Calculation: RF-Exposure for 915 MHz transmitter

Type identification: **IUHF190V1B**

In accordance to the **CFR Part 47, §1.1310** and **RSS-102 Issue 5**

S: Limit for power density according to
- CFR Part 47, §1.1310: 6.02 W/m^2
- RSS-102 Issue 5, Table 4: 2.74 W/m^2

P: 676.1 mW (peak value, refer clause 5.5 of test report F171663E1)

G: 3.5 dBi = 2.24

D: Duty cycle: 100 % = 1

R: Distance in what the limit of S has to be reached: 0.3 m (refer also to the manufacturers installation / user manual)

$$S = \frac{P \cdot G \cdot D}{4 \cdot \pi \cdot R^2} \quad \Rightarrow \quad S = \frac{0.6761W \cdot 2.24 \cdot 1}{4 \cdot \pi \cdot (0.3m)^2} = \underline{\underline{1.34 \frac{W}{m^2}}}$$

The value of the power density is below the limit of CFR Part 47, §1.1310 for the "General population / Uncontrolled Exposure" and below the limit of
RSS-102 Issue 5, Table 4 "General Public (uncontrolled environment)".
Base of the above calculations is the lowest possible frequency in combination with the highest output power of the EUT.