9. RF Exposure Information:

Calculation for compliance with MPE requirements (47CFR2.1091) is done using a worst-case transmitter power of 250 mW, assumption of a unity gain antenna, and an exposure limit of 3 mW/cm^2 (f/300 mW/cm^2 at 20 cm per 47CFR1.1310) for general applications. This device is not carried or worn by the end user. It has an extremely low duty cycle and a low rate of transmission that dramatically reduces the average power level that could pose an exposure hazard.

During operation the device transmits 12 packets once every four hours, however the averaging interval specified in 47CFR1.1310 is 6 minutes. Each transmitted packet contains a total of 213 RF pulses, each having a width of 20 µs. Therefore the transmitter is on for 4.26 ms during each packet, and the worst-case power density assuming a 6-minute interval is,

$$250mW \times \frac{12\,packets}{6\,\min} \times \frac{213\,pulses}{packet} \times \frac{20\mu s}{pulse} \times \frac{1\,\min}{60\times10^6\,\mu s} \times \frac{1}{4\pi(20cm)^2} = 70.6\frac{nW}{cm^2}$$

This is well below the 3 mW/cm^2 limit.