

RF exposure evaluation according to §15.247(e)(i) and §1.1307

Limit for power density for general population/uncontrolled exposure is 1 mW/cm^2 (for 1500 –100,000 MHz frequency range).

The power density $P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$

P_T is the transmitted power, which is equal to the peak transmitter output power 29.7 dBm plus maximum antenna gain 32.5 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 29.7 \text{ dBm} + 32.5 \text{ dBi} = 62.2 \text{ dBm} = 1659586 \text{ mW}.$$

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{1659586 / 12.56} = 364 \text{ cm}.$$

The warning has been inserted in User Manual.