

Ningbo EverFlourish Smart Technology Corp., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
EV100D-40W, EV100D-48W

REPORT NUMBER:
230402142SHA-003

ISSUE DATE:
June 9, 2023

DOCUMENT CONTROL NUMBER:
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77 Wuxiang East Road, Yinzhou, Ningbo, Zhejiang, 31511 China

Factory: Ningbo EverFlourish Smart Technology Corp., Ltd.
77 Wuxiang East Road, Yinzhou, Ningbo, Zhejiang, 31511 China

FCC ID: VBA-EFEV100D

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
230402142SHA-003	Rev. 01	Initial issue of report	June 9, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Electric Vehicle Supply Equipment
Type/Model:	EV100D-40W, EV100D-48W
Description of EUT:	The EUT is an electric vehicle supply equipment with WIFI function. Two models are same except the maximum output power.
Rating:	EV100D-40W: 240VAC, 60Hz, 40A Max, 9.6kW Max EV100D-48W: 240VAC, 60Hz, 48A Max, 11.5kW Max
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	April 21, 2023
Date of test:	April 24, 2023 ~ May 25, 2023

1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40)
Data Rate:	IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7
Channel Separation:	5 MHz
Antenna Information:	1.59dBi, Brass Antenna

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	Bluetooth LE 4.2
Type of Modulation:	GFSK
Channel Number:	40
Data Rate:	1Mbps
Channel Separation:	2MHz
Antenna Information:	1.59dBi, Brass Antenna

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 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:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

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 230402142SHA-001 and 230402142SHA-002:

Here R is chosen to be 20cm,

Mode	Frequency Range	Power		R	S	Limits
	(MHz)	dBm	mW	(cm)	(mW/cm ²)	(mW/cm ²)
WIFI	2412 - 2462	17.61	56.677	20	0.0113	1
BLE	2402 - 2480	2.23	1.671	20	0.0003	1

WIFI and BLE can't transmit simultaneously.

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 *****