

**Exposure limit according to §15.247(i)**

The Outdoor PIR Detector MP-902 PG2 is classified as a mobile device.

The FCC limit for power density for general population/uncontrolled exposure is  $f/1500$  mW/cm<sup>2</sup> for 300 – 1500 MHz frequency range:

$$P = 912.75/1500 = 0.61 \text{ mW/cm}^2$$

The power density **P (mW/cm<sup>2</sup>) =  $P_T / 4\pi r^2$**

$P_T$  is the transmitted power, which is equal to the peak transmitter output power 19.717 dBm plus maximum antenna gain -1 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 19.717 \text{ dBm} + (-1) \text{ dBi} = 18.717 \text{ dBm} = 74.4 \text{ mW}.$$

The power density at 20 cm (minimum safe distance, required for mobile devices), calculated as follows:

$$\text{Compliance with FCC limit: } 74.4 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.0148 \text{ mW/cm}^2 \ll 0.61 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.