

# Shenzhen HB Electronic Co Ltd.

# **MPE ASSESSMENT REPORT**

### **Report Type:**

FCC MPE assessment report

#### **MODEL:**

HBE-DC30KW01HW-U-A7NW4G

### **REPORT NUMBER:**

2401B1362SHA-003

### **ISSUE DATE:**

April 21, 2025



### **DOCUMENT CONTROL NUMBER:**

TTRFFCCMPE-01 V1 © 2018 Intertek



Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Building No.86, 1198 Qinzhou Road (North)
Caohejing Development Zone
Shanghai 200233, China

Telephone: 86 21 6127 8200

www.intertek.com

Report no.: 2401B1362SHA-003

**Applicant:** Shenzhen HB Electronic Co Ltd.

FLOOR 301, BLDG 21, ZHENGDAAN INDUSTRIAL PARK, 172 XIANGSHAN RD, LUOTIAN VILLAGE YANLUO TOWN, BAOAN DISTRICT, Shenzhen 518105,

China

**Manufacturer:** Shenzhen HB Electronic Co Ltd.

FLOOR 301, BLDG 21, ZHENGDAAN INDUSTRIAL PARK, 172 XIANGSHAN RD, LUOTIAN VILLAGE YANLUO TOWN, BAOAN DISTRICT, Shenzhen 518105,

China

**Factory:** Shenzhen HB Electronic Co Ltd.

FLOOR 301, BLDG 21, ZHENGDAAN INDUSTRIAL PARK, 172 XIANGSHAN RD, LUOTIAN VILLAGE YANLUO TOWN, BAOAN DISTRICT, Shenzhen 518105,

China

FCC ID: 2BF82-HBEDC30KW

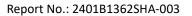
#### **SUMMARY:**

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 Part1.1307(b)

PREPARED DY:	REVIEWED BY:	
Sky Yang	Zric. li	
Project Engineer	Reviewer Eric Li	
Sky Yang	ETIC LI	

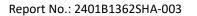
This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.





# **Revision History**

Report No.	Version	Description	Issued Date	
2401B1362SHA-003	Rev. 01	Initial issue of report	April 21, 2025	





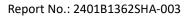
# 1 GENERAL INFORMATION

## 1.1 Description of Equipment Under Test (EUT)

Product name:	EV DC Charger
Type/Model:	HBE-DC30KW01HW-U-A7NW4G
Description of EUT:	The EUT is an electric vehicle DC charging station. The EUT contains certified module, the FCC ID is 2AC7Z-ESPWROOM32UE, the IC is 21098-ESPWROOMUE.
Rating:	Input: 380-480VAC, 50/60Hz Output: 200-1000VDC, 30kW
Category of EUT:	Class A
EUT type:	☐ Table top ☐ Floor standing
Software Version:	-
Hardware Version:	-
Serial numbers:	A250324-10
Sample received date:	March 24, 2025
Date of test:	March 25, 2025 ~ April 9, 2025

## 1.2 Technical Specification

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

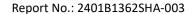




## 1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
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 L21189
	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

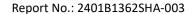
### Mobile device exposure for standalone operations:

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/cm2)	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: f = frequency in MHz. \* = Plane-wave equivalent power density.

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





### 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 = Power in mW

G = numeric gain of transmit antenna

R = distance (cm)

Limit for 13.56MHz is 60.77 V/m

As we can see from the test report 2401B1362SHA-002:

59.0dBuV/m@3m, @20cm=@3m+40log(3/0.2)=106.04dBuV/m=0.2V/m<60.77.

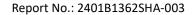
The power for WIFI module refers to certificate of FCC ID: 2AC7Z-ESPWROOM32UE

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	P (dBm) (mW)			G	R	S	Limits
(MHz)			(dBi)	(numeric)	(cm)	(mW/cm2)	(mW/cm2)
2.4G WIFI	15.92 39.084		4	2.512	20	0.0195	1.0000
BLE	4.81	3.027	4	2.512	20	0.0015	1.0000
ВТ	7.59	5.741	4	2.512	20	0.0029	1.0000

Note: 1 mW/cm2 from 1.310 Table 1.

RFID and WIFI/Bluetooth can transmit simultaneously, so the maximum rate of MPE is, 0.2/60.77+0.0195/1=0.0228<1.0.





## **Appendix I**

To satisf	y FCC RF ex	posure req	uirements,	a separ	ation d	listance o	of 20	cm or	more shou	ld be m	aintained

between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.

Definition below must be outlined in the User Manual: