RF Exposure Evaluation according to FCC 47 CFR part 1 §1.1307

The transceiver is classified as fixed. The calculation was done for minimum safety distance.

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

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

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

$\qquad P_T$ = 20.1 dBm + 13 dBi = 33.1 dBm = 2042 mW, where

20.1 dBm is the EUT maximum output power;
13 dBi –antenna gain.

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

$\qquad$ r = sqrt { P$_T$ / (Px4π)} = sqrt {2042/12.56} $\approx$13 cm.

General public will not be exposed to dangerous RF level.