Exposure limit according to §15.247(i)

The vibration sensor is classified as a mobile device.

The FCC limit for power density for general population/uncontrolled exposure is 1 mW/cm^2 for 2.4 GHz.

The power density **P (mW/cm^2) = P_T / 4π r^2**

P_T is the transmitted power, which is equal to the peak transmitter output power 7.9 dBm plus maximum antenna gain 1 dBi, the maximum equivalent isotropically radiated power EIRP is

$$P_T = 7.9 \text{ dBm} + 1 \text{ dBi} = 8.9 \text{ dBm} = 7.8 \text{ mW}.$$

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

$$7.8 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.0016 \text{ mW/cm}^2 << 1 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.