

5. RF EXPOSURE EVALUATION

5.1 FCC SAR test exclusion

5.1.1 Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ 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
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

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 5) in section 4.1 is applied to determine SAR test exclusion.

5.1.2 Measurement Result

Mode	Frequency (MHz)	Tune up Power		Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
		(dBm)	(mW)				
Bluetooth	2480	7.5	5.62	25	0.4	3.0	YES

Mode	Frequency (MHz)	Tune up Power		Distance (mm)	Calculated value	Threshold (10-g)	SAR Test Exclusion
		(dBm)	(mW)				
Bluetooth (Handheld)	2480	7.5	5.62	5	1.8	7.5	YES

Result: Compliant. The stand-alone SAR evaluation is not necessary.

Antenna position

