

FCC ID: 2ALVKHA-S100N

Portable device

According to §15.247(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

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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] * [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

f(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 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 is applied to determine SAR test exclusion. We use 5mm as separation distance to calculate.

Maximum measured transmitter power:

BT/BLE

	Channel Freq. (MHz)	Max Transmit Power (dBm)	Max tune-up power (dBm)	Result calculation	1-g SAR
GFSK	2402	-1.731	-1.0	0.246	3.0
	2441	-1.433	-1.0	0.248	3.0
	2480	-1.927	-1.0	0.250	3.0
pi/4-DQPSK	2402	-1.802	-1.0	0.246	3.0
	2441	-1.455	-1.0	0.248	3.0
	2480	-2.044	-2.0	0.199	3.0
8DPSK	2402	-1.876	-1.0	0.246	3.0
	2441	-1.442	-1.0	0.248	3.0
	2480	-2.043	-2.0	0.199	3.0
BLE(1M)	2402	2.628	3.0	0.618	3.0
	2440	2.999	3.0	0.623	3.0
	2480	2.450	3.0	0.628	3.0
BLE(2M)	2402	2.615	3.0	0.618	3.0
	2440	2.991	3.0	0.623	3.0
	2480	2.451	3.0	0.628	3.0

Conclusion:

For the max result : $0.63 \leq 3.0$ for 1-g SAR extremity SAR, No SAR is required.