RF EXPOSURE (F)

(f) U-NII devices are subject to the radio frequency radiation exposure requirements specified in § 1.1307(b), § 2.1091 and § 2.1093 of this chapter, as appropriate. All equipment shall be considered to operate in a "general population/uncontrolled" environment. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

§ 1.1310 Radio Frequency Radiation Exposure

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range Averaging time (MHz) (minutes)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm 2)	
(B) 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

Test result:

TABLE 1 (B) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

F(MHz)   **(POWER DENSITY (mW/cm²)**

1500 - 100,000   1

Transmitter Output power is **0.044 Watts** and will be used with a **3 dBi (1.995 numerically)** antenna

Computation method:

$P = E^2 / 3770$

$\sqrt{E^2} = \sqrt{1 \text{ mW/cm}^2 * 3770}$

$E = 61.4 \text{ V/m}$

$$E = \frac{\sqrt{30 * P * G}}{D}$$

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$$D = \frac{\sqrt{30 * 0.049 * 3.98}}{61.4 \text{ V/m}}$$

D = 2.64 cm

3.93 / 2.54 = 1.04 inch

MPE DISTANCE REQUIREMENT IS 1.04 INCH. A WARNING STATEMENT WITH A MPE DISTANCE REQUIREMENT OF 20CM IS PLACED IN THE MANUAL.

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