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

The booster is classified as a fixed device, the calculation was done to confirm a safe distance.

Limit for power density for general population/uncontrolled exposure is f/1500 mW/cm^2 for 300 – 1500 MHz frequency range:

$$P = 421/1500 = 0.28\ mW/cm^2$$

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

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

The maximum equivalent isotropically radiated power EIRP is

$$P_T = 36.98\ dBm + (-6\ dBd) + 2.15\ dB = 33.13\ dBm = 2056\ mW,\ where$$

36.98 dBm is the EUT maximum output power in DL mode;
-6 dBd – antenna assembly gain.

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

$$r = sqrt\ \{ P_T / (Px4\pi)\} = sqrt\ \{2056 / (0.28\ x12.56)\} \approx 25\ cm.$$

A warning about a safe distance is contained in the user manual.