

MPE Calculations

FCC part 1.1310, Table 1 limits the power density for uncontrolled exposure to $1\text{mW}/\text{cm}^2$ for systems operating in the UNII bands. The distance, $d(\text{cm})$ from the antenna at which the power density, $P_d (\text{mW}/\text{cm}^2)$ is below this limit is calculated from the maximum EIRP, $P_t(\text{mW})$ using the equation:

$$P_d = P_t / (4 \pi d^2)$$

Re-arranging for the distance at which the power density is $1\text{mW}/\text{cm}^2$ gives:

$$d = \sqrt{P_t / (4 \pi P_d)}$$

Frequency	Maximum Output Power (dBm)	Max. Antenna Gain (dBi)	EIRP (mW)	P_d at 20cm	Calculated distance (in cm) where $P_d < 1\text{mW}/\text{cm}^2$
2412 - 2462 MHz	19.5	3	177.8	0.0354	3.8

The minimum distance from the antenna that the power density is $1\text{mW}/\text{cm}^2$ and the calculated minimum distance is 3.8 cm.

The OEM will be responsible for determining the distance based on the antenna configuration(s) used in their systems. This information is detailed in the OEM compliance guide provided by Intel.