RF Exposure

According 15.247(b)(4) and 1.307(b)(1)

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 of the Commission's guidelines.

According to 1.1310 and 2.1093 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electronic Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
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 - 15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equivalent power density

RF exposure calculations

EUT	Eddy-WiFi V3.0
Operating Frequency Band	2412 ~ 2462
Exposure Classification	General Population / Uncontrolled exposure (S = 1 mW/cm^2)
Max. Output Power	14.06 dBm (25.46 mW)
Antenna Gain(Max)	3 dBi (Numeric Gain : 2)
Evaluation Applied	MPE Evaluation

Note :
1. The maximum output power is 14.06 dBm (25.46 mW) at 2462 MHz.
2. For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20 cm, even if the calculations indicate that the MPE distance would be lesser.

$S = (P*G)/4\pi R^2$

Where, S = Power Density (mW/cm^2)

P = Output Power to Antenna (mW)

G = Gain of antenna in numeric

R = Distance between radiating structure and observation point (cm)

Then, the power density (S) = (25.46 * 2) / 4 * 3.1416 * 20^2) = 0.01013 (mW/cm^2)

Note : The power density at 20 cm does not exceed the 1 mW/cm^2 limit. Therefore, the exposure condition is compliant with FCC rules.