

RF Exposure information

The Home unit is classified as a mobile device. The Home unit includes 3 transmitters operating according to FCC part 15 subpart C section 15.231 and section 15.247 (DTS) and Wi-Fi module approval under FCC ID: QOQWFM200. **Wi-Fi and BLE won't work together.**

The standard section 15.231 does not contain RF Exposure limits.

In 2402-2480 MHz range:

The FCC power density limit for general population/uncontrolled exposure is 1 mW/cm² for 2.4 GHz.

The power density $P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$

P_T is the transmitted power, which is equal to the peak transmitter measured output power with the tune up tolerance 16 dBm plus maximum antenna gain 1.9 dBi, the maximum equivalent isotropically radiated power EIRP is:

$$P_T = 16 \text{ dBm} + 1.9 \text{ dBi} = 17.9 \text{ dBm} = 61.65 \text{ mW}.$$

The power density at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$61.65 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.0122 \text{ mW/cm}^2 \ll 1 \text{ mW/cm}^2$$

General Public cannot be exposed to dangerous RF level.

In 2412-2462 MHz range:

The FCC power density limit for general population/uncontrolled exposure is 1 mW/cm² for 2.4 GHz.

Maximum conducted power with the tune up tolerance given in FCC ID: QOQWFM200 module grant is 16.4 dBm plus maximum antenna gain 4.7 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 16.4 \text{ dBm} + 4.7 \text{ dBi} = 21.1 \text{ dBm} = 129 \text{ mW}.$$

The power density at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$129 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.0256 \text{ mW/cm}^2 \ll 1 \text{ mW/cm}^2$$

General Public cannot be exposed to dangerous RF level.