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 $\mathbf{P\,(mW/cm^2)\,=\,P_T\,/\,4\pi\,r^2}$, where

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

In our case antenna gain is 7.5 dBi.

Maximal P_T @ carrier frequency 904.2 MHz is equal to 20.00 dBm + 7.5 dBi = 27.5 dBm = 562.34 mW .

$$1(mW/cm^2) = 562.34 \text{ mW} / 4\pi\,r^2$$

The minimum allowed distance "r", where RF exposure limits may not be exceeded, is **6.69** cm.

$$r = sqrt\,(\,P_T\,/\,4\pi) = sqrt(\,562.34/\,(4 \times 3.14)) = 6.69 \text{ (cm)}.$$

Maximal P_T @ carrier frequency 915.0 MHz is equal to 20.1 dBm + 7.5 dBi = 27.6 dBm = 575.44 mW .

$$1(mW/cm^2) = 575.44 \text{ mW} / 4\pi\,r^2$$

The minimum allowed distance "r", where RF exposure limits may not be exceeded, is **6.76** cm.

$$r = sqrt\,(\,P_T\,/\,4\pi) = sqrt(\,575.44/\,(4 \times 3.14)) = 6.76 \text{ (cm)}.$$

Maximal P_T @ carrier frequency 925.8 MHz is equal to 20.35 dBm + 7.5 dBi = 27.85 dBm = 609.53 mW .

$$1(mW/cm^2) = 609.53 \text{ mW} / 4\pi\,r^2$$

The minimum allowed distance "r", where RF exposure limits may not be exceeded, is **6.96** cm.

$$r = sqrt\,(\,P_T\,/\,4\pi) = sqrt(\,609.53/\,(4 \times 3.14)) = 6.96 \text{ (cm)}.$$

The EUT is an outdoor mounted unit, therefore the public cannot be exposed to dangerous RF level.