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 1 mW/cm^2 for 1500 -100000 MHz frequency range.

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

$$P_T = 32.24\ dBm + 22\ dBi = 54.24\ dBm = 265460.5\ mW, \text{ where}$$

32.24 dBm is the EUT maximum output power,
19 dBi – Maximum declared Individual antenna gain
22 dBi - Total Directional Antenna Gain = Individual antenna gain + 10 log (number of co-polarized antennas)

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

$$r = \text{sqrt}\ \{ P_T / (Px4\pi)\} = \text{sqrt}\ \{265460.5 / 12.56\} \cong 145.5\ cm \cong 1.5\ m.$$