

Portable device

According to §15.231 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.

Antenna Type: Spring antenna

Antenna Gain: 0.1 dBi

Transmit power:

Frequency (MHz)	EIRP power (dBuV/m)	EIRP power (dBm)	EIRP power (mW)
433.92	79.13	-16.13	0.0244

$\text{EIRP} = \text{E} - 104.8 + 20 \log(D)$

Maximum Permissible Exposure:

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	1g SAR Exclusion threshold	SAR test exclusion
ASK	433.92	-16.13	0.0244	-16 \pm 1	-15.0	0.032	<5	0.132	3.00	YES

Conclusion:

For the max result : $0.132 \leq 3.0$ for 1-g SAR, No SAR is required.



Signature:

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