

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 check a safe 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 / 4π r²**, where

P_T is the transmitted power, which is equal to the peak transmitter measured output power with the tune up tolerance 31.96 dBm plus maximum antenna gain 17 dBi, the maximum equivalent isotropically radiated power EIRP is:

$$P_T = 31.96 \text{ dBm} + 17 \text{ dBi} = 48.96 \text{ dBm} = 78705 \text{ mW}, \text{ where}$$

31.96 dBm is the EUT maximum output power with the tune up tolerance (per port), 17 dBi – antenna gain.

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{78705 / 12.56} = 79.2 \approx 80 \text{ cm}.$$

A warning about a safe distance is contained in the user manual.