

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

The transceiver is classified as fixed, the calculation was done to check a safe distance.

Limit for power density for general population/uncontrolled exposure is 1 mW/cm<sup>2</sup> for 1500 -100000 MHz frequency range.

The power density  $P$  (mW/cm<sup>2</sup>) =  $P_T / 4\pi r^2$ , 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

$$P_T = 36 \text{ dBm} = 3.981 \text{ mW, where}$$

16.50 dBm is the EUT maximum output power,

16.5 dBi – antenna gain

3.0 dB- antenna gain array (Table 7.5.6 from test report TelRad\_FCC\_31832\_rev1).

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

$$r = \sqrt{P_T / (P \times 4\pi)} = \sqrt{3.981 / 12.56} = 18 \text{ cm} \approx 20 \text{ cm.}$$

General public cannot be exposed to dangerous RF level.