R.F Exposure/Safety

The typical placement of the E.U.T. is on a communication tower. The typical distance between the E.U.T. and the user is at least 42cm.

Calculation of Maximum Permissible Exposure (MPE)
Based on 47CFR1 Section 1.1307(b)(1)

(a)   FCC Limit is: $1\dfrac{mW}{cm^2}$

Using Table 1 of 47CFR1 Section 1.1310 limit for general population/uncontrolled exposures, the above levels are an average over 30 minutes.

(b)   The power density produced by the E.U.T. is:

$$S = \frac{P_t G_t}{4\pi R^2}$$

P_t = Conducted Transmitted Power 23.35dBm
G_t = Antenna Gain 20 dBi
R = Distance From Transmitter 42 cm

(c)   The peak power density produced by the E.U.T. is:
23.35dBm + 20= 43.35dBm = 21627mW
S = 21627/4/3.14/(42sq=1764) = 0.98 mW/cm2

(d)   This is below the FCC limit.