Groupe SEB

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
PU2840

REPORT NUMBER:
220700655HZH-003

ISSUE DATE:
October 12, 2022

DOCUMENT CONTROL NUMBER:
TTRFFCCMPE-01_V1 © 2018 Intertek

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

Telephone: 86 21 6127 8200
www.intertek.com

Total Quality. Assured.

TEST REPORT

Report no.: 220700655HZH-003

Applicant:	Groupe SEB ZI Montplaisir, Rue du Champ de Courses 38780 Pont- Evêque, France
Manufacturer:	Groupe SEB ZI Montplaisir, Rue du Champ de Courses 38780 Pont- Evêque, France
Factory:	Ningbo Taller Intelligent Technology Co., Ltd. Industrial Park, Simen, Yuyao, Zhejiang, China
PRODUCT NAME:	Air purifier
TYPE/MODEL:	PU2840
FCC ID:	2AGS8-2310N9181

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:**
Offa Zhou	Wakeyou Wang
Project Engineer	Reviewer

TEST REPORT

Revision History

Report No.	Version	Description	Issued Date
220700655HZH-003	Rev. 01	Initial issue of report	October 12, 2022

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Air purifier
Type/Model:	PU2840
Description of EUT:	The EUT covered in the report is air purifier, WIFI and Bluetooth module WBR3 is incorporated in models for wireless control. Therefore, the test was performed on this model.
Rating:	For unit: DC 24V, 1,5A For adaptor: input: 100-240V~, 50/60Hz, Max.1.0 A output: DC 24V, 1,5A, 36,0W, Class II
EUT type:	☐ Tabletop ☒ Floor standing
Brand name:	/
Software Version:	/
Hardware Version:	/
Sample received date:	August 6, 2022
Date of test:	August 6, 2022, to September 16, 2022

1.2 Technical Specification

Wifi	
Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(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)
Data Rate:	IEEE 802.11b: Up to 11Mbps IEEE 802.11g: Up to 54Mbps IEEE 802.11n(HT20): Up to MCS7
Channel Separation:	5 MHz
Antenna Information:	PCB Antenna, 2.54dBi Gain

Bluetooth	
Frequency Band:	2400MHz to 2483.5MHz
Support Standards:	Bluetooth Low Energy
Type of Modulation:	GFSK
Channel Number:	40 (0 ~ 39)
Channel Rate:	1Mbps
Channel Separation:	2MHz
Antenna Information:	PCB Antenna, 2.54dBi Gain

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 Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	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:
$S = PG / (4\pi R^2)$
Where S = power density in mW/cm^2
P = Radiated transmit power in mW
G = numeric gain of transmit antenna
R = distance (cm)

As we can see from the test report 220700655HZH-001 & 220700655HZH-002:

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	EIRP	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm2)	(mW/cm2)
Bluetooth	2402 -2480	12.45	2.54	20	0.0088	1
WIFI	2412-2462	19.40	2.54	20	0.0173	1

Note: 1 mW/cm2 from 1.310 Table 1

The sum of the MPE ratios for all simultaneously transmitting is 0.0088/1+0.0173/1=0.0261＜1.0

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

Total Quality. Assured.

TEST REPORT

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 **********