# RF exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310

The calculation was done for power density at 20 cm distance.
Operating frequency range 1850.2 –1909.8 MHz.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm$^2$
(for 1500 –100,000 MHz frequency range).

The power density $P \text{ (mW/cm}^2) = P_T / 4\pi\, r^2$, where
$P_T$ is the transmitted power, which is equal to the peak transmitter output power 30.6 dBm plus maximum antenna gain 1.5 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 30.6 \text{ dBm} + 1.5 \text{ dBi} = 32.1 \text{ dBm} = 1622 \text{ mW}.$$

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

$$P = 1622 \text{ mW} / 4\pi\, (20 \text{ cm})^2 = 0.32 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.