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

The transceiver is classified as fixed, the calculation was done to confirm a safe distance.

Limit for power density for general population/uncontrolled exposure is f/1500 mW/cm^2 for 300 – 1500 MHz frequency range:

P = 698/1500 = 0.46 mW/cm^2

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

P_T is the transmitted power, which is equal to the peak transmitter output power plus maximum antenna gain. The maximum equivalent isotropically radiated power EIRP is

P_T = 28.6 dBm +15.3 dBi = 43.9 dBm = 24547 mW, where

28.6 dBm is the EUT maximum output power,
15.3 dBi – antenna gain.

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

$$r = \text{sqrt}\ \{ P_T / (Px4\pi)\} = \text{sqrt}\ \{24547 / (0.46 \text{ x}12.56)\} = 65.2 \text{ cm} << 2 \text{ m} .$$

General public cannot be exposed to dangerous RF level.