

1) Standalone SAR test exclusion

According to 447498 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:

- a) 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR,}^{30} \text{ where}$$

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation³¹
- 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) below

According to the output power measurement, and the tune-up statement by manufacturer, the calculated value can be obtained.

Type	Test Frequency (MHz)	Minimum Separation Distance (mm)	Max. Output Power (dBm)	Output Power with tune up (dBm)	Output Power (mW)	calculated value	exclusion thresholds
WIFI 2.4G	2437	5.0	9.48	9.5	8.913	2.8	3
WIFI 5G U-NII 1	5200	5.0	7.68	8.0	6.310	2.9	3
WIFI 5G U-NII 3	5795	5.0	7.58	7.7	5.888	2.8	3
BT	2441	5.0	7.61	8.0	6.310	2.0	3

2) Simultaneous transmission SAR test exclusion

According to 447498 D01 General RF Exposure Guidance v06

When an antenna qualifies for the standalone SAR test exclusion of 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria:

- b) When an antenna qualifies for the standalone SAR test exclusion of 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria:³⁶

- 1) $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}/x] \text{ W/kg, for test separation distances } \leq 50 \text{ mm;}$
 where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.
- 2) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the *test separation distance* is > 50 mm.³⁷

The device cannot transmission simultaneously.

3) .Conclusion: No SAR is required.