

## Calculation: RF-Exposure for Unlicensed Transmitter

FCC ID: **T3X-CDL2**

Type of Device: **Commercial Series Gen 2 Combined PIR/Microwave Detector**

In accordance with **CFR47, §1.1310 Radiofrequency radiation exposure limits:**

S: Limit for power density according to Table 1 to § 1.1310(e)(1)  
 (i) Occupational / Controlled Exposure  
 (ii) General Population / Uncontrolled Exposure  
(Power Density Limit for frequency range of **1,500 – 100,000 MHz**  
is **1.0 mW/cm<sup>2</sup>** with **averaging time < 30min**)

P: **0.00007 mW EIRP**  
(calculated from max AV field strength of 53.7 dBμV/m @3m)

G: **1** (Field Strength measurement result includes antenna gain)

D: Duty cycle: **1** (100%)

R: Distance in what the limit of S must be reached: **20 cm**  
(refer also to the manufacturers installation / user manual)

$$S = \frac{P \cdot G \cdot D}{4 \cdot \pi \cdot R^2} \Rightarrow \underline{S} = \frac{0,00007 \text{ mW} \cdot 1 \cdot 1}{4 \cdot \pi \cdot (20 \text{ cm})^2} = \underline{\underline{0,00000001 \frac{\text{mW}}{\text{cm}^2}}}$$

**Conclusion:** The maximum value of the calculated power density at the recommended minimum separation distance of 20 cm is well below the applicable limits.