

RF Exposure Analysis

FCC ID: KR5ALFA434

Analysis for FCC portable use

Standalone SAR test exclusion considerations are defined in KDB 447498D01 (v05r02) Chapter 4.3.1 where the 1-g head or body and 10-g extremity SAR exclusion threshold is defined by the following formula:

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

- f(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

For the ALFA434_Fobik the maximum conducted output power is +0.8dBm (1.2mW) at 433MHz.

Applying the above data using the given KDB 447498 D01 formula, and minimum separation distance of 5mm, the following results:

$$(1.2\text{mW} / 5 \text{ mm}) \times \sqrt{0.433 \text{ GHz}} = 0.16$$

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

Conclusion

This demonstrates the ALFA434_Fobik meets the criteria for 1-g head/ body and 10-g extremity SAR test exemption.

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