

# Electrolux Home Products, Inc.

# **MPE ASSESSMENT REPORT**

## **Report Type:**

FCC MPE assessment report

#### Model:

EHAW4010AG, EHAW6020AG

#### **REPORT NUMBER:**

210900634SHA-003

#### **ISSUE DATE:**

Feb 14, 2022

#### **DOCUMENT CONTROL NUMBER:**

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Report no.: 210900634SHA-003

**Applicant:** Electrolux Home Products, Inc.

10200 David Taylor Drive, Charlotte, NC 28262, United States

**Manufacturer:** Electrolux Home Products, Inc.

10200 David Taylor Drive, Charlotte, NC 28262, United States

FCC ID: 2A3EWEHAW4

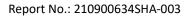
#### **SUMMARY:**

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:		
Teddy yin	Damed Than		
Project Engineer	 Reviewer		
Teddy Yin	Daniel 7hao		

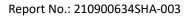
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## **Revision History**

Report No.	Version	Description	Issued Date
210900634SHA-003	Rev. 01	Initial issue of report	Feb 14, 2022





## 1 GENERAL INFORMATION

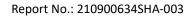
## 1.1 Description of Equipment Under Test (EUT)

Product name:	Air Purifier		
Type/Model/PMN/HVIN:	EHAW4010AG, EHAW6020AG		
	EUT is an Air Purifier. Both models are same except for the model's		
	name and the size of the enclosure. So EHAW6020AG was tested as		
Description of EUT:	representative. EUT supports WIFI and RFID function.		
Rating:	120V~, 60Hz		
Category of EUT:	Class B		
EUT type:	☐ Table top ☐ Floor standing		
Software Version:	V02.20		
Hardware Version:	1V0		
Sample No.:	0211022-06-002		
Sample received date:	Apr 2, 2021		
Date of test:	Apr 2~Dec 20, 2021		

## 1.2 Technical Specification

WIFI

Frequency Range:	2412MHz ~ 2462MHz		
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40		
	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)		
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)		
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)		
Channel Number:	7 Channels for 802.11n(HT40)		
	IEEE 802.11b: Up to 11 Mbps		
	IEEE 802.11g: Up to 54 Mbps		
	IEEE 802.11n-HT20: Up to MCS7		
Data Rate:	IEEE 802.11n-HT40: Up to MCS7		
Channel Separation:	5 MHz		
Antenna Information:	1.5dBi, PCB antenna		

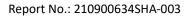




### **TEST REPORT**

### RFID

Operation Frequency:	13.56MHz	
Type of Modulation:	ASK	
	Mobile	
	Portable	
Product Type:	Fix Location	
Channel Number:	1	
Antenna Designation:	Integral PCB antenna, non-user removable	
Gain of Antenna:	0dBi max (Declared by manufacture)	

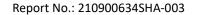




## 1.3 Description of Test Facility

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	CNAS Accreditation Lab	
recognized,	Registration No. CNAS L0139	
certified, or	FCC Accredited Lab	
accredited by these		
	Designation Number: CN0175	
organizations:	<u> </u>	
	IC Registration Lab	
	CAB identifier.: CN0051	
	Gris identification of toos 2	
	VCCI Registration Lab	
	_	
	Registration No.: R-14243, G-10845, C-14723, T-12252	
	A2LA Accreditation Lab	
	Certificate Number: 3309.02	





## 2 MPE Assessment

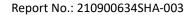
Test result: Pass

## 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave
	(V/m)	(A/m)	(uT)	power density
				S <sub>eq</sub> (W/m²)
0-1 Hz	-	$3,2 \times 10^4$	$4 \times 10^{4}$	-
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 <sup>1/2</sup>	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	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  $\leq$  1.0





## 2.2 Assessment Results

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

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

Where  $S = power density in mW/cm^2$ 

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

#### WIFI

As we can see from the test report 210900634SHA-001: The maximum radiated power = 20.26dBm = 106.17 mW; Here R is chosen to be 20cm,

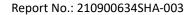
 $S1 = PG / (4\pi R^2) = 106.17 / (4 * 3.14 * 20 * 20) = 0.0211 mW/cm^2$ 

#### **RFID**

As we can see from the test report 210900634SHA-002: The maximum radiated power = 59.6-95.3=-35.7dBm = 0.00027 mW; Here R is chosen to be 20cm,

 $S2 = PG / (4\pi R^2) = 0.00027 / (4 * 3.14 * 20 * 20) = 0.000000054 mW/cm^2$ 

S=S1+S2=0.0211+0.000000054=0.0211mW/cm<sup>2</sup> < 1 mW/cm<sup>2</sup>





## 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.