

### **Environmental evaluation and exposure limit according to FCC CFR 47part 1, §1.1307, §1.1310**

The calculation was done to confirm required safe distance for fixed device.

Limit for power density for general population/uncontrolled exposure is  $1 \text{ mW/cm}^2$  for 1500 -100000 MHz frequency range:

The power density  $P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$ , where  $P_T$  is the maximum equivalent isotropically radiated power (EIRP).

The peak output power of 18.46 dBm with 18 dBi antenna gain and 3 dB beamforming factor corresponds to the equivalent isotropically radiated power (EIRP) of

$$18.46 \text{ dBm} + 18 \text{ dBi} + 3 \text{ dB} = 39.46 \text{ dBm, which is equal to } 8830.8 \text{ mW.}$$

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{8830.8 / 12.56} = 26.5 \text{ cm.}$$

General public cannot be exposed to dangerous RF level.