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

The calculation was done to confirm required safe distance for fixed device.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm^2 for 1500 -100000 MHz frequency range:

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

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

The peak output power of 21.48 dBm with 17.5 dBi antenna assembly gain corresponds to the equivalent isotropically radiated power (EIRP) of

21.48 dBm + 17.5 dBi = 38.98 dBm, which is equal to 7906.8 mW.

The minimum safe distance "r", where RF exposure does not exceed FCC permissible limit, is

$$r = sqrt\{\ P_T\ /\ (Px4\pi)\} = sqrt\{7906.8\ /\ 12.56\} = 25\ cm.$$

General public cannot be exposed to dangerous RF level.