Calculation: RF-Exposure for 5.2 GHz transmitter

Type identification: **BAT300**

In accordance to the **CFR Part 47, §1.1310**

S: Limit for power density according to CFR Part 47, §1.1310:

   $10 \ W/m^2$

P: 42.7 mW

G: 6.4 dBi = 4.4

D: Duty cycle: 100 % = 1

R: Distance in what the limit of S has to be reached: 0.2 m

$$S = \frac{P \cdot G \cdot D}{4 \cdot \pi \cdot R^2} \quad \Rightarrow \quad \underline{\underline{S}} = \frac{0.0427 \ W \cdot 4.4 \cdot 1}{4 \cdot \pi \cdot (0.2m)^2} \quad = \quad \underline{\underline{0.37 \frac{W}{m^2}}}$$

The value for the "General population / Uncontrolled Exposure" of the power density is below the limit of CFR Part 47, §1.1310.