

FCC ID: 2A6I2-P5RMT07

RF exposure evaluation

§ 2.1093 Radiofrequency radiation exposure evaluation: Portable Devices.

According to § 15.247(i) and § 1.1307b(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 guidance.

The 1-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, 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
- When the minimum test separation distance is < 5 mm, a distance of 5 mm according is applied to determine SAR test exclusion.
- The result is rounded to one decimal place for comparison
- GFSK

Modulation	Frequency (GHz)	Max. Power (dBm)	Tune up Power (dBm)	Max. Tune up Power (dBm)	Max. Tune up Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
GFSK	2.48	-2.09	-3 \pm 1	-2	0.63	5	0.20	3.0
5.8G WIFI	5.785	6.76	6 \pm 1	7	5.01	5	2.41	3.0

For the Max simultaneous transmission:

exclusion thresholds for 1-g SAR: 1.0

$$\text{BT+WIFI} = \text{BT}/\text{Limit} + \text{WIFI}/\text{Limit} \\ = 0.20/3 + 2.41/3 = 0.87$$

Conclusion:

For the max result : Max simultaneous transmission $0.87 \leq$ FCC Limit 1.0 for 1g SAR, Maximum emission for a single function $2.41 \leq$ FCC Limit 3.0 for 1g SAR