

## 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/cm<sup>2</sup> for 300-1500 MHz frequency range:

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

The power density  $P$  (mW/cm<sup>2</sup>) =  $P_T / 4\pi r^2$ , where

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

The peak output power of 28.22 dBm with 14 dBi antenna gain corresponds to the equivalent isotropically radiated power (EIRP) of

$$28.22 \text{ dBm} + 14 \text{ dBi} = 42.22 \text{ dBm}, \text{ which is equal to } 16672 \text{ mW}.$$

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{16672 / (0.525 \times 12.56)} = 50 \text{ cm} \ll 2 \text{ m} .$$