

Transmitter, model Speed HPTx

Exposure limit according to part 1, §1.1310

Limit for power density for general population/uncontrolled exposure is 1 mW/cm^2 .

The power density $P \text{ (mW/cm}^2\text{)} = f/1500 \text{ (mW/cm}^2\text{)} = 0.3 \text{ mW/cm}^2 = P_T / 4\pi r^2$, where

P_T - the transmitted power, which is equal to the transmitter output.

Maximal $P_T = 17.78 \text{ dBm} \approx 60 \text{ mW}$.

$$0.3 \text{ (mW/cm}^2\text{)} = 60 \text{ mW} / 4\pi r^2$$

The minimum allowed distance “r”, where RF exposure limits may not be exceeded, is 4 cm.

$$r = \sqrt{P_T / 4\pi} = \sqrt{60 / 0.3 \times 4 \times 3.14} = 4 \text{ (cm)}.$$

The public cannot be exposed to dangerous RF level.