

RF Exposure

The EUT is a handheld, battery operated, medical programmer that contains MICS and Bluetooth radios. It can be considered a mobile transmitter per 47 CFR 2.1091. It is not designed for body worn use.

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 Bluetooth antenna is etched onto the circuit board as a monopole antenna. It has -1.37 dBi of gain. The maximum peak conducted output power is 2.91 mW.

The maximum peak radiated power in the 2.4 GHz band is 2.12 mW eirp for FCC ID: LF597745. The transmit frequency is 2402 to 2480MHz, therefore the EUT does not require routine SAR evaluation nor MPE estimates because it falls below the low power threshold of $60/f(\text{GHz})\text{mW}$. Please see this excerpt from KDB 447498D01 Mobile Portable RF Exposure v04, item 2)(a)(i):

“a device may be used in portable exposure conditions with no restrictions on host platforms when either the source-based time-averaged output power is $\leq 60/f(\text{GHz})\text{mW}$ or all measured 1-g SAR are $< 0.4\text{W.kg.}$ ”

The applicant’s wireless radio, FCC ID: LF597745, is compliant with the requirements of FCC 15.247(i).

Compliance with 47 CFR 95.1221

“MedRadio medical implant or medical body-worn transmitters (as defined in appendix 1 to subpart E of part 95 of this chapter) are subject to the radiofrequency radiation exposure requirements specified in §§ 1.1307 and 2.1093 of this chapter, as appropriate...”

The device is not an implant, nor is it designed for body worn use so it is not subject to routine environment evaluation per 1.1307 and 2.1093.

The MICS antenna is a multi-turn helical antenna soldered into the PCB assembly. It has 0 dBi of gain. The maximum peak conducted output power is 64uW.

The maximum peak radiated power in the MICS band is 64uW eirp for FCC ID: LF597745. The operating band is 402 – 405 MHz, and. Therefore the EUT does not require routine SAR evaluation nor MPE estimates because it falls below the low power threshold of $60/f(\text{GHz})\text{mW}$. Please see this excerpt from KDB 447498D01 Mobile Portable RF Exposure v04, item 2)(a)(i):

“a device may be used in portable exposure conditions with no restrictions on host platforms when either the source-based time-averaged output power is $\leq 60/f(\text{GHz})\text{mW}$ or all measured 1-g SAR are $< 0.4\text{W.kg.}$ ”

The applicant’s wireless radio, FCC ID: LF597745, is compliant with the requirements of FCC 95I.