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 is a Bluetooth Low Energy transceiver contained within a host system of a hearing aid. It will be used within 20 cm to the head since it will be worn in the ear as a typical hearing aid is utilized. However, due to its low output power, there is no restriction from placing it within 20cm of the user. The maximum antenna gain of flex circuit trace dipole antenna is -2.0 dBi. The maximum peak conducted output power is 0.622 mW.

The maximum peak radiated power is 0.39 mW EIRP. The transmit frequency is 2402 MHz to 2480 MHz, therefore the EUT does not require routine SAR evaluation because it falls below the low power threshold. 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 ≤ 50 mm are determined by:*
>
> *[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where*
>
> *• f(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 ≤ 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: EOA-24HALOXF13, 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:

*(0.39mW / 5mm)*2.48GHz = 0.19 which is < 3.0 for 1-g SAR.*