12	29	794.33	4	20	0.158	0.47
LTE Band 13	29	794.33	4	20	0.158	0.52
LTE Band 14	29	794.33	4	20	0.158	0.53
LTE Band66	29	794.33	4	20	0.158	1
LTE Band 71	29	794.33	4	20	0.158	0.45

Note: 1 mW/cm2 from 1.310 Table 1.

RFID, WIFI and LTE can transmit simultaneously, so the maximum rate of MPE is,
0.274/60.77+0.0959/1+0.158/0.45=0.452 <1.0.

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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**********