

Environmental evaluation and exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310

The calculation was done for confirm compliance with power density limit at 20 cm distance.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm² for 1500 -100000 MHz frequency range:

The power density P (mW/cm²) = $P_T / 4\pi r^2$, where

P_T is the maximum equivalent isotropically radiated power (EIRP).

The peak output power of 25.83 dBm with 7 dBi antenna gain corresponds to the equivalent isotropically radiated power (EIRP) of

$$25.83 \text{ dBm} + 7 \text{ dBi} = 32.83 \text{ dBm}, \text{ which is equal to } 1919 \text{ mW}.$$

The power density at 20 cm calculated as follows:

$$1919 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.38 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.