

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/m²
 - RSS-102 Issue 5, Table 4: 2.74 W/m²
- 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)

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

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.