

FCC 47 CFR MPE REPORT

LEVO Oil Infusion Inc.

Oil Infuser

Model Number: LEVO II Alpine

Additional Model: LEVO II Cayenne, LEVO II Jet, LEVO II Robin,
LEVO II Meyer

FCC ID: 2AQQX857722

Prepared for:	LEVO Oil Infusion Inc.
	3000 Lawrence Street Suite #10, Denver, Colorado 80205, United States
Prepared By:	EST Technology Co., Ltd.
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China
Tel: 86-769-83081888-808	

Report Number:	ESTE-R1810014
Date of Test:	Jul. 25 ~ Oct. 08, 2018
Date of Report:	Oct. 09, 2018

Maximum Permissible Exposure

1、Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(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 Times 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
1500-10000			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 Times 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
1500-10000			1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

2、MPE Calculation Method

$$E \text{ (V/m)} = (30 \cdot P \cdot G)^{0.5} / d \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = E^2 / 377$$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$P_d = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

3、Conducted Power Result

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	Target power (dBm)	Antenna gain	
					(dBi)	(Linear)
IEEE 802.11b	2412	10.74	11.858	10 ± 1	1.5	1.413
	2437	10.03	10.069	10 ± 1	1.5	1.413
	2462	10.28	10.666	10 ± 1	1.5	1.413
IEEE 802.11g	2412	5.78	3.784	5 ± 1	1.5	1.413
	2437	5.53	3.573	5 ± 1	1.5	1.413
	2462	5.59	3.622	5 ± 1	1.5	1.413
IEEE 802.11n HT20	2412	5.11	3.243	5 ± 1	1.5	1.413
	2437	4.74	2.979	4 ± 1	1.5	1.413
	2462	4.52	2.831	4 ± 1	1.5	1.413

4、Calculated Result and Limit

Mode	Target power (dBm)	Antenna gain		Power Density (S) (mW /cm2)	Limited of Power Density (S) (mW /cm2)	Test Result
		(dBi)	(Linear)			
Wi-Fi						
IEEE 802.11b	11	1.5	1.413	0.00354	1	Compiles
IEEE 802.11g	6	1.5	1.413	0.00112	1	Compiles
IEEE 802.11n HT20	6	1.5	1.413	0.00112	1	Compiles