

**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 $f/1500$ mW/cm² for 300-1500 MHz frequency range:

$$P = 787/1500 = 0.525 \text{ mW/cm}^2$$

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

P_T is the maximum equivalent isotropically radiated power (EIRP).

The peak output power of 32.3 dBm with 13.65 dBi antenna gain corresponds to the equivalent isotropically radiated power (EIRP) of

$$33.0 \text{ dBm} + 13.65 \text{ dBi} = 46.65 \text{ dBm}, \text{ which is equal to } 46238 \text{ mW}.$$

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{46238 / (0.525 \times 12.56)} = 84 \text{ cm} \ll 2 \text{ m} .$$