

FCC ID:2BLRA-NA01**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	1.993	1.58	1±1	2.00	1.58	<5	0.49127	3.00	YES
	2.441	2.176	1.65	2±1	3.00	2.00	<5	0.62347	3.00	YES
	2.480	2.175	1.65	2±1	3.00	2.00	<5	0.62843	3.00	YES
π /4DQPSK	2.402	2.996	1.99	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.441	3.143	2.06	3±1	4.00	2.51	<5	0.78490	3.00	YES
	2.480	3.143	2.06	3±1	4.00	2.51	<5	0.79114	3.00	YES
8DQPSK	2.402	3.264	2.12	3±1	4.00	2.51	<5	0.77860	3.00	YES
	2.441	3.481	2.23	3±1	4.00	2.51	<5	0.78490	3.00	YES
	2.480	3.466	2.22	3±1	4.00	2.51	<5	0.79114	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	2.488	1.77	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.44	2.644	1.84	2±1	3.00	2.00	<5	0.62334	3.00	YES
	2.480	2.69	1.86	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	2.49	1.77	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.44	2.511	1.78	2±1	3.00	2.00	<5	0.62334	3.00	YES
	2.480	2.887	1.94	2±1	3.00	2.00	<5	0.62843	3.00	YES

2.4GWIFI:ANT1

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	5.201	3.31	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	5.511	3.56	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	5.778	3.78	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11g	2.412	5.473	3.53	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	6.362	4.33	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	6.508	4.48	6±1	7.00	5.01	<5	1.57280	3.00	YES
802.11n(HT20)	2.412	4.807	3.02	4±1	5.00	3.16	<5	0.98224	3.00	YES
	2.437	6.344	4.31	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	5.64	3.66	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11n(HT40)	2.422	5.55	3.59	5±1	6.00	3.98	<5	1.23913	3.00	YES
	2.437	5.974	3.96	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.452	6.202	4.17	6±1	7.00	5.01	<5	1.56960	3.00	YES
802.11ax(HT20)	2.412	5.897	3.89	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	5.781	3.79	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	6.35	4.32	6±1	7.00	5.01	<5	1.57280	3.00	YES
802.11ax(HT40)	2.422	5.698	3.71	5±1	6.00	3.98	<5	1.23913	3.00	YES
	2.437	6.232	4.20	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.452	6.438	4.40	6±1	7.00	5.01	<5	1.56960	3.00	YES

2.4GWIFI:ANT2

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	5	3.16	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	4.404	2.76	4±1	5.00	3.16	<5	0.98732	3.00	YES
	2.462	4.714	2.96	4±1	5.00	3.16	<5	0.99237	3.00	YES
802.11g	2.412	6.041	4.02	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	6.961	4.97	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	5.961	3.95	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11n(HT20)	2.412	5.275	3.37	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	6.225	4.19	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	5.4	3.47	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11n(HT40)	2.422	5.462	3.52	5±1	6.00	3.98	<5	1.23913	3.00	YES
	2.437	5.985	3.97	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.452	6.337	4.30	6±1	7.00	5.01	<5	1.56960	3.00	YES
802.11ax(HT20)	2.412	5.595	3.63	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	5.489	3.54	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	6.328	4.29	6±1	7.00	5.01	<5	1.57280	3.00	YES
802.11ax(HT40)	2.422	5.789	3.79	5±1	6.00	3.98	<5	1.23913	3.00	YES
	2.437	6.211	4.18	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.452	6.466	4.43	6±1	7.00	5.01	<5	1.56960	3.00	YES

2.4GWIFI:ANT1+ANT2

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
802.11n(HT20)	2.412	8.058	6.39	8±1	9.00	7.94	<5	2.46728	3.00	YES
	2.437	9.295	8.50	8.5±1	9.50	8.91	<5	2.78264	3.00	YES
	2.462	8.532	7.13	8±1	9.00	7.94	<5	2.49272	3.00	YES
802.11n(HT40)	2.422	8.517	7.11	8±1	9.00	7.94	<5	2.47239	3.00	YES
	2.437	8.99	7.93	8±1	9.00	7.94	<5	2.48003	3.00	YES
	2.452	9.28	8.47	8.5±1	9.50	8.91	<5	2.79120	3.00	YES
802.11ax(HT20)	2.412	8.759	7.51	8±1	9.00	7.94	<5	2.46728	3.00	YES
	2.437	8.648	7.32	8±1	9.00	7.94	<5	2.48003	3.00	YES
	2.462	9.349	8.61	8.5±1	9.50	8.91	<5	2.79688	3.00	YES
802.11ax(HT40)	2.422	8.754	7.51	8±1	9.00	7.94	<5	2.47239	3.00	YES
	2.437	9.232	8.38	8.5±1	9.50	8.91	<5	2.78264	3.00	YES
	2.452	9.462	8.83	8.5±1	9.50	8.91	<5	2.79120	3.00	YES

Conclusion:

For the max result : $2.79688 \leq \text{FCC Limit } 3.0$ for 1g SAR

WiFi 2.4G ANT 2 and BT Simultaneous Transmission: $1.56960 + 0.79114 = 2.36074 \leq \text{FCC Limit } 3.0$ for 1g SAR

Note: WiFi 2.4G ANT 1 and BT share the same antenna, and cannot transmit simultaneously.

WiFi 2.4G ANT 2 and BT can transmit simultaneously