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

1) P_T is the transmitted power, which is equal to the peak transmitter output power 24 dBm plus maximum antenna gain 24 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_{T1} = 24\ dBm + 24\ dBi = 48\ dBm = 63096\ mW.$$

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

$$r = sqrt\ \{\ P_T\ /\ (Px4\pi)\} = sqrt\ \{63096\ /\ 12.56\} = 71\ cm.$$

2) The maximum equivalent isotropically radiated power with 15.2 dBi integral antenna is P_{T2} = 27 dBm + 15.2 dBi = 42.2 dBm = 16596 mW (< 63096 mW), the minimum safe distance is 37 cm.

The warning has been inserted in User Manual.