

## Compliance with 47 CFR 15.247(i)

*“Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.”*

The EUT provides wireless control for an adjustable bed. It will be installed greater than 20 cm from the user's head or torso. However, due to its low output power, there is no restriction from placing it within 20cm of the user. The maximum antenna gain of the Inverted-F, PCB trace antenna is 2.5 dBi. The maximum peak conducted output power is 0.047 mW.

The maximum peak radiated power is 0.08 mW EIRP for FCC ID: LPM-9000A. The transmit frequency is 2405 to 2480MHz, therefore the EUT does not require routine SAR evaluation because it falls below the low power threshold of  $60/f(\text{GHz})\text{mW}$ . Please see this excerpt from KDB 447498 D01 Mobile Portable RF Exposure v05r01, Section 4.3.1, Item #1:

*“The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:*

*$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where*

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz*
- Power and distance are rounded to the nearest mW and mm before calculation*
- The result is rounded to one decimal place for comparison*
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below*

*The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.”*

Using the most conservative exposure condition (closest to the user), the applicant's wireless radio, FCC ID: LPM-9000A, is compliant with the requirements of FCC 15.247(i). Per KDB 447498 it is excluded from SAR testing and deemed compliant. Using the equation above:

$$(0.08\text{mW} / 5\text{mm}) * 2.48\text{GHz} = 0.04 \text{ which is } < 3.0 \text{ for 1-g SAR.}$$