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 f/1500 mW/cm^2 for 300 – 1500 MHz frequency range:

P = 700/1500 = 0.47 mW/cm^2

The power density **P (mW/cm^2) = P$_T$ / 4π r^2**, where
P$_T$ is the maximum equivalent isotropically radiated power (EIRP).

To convert the total ERP output power of 39.86 dBm* (including 11.35 dBd antenna gain and 6 dB beamforming factor) into EIRP the 2.15 dB was added:

39.86 dBm + 2.15 dB = 42.01 dBm, which is equal to 15885.5 mW.

- *39.86 dBm obtained at 740 MHz, CBW=10 MHz, 64QAM*

corresponds to the equivalent isotropically radiated power (EIRP) of

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

r = sqrt { P$_T$ / (Px4π)} = sqrt {15885.5 / (0.47 x12.56)} = 51.9 cm ≈ 52 cm.

General public cannot be exposed to dangerous RF level.