

RF Exposure Report (FCC)

Report No.: WIR117825-FCC-SEN-RF Exposure

Test Model: V3, V4

Received Date: March 15, 2023

Test Date: March 16, 2023 – March 29, 2023

Issued Date: April 11, 2023

Applicant: Sensio Air Inc

Address: 86-90 Paul Street, London EC2A 4NE, UNITED KINGDOM

Issued By: Eurofins Electrical and Electronic Testing NA, Inc.

Lab Address: 3162 Belick St. Santa Clara CA, 95054



1. Certificate of Conformity

Product: Sensio Air
Brand: Sensio Air Inc
Test Model: V3, V4
FCC ID: 28ARFSENSIOV3
Series Model: N/A
Sample Status: Engineering Sample
Applicant: Sensio Air Inc
Test Date: March 16, 2023 – March 29, 2023

Standard: FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1-1992

Christopher Martin

Christopher Martin
Test Engineer, Wireless Laboratory

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made.

Gary Chou

Gary Chou
Wireless Engineering Manager, Wireless Laboratory

Revision	Report Date	Reason for Revision
Ø	April 11, 2023	Initial Issue.

2. RF Exposure

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	f/1500	30
1500-100,000	1.0	30

f = Frequency in MHz; *Plane-wave equivalent power density

2.1 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.2 Antenna Gain

PCB Antenna, 3.58 dBi

2.3 Calculation Result worst case of Maximum Conducted Power

Type/ Mode	Frequency Band (MHz)	Max Power (tune up) (dBm)	Max Power (tune up) (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WLAN/ B	2412	18.15	65.3131	3.58	20	0.029645	1

The maximum calculations of above situations are less than the limit.
The SAR evaluation is not required.

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

3. This device contains

TYPE	Model No.	FCC ID	Note
WLAN	1DX	VPYLB1DX	-

4. Conclusion

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

Worse case

Total MPE Percentage for

WLAN = $0.029645 < 1$

Therefore, the maximum calculations of above situations are less than the “1” limit.
The SAR evaluation is not required.