

Appendix IV RF Exposure evaluation

FCC ID: 2AF6B-10727

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison.

BLE:

Worse case output power is as below: [2480MHz: 2.33dBm]

Maximum output power is 2.33dBm (1.71 mW).

$$(1.71\text{mW} / 5\text{mm}) \cdot [\sqrt{2.480(\text{GHz})}] = 0.53 < 3.0 \text{ for 1-g SAR.}$$

Lora:

Worse case output power is as below: [915MHz: 10.60dBm]

Maximum output power is 10.60dBm (11.48 mW).

$$(11.48\text{mW} / 5\text{mm}) \cdot [\sqrt{0.915 (\text{GHz})}] = 2.20 < 3.0 \text{ for 1-g SAR.}$$

Then SAR evaluation is not required.

According to FCC Part 2.1093, this device is classified as a Portable Device. A portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.