

FCC ID: 2BG6M-8620

Portable device

According to §15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance V06

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

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

- 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

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Modulation	Channel Freq. (GHz)	Conduct ed power (dBm)	Conducte d power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculatio n	SAR Exclusion threshold	SAR test exclusion
LoRa	0.915	-10.97	0.08	-10±1	-9.00	0.13	<5	0.02408	3.00	YES

Note: $\text{dbm} = \text{dbuv/m} - 95.2 - 2.15 = 87.38 - 95.2 - 2.15 = -9.97 \text{dBm(ERP)}$, so the conduct peak power = $-9.97 - 1 = -10.97 \text{dBm}$

Conclusion:

For the max result : $0.02408 \leq \text{FCC Limit } 3.0$ for 1g SAR.