1.1 Exposure limit according to §15.247(b)(5) and §1.1310

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

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

P_{T1} is the transmitted power, which is equal to the full transmitter output power 15.9 dBm plus maximum antenna gain 20 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_{T1} = 15.9\ dBm + 20\ dBi = 35.9\ dBm = 3890\ mW.$$

The power density at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$3890\ mW / 4\pi\ (20\ cm)^2 = 0.774\ mW/cm^2 < 1\ mW/cm^2$$

was found below the limit.

Hence, no safety hazard exists for human being.

1.2 Exposure limit according to §15.407(f) and §1.1310

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

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

P_{T2} is the transmitted power, which is equal to the full transmitter output power 16.7 dBm plus maximum antenna gain 20 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_{T2} = 16.7\ dBm + 20\ dBi = 36.7\ dBm = 4677.4\ mW.$$

The power density at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$4677.4\ mW / 4\pi\ (20\ cm)^2 = 0.93\ mW/cm^2 < 1\ mW/cm^2$$

was found below the limit.

Hence, no safety hazard exists for human being.