

RF Exposure Report

FCC ID: 2ABWOHH2001

The EUT is a Intelligent aroma diffuser in the 2412MHz ~ 2462MHz frequency band.

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	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

MPE calculation method

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2}$$

S: power density mW/ cm²;

P: power input to the antenna in mW;

g: numeric gain of antenna;

r: distance to centre of radiation in cm

Calculated result

2.4G WIFI

Mode	Max. Peak output power (dBm)	Max. Peak output power (mW)	Antenna Gain (numeric)	Power Density at R=20cm (mW/cm ²)	Limit of Power Density (S) (mW/ cm ²)
802.11b	13.60	22.909	1.26	0.172362	1
802.11g	10.74	11.858	1.26	0.089216	1
802.11n20	8.83	7.638	1.26	0.057470	1
802.11n40	8.36	6.855	1.26	0.051575	1

5G WIFI Band 1

Mode	Max. Peak output power (dBm)	Max. Peak output power (mW)	Antenna Gain (numeric)	Power Density at R=20cm (mW/cm ²)	Limit of Power Density (S) (mW/ cm ²)
802.11a	20.56	113.763	1.26	0.855938	1
802.11n 20MHz	18.27	67.143	1.26	0.505175	1
802.11n 40MHz	18.72	74.473	1.26	0.560328	1
802.11ac 80MHz	18.77	75.336	1.26	0.566816	1

5G WIFI Band 4

Mode	Max. Peak output power (dBm)	Max. Peak output power (mW)	Antenna Gain (numeric)	Power Density at R=20cm (mW/cm ²)	Limit of Power Density (S) (mW/ cm ²)
802.11a	20.77	119.399	1.26	0.898343	1
802.11n 20MHz	19.04	80.168	1.26	0.603173	1
802.11n 40MHz	19.67	92.683	1.26	0.697336	1
802.11ac 20MHz	12.67	18.493	1.26	0.139137	1
802.11ac 40MHz	11.91	15.524	1.26	0.116800	1
802.11ac 80MHz	8.57	7.194	1.26	0.054131	1

Note1: the antenna gain is 1.0dBi;

Note2: Calculated distance is 20cm, which is declared by the manufacture.