

FCC ID: 2ASTR-000B1AP01

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:

- $f(\text{GHz})$ 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

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

BLE

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
GFSK	2.402	3.9	2.45	3±1	4.00	2.51	<5	0.77860	3.00	YES

433M

Modulation	Frequency MHz	Output Power (dBuV/m)	Output Power (dBm)
FM	433.92	71.59	-28.31

Below 1GHz: $\text{dBm} = \text{dBuV/m} - 95.2 - 4.7$

Modulation	Channel Freq. (GHz)	Output Power (dBm)	Output 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
FM	0.434	-28.31	0.001476	-28±1	-27.00	0.001995	<5	0.000263	3.00	YES

Conclusion:

For the max result : $0.77860 < 3$, the SAR testing is not required.