

FCC ID:2A2DD-S1

Portable device

According to §15.247(e)(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 SAR 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

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

BLE:1M

Modulation	Channel Freq. (GHz)	Conduct ed power (dBm)	Conducte d power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	SAR Exclusion threshold	SAR test exclusion
GFSK	2.402	3.467	2.22	3±1	4.00	2.51	<5	0.77860	3.00	YES
	2.44	2.874	1.94	2±1	3.00	2.00	<5	0.62334	3.00	YES
	2.480	2.32	1.71	2±1	3.00	2.00	<5	0.62843	3.00	YES

BLE:2M

Modulation	Channel Freq. (GHz)	Conduct ed power (dBm)	Conducte d power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	SAR Exclusion threshold	SAR test exclusion
GFSK	2.402	3.457	2.22	3±1	4.00	2.51	<5	0.77860	3.00	YES
	2.44	2.907	1.95	2±1	3.00	2.00	<5	0.62334	3.00	YES
	2.480	2.331	1.71	2±1	3.00	2.00	<5	0.62843	3.00	YES

2.4GWIFI:

Modulation	Channel Freq. (GHz)	Conduct ed power (dBm)	Conducte d power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Distance (mm)	Result calculation	SAR Exclusion threshold	SAR test exclusion
802.11b	2.412	7.124	5.16	7±1	8.00	6.31	<5	1.95983	3.00	YES
	2.437	7.797	6.02	7±1	8.00	6.31	<5	1.96996	3.00	YES
	2.462	7.086	5.11	7±1	8.00	6.31	<5	1.98004	3.00	YES
802.11g	2.412	7.05	5.07	7±1	8.00	6.31	<5	1.95983	3.00	YES
	2.437	7.54	5.68	7±1	8.00	6.31	<5	1.96996	3.00	YES
	2.462	7.981	6.28	7±1	8.00	6.31	<5	1.98004	3.00	YES
802.11n(HT20)	2.412	7.964	6.26	7±1	8.00	6.31	<5	1.95983	3.00	YES
	2.437	7.717	5.91	7±1	8.00	6.31	<5	1.96996	3.00	YES
	2.462	7.113	5.14	7±1	8.00	6.31	<5	1.98004	3.00	YES

Conclusion:

BLE+ WIFI: Σ MPE Ratio =: $0.77860/3 + 1.98004/3 = 0.9195 \leq$ FCC Limit 3.0 for 1g SAR.