

**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/cm² for 300 – 1500 MHz frequency range:

$$P = 757/1500 = 0.505 \text{ mW/cm}^2$$

The power density P (mW/cm²) = $P_T / 4\pi r^2$, 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

$$P_T = 41.41 \text{ dBm} + 15.45 \text{ dBi} = 56.86 \text{ dBm} = 485288 \text{ mW}, \text{ where}$$

41.41 dBm is the EUT maximum output power,
15.45 dBi – antenna gain.

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{485288 / (0.505 \times 12.56)} = 276 \text{ cm}.$$

The warning shall be provided in the User Guide.