

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.

BT:

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted 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	4.161	2.61	4±1	5.00	3.16	<5	0.98020	3.00	YES
	2.441	4.595	2.88	4±1	5.00	3.16	<5	0.98813	3.00	YES
	2.480	4.816	3.03	4±1	5.00	3.16	<5	0.99599	3.00	YES
$\pi/4$ -DQPSK	2.402	3.830	2.42	4±1	5.00	3.16	<5	0.98020	3.00	YES
	2.441	4.211	2.64	4±1	5.00	3.16	<5	0.98813	3.00	YES
	2.480	4.420	2.77	4±1	5.00	3.16	<5	0.99599	3.00	YES
8DPSK	2.402	3.617	2.30	4±1	5.00	3.16	<5	0.98020	3.00	YES
	2.441	3.991	2.51	4±1	5.00	3.16	<5	0.98813	3.00	YES
	2.480	4.192	2.63	4±1	5.00	3.16	<5	0.99599	3.00	YES

BLE:

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted 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	-4.245	0.38	-4±1	-3.00	0.50	<5	0.15535	3.00	YES
	2.44	-4.718	0.34	-4±1	-3.00	0.50	<5	0.15658	3.00	YES
	2.480	-4.726	0.34	-4±1	-3.00	0.50	<5	0.15785	3.00	YES

WIFI:

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted 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	8.80	7.59	8±1	9.00	7.94	<5	2.46728	3.00	YES
	2.437	8.20	6.61	8±1	9.00	7.94	<5	2.48003	3.00	YES
	2.462	8.90	7.76	8±1	9.00	7.94	<5	2.49272	3.00	YES
802.11g	2.412	8.50	7.08	8±1	9.00	7.94	<5	2.46728	3.00	YES
	2.437	8.60	7.24	8±1	9.00	7.94	<5	2.48003	3.00	YES
	2.462	8.80	7.59	8±1	9.00	7.94	<5	2.49272	3.00	YES
802.11n20	2.412	8.20	6.61	8±1	9.00	7.94	<5	2.46728	3.00	YES
	2.437	8.20	6.61	8±1	9.00	7.94	<5	2.48003	3.00	YES
	2.462	8.00	6.31	8±1	9.00	7.94	<5	2.49272	3.00	YES
802.11n40	2.422	7.60	5.75	7±1	8.00	6.31	<5	1.96389	3.00	YES
	2.437	7.30	5.37	7±1	8.00	6.31	<5	1.96996	3.00	YES
	2.452	7.50	5.62	7±1	8.00	6.31	<5	1.97601	3.00	YES

Conclusion:

For the max result : 2.49272W/Kg ≤ FCC Limit 3.0W/Kg for 1g SAR.

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Signature:

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