

§ 15.247(i) RF Exposure – SAR Exclusion

RF Exposure Requirements: §1.1307(b)(1) and §1.1307(b)(2): 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 levels in excess of the Commission's guidelines.

RF Radiation Exposure Exclusion Threshold: transmitting

§2.1093: As specified in this section, a portable device is defined as a device designed to be used so that the radiated structure(s) of the device is within 20 centimeters of the body of the user.

Calculations below are in accordance with KDB 447498 D01 General RF Exposure Guidance v06, Section 4.3 General SAR test exclusion guidance.

The SAR test exclusion thresholds are 3.0 for 1-g SAR and 7.5 for 10-g extremity SAR.

Test Results:

FCC										
Frequency (MHz)	Con. Pwr. (dBm)	Con. Pwr. (mW)	Ant. Gain (dBi)	Ant. Gain numeric	Total Pwr. (mW)	Calculated SAR Threshold	1.0-g SAR Limit	Margin	Separation Distance Declared (mm)	Result
2402	10.8	12.023	1	1.259	13.282	1.083	3.0	1.917	19	Pass

Per KDB 447498, Section 4.3.1 (a), applicable for 100 MHz to 6 GHz and test separation distances ≤ 50 mm:

$$\frac{\text{max. power of channel, including tuneup tolerance [mW]}}{\text{min. test separation distance [mm]}} * \sqrt{f \text{ [GHz]}} \leq 3.0 \text{ (1 - g SAR Limit)}$$

$$\frac{13.282 \text{ mW}}{19 \text{ mm}} * \sqrt{2.402} = 1.917 \leq 3.0 \text{ (1 - g SAR)}$$