

**Environmental evaluation and exposure limit according to FCC CFR 47part 1,
§1.1307, §1.1310**

The calculation was done for required 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 maximum equivalent isotropically radiated power (EIRP).

The peak output power of 28.68 dBm with 16.5 dBi antenna gain corresponds to the equivalent isotropically radiated power (EIRP) of

$$28.68 \text{ dBm} + 16.5 \text{ dBi} = 45.18 \text{ dBm}, \text{ which is equal to } 32961 \text{ mW}.$$

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{32961 / 12.56} = 51.2 \text{ cm} \ll 2 \text{ m} .$$