

JP Commerce, LLC

MPE ASSESSMENT REPORT

Report Type:

FCC Part §2.1091 and §1.1307(b) assessment report

Model:

Aquanova

REPORT NUMBER:

2408B1644SHA-002

ISSUE DATE:

December 13, 2024

DOCUMENT CONTROL NUMBER:

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TEST REPORT

Applicant: JP Commerce, LLC
6943 Valjean Ave Van Nuys, California, 91406 United States.

Manufacturer: Same as applicant

Factory: Comefresh(Xiamen) Electronic Co., Ltd.
F2-4, No.35, Xiangyue Road, Xiang'an District, Xiamen, Fujian, China

FCC ID: 2BBB3-AQUANOVA

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 BY:



Project Engineer
Eric Li

REVIEWED BY:



Reviewer
Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
2408B1644SHA-002	Rev. 01	Initial issue of report	December 13, 2024

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Aquanova Air Purifier
Type/Model:	Aquanova
Description of EUT:	The EUT is an air purifier, it supports wifi function, there is only one model. We tested it and listed the worst results in this report.
Rating:	24VDC 30W Class 2 Power unit: Input: 100-240VAC, 50/60Hz, 0.8A or 1.5A Output: 24VDC, Max 1.5A
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	2024.9.3
Date of test:	2024.9.4-2024.9.22

1.2 Technical Specification

Frequency Band:	2412MHz ~ 2462MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20)
Operating Frequency:	2412MHz to 2462MHz for IEEE 802.11b/g/n(HT20)
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)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20)
Channel Separation:	5 MHz
Antenna Information:	PCB Antenna, 2.45dBi

TEST REPORT

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 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**

TEST REPORT

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/cm²

P = conducted power to antenna port in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 2408B1644SHA-001:

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.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm ²)	(mW/cm ²)
WIFI	2412-2462	15.65	2.45	20	0.0129	1

Note: 1 mW/cm² from 1.310 Table 1

For the device can support simultaneous transmission, according to 447498 D01 General RF Exposure Guidance v06,

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 *****