

**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 $f/1500 \text{ mW/cm}^2$ for 300 – 1500 MHz frequency range:

$$P = 1392.5/1500 = 0.928 \text{ mW/cm}^2$$

The maximum equivalent isotropically radiated power EIRP is

$P_T = 26.18 \text{ dBm} + 10 \text{ dBi} = 36.18 \text{ dBm} = 4149.5 \text{ mW}$, where
26.18 dBm is the EUT maximum output power,
10 dBi – antenna gain.

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{4149.5 / (0.928 \times 12.56)} = 18.9 \text{ cm} \ll 2 \text{ m} .$$

General public cannot be exposed to dangerous RF level.