



UBISENSE AMERICA LLC
999 18th Street
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United States

27th March 2023

Re: SAR / RF exposure exemption for SEASENSOR33

To Whom It May Concern:

We have prepared below a SAR / RF exposure exemption analysis for the Ubisense UBISENSOR30V1 device (FCC ID: SEASENSOR33).

Background

The UBISENSOR30V1 is a composite device consisting of a proprietary Part 15.249 conventional FM radio transceiver operating in the range 2401.75-2481.75MHz, and associated digital circuitry. The transceiver is connected via an antenna switch to two internal, permanently-affixed antennas. Only one of the antennas can be active at any one time.

For RF exposure purposes, the device is being certified as a portable device, in the General Population exposure environment.

Single source RF exemption

Per §1.1307(b)(3)(i)(A), if the available maximum time-averaged power of the device is no more than 1mW, then the RF source is exempt from SAR / RF exposure analysis, regardless of the rule part or device classification.

In the case of the UBISENSOR30V1 device, the maximum time-averaged e.i.r.p. of the device is:

$$\text{e.i.r.p. (dBm)} = -4.3\text{dBm} = 0.4\text{mW}$$

This is below the 1mW exemption threshold, and therefore the device is exempt from further SAR / RF exposure analysis by virtue of its low-output-power characteristics.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Andy Ward".

Dr Andy Ward FEng
Chief Technology Officer, Ubisense
27th March 2023