

RF Exposure Analysis for the EQTrackerV4

FCC ID: 2AXIALTRA072

Analysis for FCC portable use

The EQTrackerV4 equipment operates using a 917.5MHz transmitter.

Transmission occurs for 1.9mS max, every 200mS (defined by the product firmware)

Standalone SAR test exclusion considerations are defined in KDB 447498D01 (v06) Chapter 4.3.1 where the 1-g head or body and 10-g extremity SAR exclusion threshold is defined by the following formula:

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

- $f(\text{GHz})$ 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

The maximum specified conducted transmitter power is +17dBm (50.1mW)

For transmission of 1.9mS max, every 200mS:

Source-based, time-averaged power = $50.1 \times 1.9 / 200 = 0.48\text{mW}$

Applying this value in the given KDB 447498 D01 formula, and minimum separation distance of 5mm, the following results:

$(0.48\text{mW} / 5 \text{ mm}) \times \sqrt{0.917 \text{ GHz}} = 0.092$

(i.e.: ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR)

Conclusion

This demonstrates the EQTrackerV4 equipment meets the criteria for 1-g head/ body and 10-g extremity SAR test exemption at 5mm.

Signature:


Michael Thomasius
Chief Technology Officer (CTO)

Date: 06/10/2021
mm/dd/yyyy