

**Environmental evaluation and exposure limit according to FCC CFR 47part 1,
§1.1307, §1.1310**

The PGM Expander are classified as a mobile device. The PGM Expander includes transmitter operating according to FCC part 15 subpart C section 15.247 (FHSS)

The FCC limit for power density for general population/uncontrolled exposure is $f/1500 \text{ mW/cm}^2$ for 300 – 1500 MHz frequency range:

$$P = 902.25/1500 = 0.6 \text{ mW/cm}^2$$

The power density **$P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$**

P_T is the transmitted power, which is equal to the peak transmitter output power 1.84 dBm plus maximum antenna gain 0 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 19.67 \text{ dBm} + 0 \text{ dBi} = 19.67 \text{ dBm} = 92.68 \text{ mW}.$$

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

$$\text{Compliance with FCC limit: } 92.68 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.018 \text{ mW/cm}^2 \ll 0.6 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.

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EXPERTS IN GLOBAL COMPLIANCE SOLUTIONS



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