

FCC ID: 2ATAL-WS-07A

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)	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 Left	2.402	-3.95	0.40	-4±1	-3	0.50	<5	0.15535	3.00	YES
	2.44	-3.54	0.44	-4±1	-3	0.50	<5	0.15658	3.00	YES
	2.480	-4.06	0.39	-4±1	-3	0.50	<5	0.15785	3.00	YES
GFSK Right	2.402	-3.88	0.41	-4±1	-3	0.50	<5	0.15535	3.00	YES
	2.44	-3.44	0.45	-4±1	-3	0.50	<5	0.15658	3.00	YES
	2.480	-3.98	0.40	-4±1	-3	0.50	<5	0.15785	3.00	YES
π/4-DQPSK Left	2.402	-1.99	0.63	-2±1	-1	0.79	<5	0.24622	3.00	YES
	2.44	-1.65	0.68	-2±1	-1	0.79	<5	0.24816	3.00	YES
	2.480	-2.04	0.63	-2±1	-1	0.79	<5	0.25018	3.00	YES
π/4-DQPSK Right	2.402	-2.03	0.63	-2±1	-1	0.79	<5	0.24622	3.00	YES
	2.44	-1.5	0.71	-2±1	-1	0.79	<5	0.24816	3.00	YES
	2.480	-2.01	0.63	-2±1	-1	0.79	<5	0.25018	3.00	YES
8-DPSK Left	2.402	-1.76	0.67	-1±1	0	1.00	<5	0.30997	3.00	YES
	2.44	-1.10	0.78	-1±1	0	1.00	<5	0.31241	3.00	YES
	2.480	-1.54	0.70	-1±1	0	1.00	<5	0.31496	3.00	YES
8-DPSK Right	2.402	-1.65	0.68	-1±1	0	1.00	<5	0.30997	3.00	YES
	2.44	-0.95	0.80	-1±1	0	1.00	<5	0.31241	3.00	YES
	2.480	-1.45	0.72	-1±1	0	1.00	<5	0.31496	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 Left	2.402	-4.01	0.40	-4±1	3	2.00	<5	0.61847	3.00	YES
	2.44	-3.59	0.44	-4±1	3	2.00	<5	0.62334	3.00	YES
	2.480	-4.13	0.39	-4±1	3	2.00	<5	0.62843	3.00	YES
GFSK Right	2.402	-4.08	0.39	-4±1	3	2.00	<5	0.61847	3.00	YES
	2.44	-3.58	0.44	-4±1	3	2.00	<5	0.62334	3.00	YES
	2.480	-4.12	0.39	-4±1	3	2.00	<5	0.62843	3.00	YES

Conclusion:

For the max result : $0.62843\text{W/Kg} \leq 3.0$ for 1g SAR, No SAR is required.

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