

RF Exposure Analysis

FCC ID: 2ARGD-NR1

Analysis for FCC portable use

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:

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

- $f(\text{GHz})$ 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

For the NR1, the maximum conducted output power is 4.5 dBm (2.8mW).

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

$$(2.8\text{mW} / 5 \text{ mm}) * \sqrt{2.45 \text{ GHz}} = 0.98 \text{ (i.e.: } \leq 7.5 \text{ for 10-g extremity SAR)}$$

Conclusion

This demonstrates the NR1 meets the criteria for 10-g SAR extremity, test exemption.

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