

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

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f_{\text{(GHz)}}}] \leq 3.0$ 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
- The values 3.0 and 7.5 are referred to as numeric thresholds in step b)

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

Maximum measured transmitter power:

ZigBee:

Mode	Transmit Frequency (GHz)	Measured Power (dBm)	Tune-up power (dBm)	Max tune-up power(dBm)	Result calculation	1-g SAR
GFSK	2.405	4.46	-5±1	6	1.2340	3.00
	2.440	5.17	-5±1	6	1.2348	3.00
	2.480	6.35	-6±1	7	1.5785	3.00

Conclusion:

For the max result $1.5785 < 3.0$ for 1-g SAR extremity SAR, No SAR is required.

Sincerely,



Zhonglie Ge/Engineer
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