

18 RF Exposure

U-NII devices are subject to the radio frequency radiation exposure requirements specified in §1.1307(b), §2.1091 and §2.1093 of chapter 47 of the CFR, 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.

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Prediction of MPE limit at a given distance

Equation from IEEE C95.1

$$S = \frac{EIRP}{4\pi R^2} \text{ re - arranged } R = \sqrt{\frac{EIRP}{S 4\pi}}$$

where:

S = power density

R = distance to the centre of radiation of the antenna

EIRP = EUT Maximum power

Note:

The EIRP was measured by substitution method

Result

Prediction Frequency (MHz)	EIRP (mW)	Maximum Duty Cycle (dBi)	Time Averaged EIRP (mW)	Minimum Distance (cm)	Power density at distance (mW/cm ²)	Power density limit (S) (mW/cm ²)
5150 – 5350	3411.93	85%	2900.14	15.2	0.9988	1