

FCC ID:2BNJV-ZC81

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.

EDR:

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	3.219	2.10	3±1	4.00	2.51	<5	0.77860	3.00	YES
	2.441	3.253	2.11	3±1	4.00	2.51	<5	0.78490	3.00	YES
	2.480	3.219	2.10	3±1	4.00	2.51	<5	0.79114	3.00	YES
π /4DQPSK	2.402	2.057	1.61	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.441	1.947	1.57	1±1	2.00	1.58	<5	0.49524	3.00	YES
	2.480	2.069	1.61	2±1	3.00	2.00	<5	0.62843	3.00	YES
8DQPSK	2.402	2.879	1.94	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.441	2.902	1.95	2±1	3.00	2.00	<5	0.62347	3.00	YES
	2.480	2.84	1.92	2±1	3.00	2.00	<5	0.62843	3.00	YES

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	2.174	1.65	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.44	2.133	1.63	2±1	3.00	2.00	<5	0.62334	3.00	YES
	2.480	2.591	1.82	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	2.056	1.61	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.44	2.059	1.61	2±1	3.00	2.00	<5	0.62334	3.00	YES
	2.480	2.529	1.79	2±1	3.00	2.00	<5	0.62843	3.00	YES

5GWIFI:

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
802.11a	5.745	6.867	4.86	6.5±0.5	7.00	5.01	<5	2.40256	3.00	YES
	5.785	6.829	4.82	6.5±0.5	7.00	5.01	<5	2.41091	3.00	YES
	5.825	7.386	5.48	7±0.5	7.50	5.62	<5	2.71443	3.00	YES
802.11ac 20	5.745	7.367	5.45	7±0.5	7.50	5.62	<5	2.69572	3.00	YES
	5.785	7.166	5.21	7±0.5	7.50	5.62	<5	2.70509	3.00	YES
	5.825	7.354	5.44	7±0.5	7.50	5.62	<5	2.71443	3.00	YES
802.11ac 40	5.755	6.9	4.90	6.5±0.5	7.00	5.01	<5	2.40465	3.00	YES
	5.795	7.988	6.29	7.4±0.5	7.90	6.17	<5	2.96863	3.00	YES
802.11n(HT20)	5.745	6.733	4.71	6.5±0.5	7.00	5.01	<5	2.40256	3.00	YES
	5.785	6.86	4.85	6.5±0.5	7.00	5.01	<5	2.41091	3.00	YES
	5.825	7.455	5.57	7±0.5	7.50	5.62	<5	2.71443	3.00	YES
802.11n(HT40)	5.755	7.137	5.17	7±0.5	7.50	5.62	<5	2.69807	3.00	YES
	5.795	7.485	5.60	7±0.5	7.50	5.62	<5	2.70743	3.00	YES
802.11ax 20	5.745	7.181	5.23	7±0.5	7.50	5.62	<5	2.69572	3.00	YES
	5.785	7.088	5.11	6.5±0.5	7.00	5.01	<5	2.41091	3.00	YES
	5.825	7.506	5.63	7±0.5	7.50	5.62	<5	2.71443	3.00	YES
802.11ax 40	5.755	7.963	6.26	7.4±0.5	7.90	6.17	<5	2.95837	3.00	YES
	5.795	7.811	6.04	7.3±0.5	7.80	6.03	<5	2.90106	3.00	YES

Conclusion:

For the max result : $2.95837 \leq$ FCC Limit 3.0 for 1g SAR.