RF Exposure Evaluation

FCC KDB 447898 D01 v05r02.

SAR test exclusion threshold formula according to KDB 447898 D01 is:

$$[(EIRP) / (d)] \cdot [\sqrt{f}] \leq 3.0$$

Where:
EIRP is *max. average radiated power of a channel, including tune-up tolerance, mW*
f is operating frequency, GHz
d is *min. test separation distance, mm*

The maximum measured peak conducted output power is 2.43 dBm. The antenna gain, G is 1.7 dBi. Therefore, the maximum calculated average EIRP is 4.13 dBm or 2.6 mW.

As declared by the Applicant, the minimum distance from antenna to user (antenna to breast) is 30 mm, refer Figure1 of this document. Also per applicant, user can use two pumps at the same time. Therefore, simultaneous operation was considered.

Therefore, the average EIRP is (2.6+2.6) = 5.2 mW (7.14 dBm).

At 30mm distance the condition for SAR exclusion threshold is:

$[5.2 / 30] \times \sqrt{2.480} = 0.27$ which is less than 3.

Therefore, SAR testing is not required as the SAR Test Exclusion Threshold condition is satisfied.

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Distance of Antenna to body – Sevena

Test separation Distance for Sevena:
The BLE antenna is 1.19 in / 30.3 mm from the surface of the flange at its closest point. See CAD image and measurement below (Figure 1)

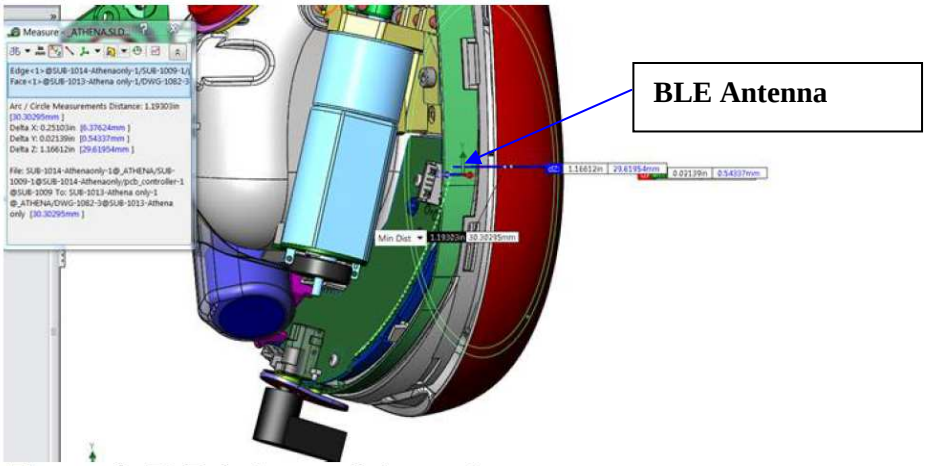

Figure 1. BLE Antenna distance to user

Figure 2. Side view of pump

In this view, the BLE antenna, shown in Figure 1 above with (A), is covered by the pump housing (white).

The flange is translucent and rests on the users breast tissue when pumping. The flange is shown as Red in Figure 1 CAD drawing.