

FCC ID: 2ATAL-WS-RE01

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: Left

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 calculatio n	SAR Exclusion threshold	SAR test exclusion
GFSK	2.402	4.801	3.02	4±1	5	3.16	<5	0.98020	3.00	YES
	2.441	4.885	3.08	4±1	5	3.16	<5	0.98813	3.00	YES
	2.480	4.41	2.76	4±1	5	3.16	<5	0.99599	3.00	YES
π/4-DQPSK	2.402	5.261	3.36	5±1	6	3.98	<5	1.23400	3.00	YES
	2.441	5.551	3.59	5±1	6	3.98	<5	1.24398	3.00	YES
	2.480	5.226	3.33	5±1	6	3.98	<5	1.25388	3.00	YES
8-DPSK	2.402	5.525	3.57	5±1	6	3.98	<5	1.23400	3.00	YES
	2.441	5.771	3.78	5±1	6	3.98	<5	1.24398	3.00	YES
	2.480	5.563	3.60	5±1	6	3.98	<5	1.25388	3.00	YES

BLE:Left

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 calculatio n	SAR Exclusion threshold	SAR test exclusion
GFSK (1M)	2.402	3.342	2.16	3±1	4	2.51	<5	0.77860	3.00	YES
	2.440	3.616	2.30	3±1	4	2.51	<5	0.78474	3.00	YES
	2.480	3.665	2.33	3±1	4	2.51	<5	0.79114	3.00	YES
GFSK (2M)	2.402	3.705	2.35	3.5±1	4.5	2.82	<5	0.87361	3.00	YES
	2.440	4.174	2.61	3.5±1	4.5	2.82	<5	0.88049	3.00	YES
	2.480	4.332	2.71	3.5±1	4.5	2.82	<5	0.88768	3.00	YES

BT: Right

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 calculatio n	SAR Exclusion threshold	SAR test exclusion
GFSK	2.402	5.096	3.23	4.5±1	5.5	3.55	<5	1.09981	3.00	YES
	2.441	4.204	2.63	4.5±1	5.5	3.55	<5	1.10870	3.00	YES
	2.480	3.719	2.35	4.5±1	5.5	3.55	<5	1.11752	3.00	YES
π/4-DQPSK	2.402	4.83	3.04	4±1	5	3.16	<5	0.98020	3.00	YES
	2.441	4.939	3.12	4±1	5	3.16	<5	0.98813	3.00	YES
	2.480	4.585	2.87	4±1	5	3.16	<5	0.99599	3.00	YES
8-DPSK	2.402	4.848	3.05	4±1	5	3.16	<5	0.98020	3.00	YES
	2.441	4.87	3.07	4±1	5	3.16	<5	0.98813	3.00	YES
	2.480	4.537	2.84	4±1	5	3.16	<5	0.99599	3.00	YES

BLE

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 calculatio n	SAR Exclusion threshold	SAR test exclusion
GFSK (1M)	2.402	5.342	3.42	4.5±1	5.5	3.55	<5	1.09981	3.00	YES
	2.440	5.156	3.28	4.5±1	5.5	3.55	<5	1.10847	3.00	YES
	2.480	4.774	3.00	4.5±1	5.5	3.55	<5	1.11752	3.00	YES
GFSK (2M)	2.402	5.185	3.30	4.5±1	5.5	3.55	<5	1.09981	3.00	YES
	2.44	4.972	3.14	4.5±1	5.5	3.55	<5	1.10847	3.00	YES
	2.480	4.714	2.96	4.5±1	5.5	3.55	<5	1.11752	3.00	YES

Conclusion:

For the max result : $1.25388 \leq 3.0$ for 1g SAR, No SAR is required.

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Signature:

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