

FCC ID: 2BVTM-TY-D1S**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.

BLE1M:

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	1.384	1.38	1±1	2.00	1.58	<5	0.49127	3.00	YES
	2.441	1.535	1.42	1±1	2.00	1.58	<5	0.49524	3.00	YES
	2.480	1.087	1.28	1±1	2.00	1.58	<5	0.49918	3.00	YES

BLE2M:

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	1.489	1.41	1±1	2.00	1.58	<5	0.49127	3.00	YES
	2.441	1.67	1.47	1±1	2.00	1.58	<5	0.49524	3.00	YES
	2.480	1.232	1.33	1±1	2.00	1.58	<5	0.49918	3.00	YES

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 calculatio n	SAR Exclusion threshold	SAR test exclusion
GFSK	2.402	1.637	1.46	1±1	2.00	1.58	<5	0.49127	3.00	YES
	2.441	1.796	1.51	1±1	2.00	1.58	<5	0.49524	3.00	YES
	2.480	1.36	1.37	1±1	2.00	1.58	<5	0.49918	3.00	YES
π /4DQPSK	2.402	2.366	1.72	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.441	2.487	1.77	2±1	3.00	2.00	<5	0.62347	3.00	YES
	2.480	2.04	1.60	2±1	3.00	2.00	<5	0.62843	3.00	YES
8DQPSK	2.402	2.651	1.84	2±1	3.00	2.00	<5	0.61847	3.00	YES
	2.441	2.778	1.90	2±1	3.00	2.00	<5	0.62347	3.00	YES
	2.480	2.25	1.68	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	6.134	4.11	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	5.852	3.85	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	5.718	3.73	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11g	2.412	6.342	4.31	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	5.931	3.92	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	5.954	3.94	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11n(H T20)	2.412	5.832	3.83	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	6.036	4.01	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	5.957	3.94	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11n(H T40)	2.422	5.874	3.87	5±1	6.00	3.98	<5	1.23913	3.00	YES
	2.437	5.618	3.65	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.452	5.956	3.94	5±1	6.00	3.98	<5	1.24678	3.00	YES
802.11ax(HT20)	2.412	6.622	4.59	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	6.136	4.11	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	6.332	4.30	6±1	7.00	5.01	<5	1.57280	3.00	YES
802.11ax(HT40)	2.422	5.814	3.81	5±1	6.00	3.98	<5	1.23913	3.00	YES
	2.437	5.612	3.64	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.452	5.881	3.87	5±1	6.00	3.98	<5	1.24678	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	5.407	3.47	5±1	6.00	3.98	<5	1.23657	3.00	YES
	2.437	5.938	3.92	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	5.916	3.90	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11g	2.412	6.007	3.99	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	6.639	4.61	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	6.087	4.06	6±1	7.00	5.01	<5	1.57280	3.00	YES
802.11n(H T20)	2.412	6.134	4.11	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	5.696	3.71	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.462	5.199	3.31	5±1	6.00	3.98	<5	1.24932	3.00	YES
802.11n(H T40)	2.422	6.358	4.32	6±1	7.00	5.01	<5	1.55997	3.00	YES
	2.437	6.005	3.99	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.452	5.697	3.71	5±1	6.00	3.98	<5	1.24678	3.00	YES
802.11ax(HT20)	2.412	6.272	4.24	6±1	7.00	5.01	<5	1.55675	3.00	YES
	2.437	6.348	4.31	6±1	7.00	5.01	<5	1.56480	3.00	YES
	2.462	6.479	4.45	6±1	7.00	5.01	<5	1.57280	3.00	YES
802.11ax(HT40)	2.422	6.288	4.25	6±1	7.00	5.01	<5	1.55997	3.00	YES
	2.437	5.878	3.87	5±1	6.00	3.98	<5	1.24296	3.00	YES
	2.452	5.673	3.69	5±1	6.00	3.98	<5	1.24678	3.00	YES

5.2GWIFI

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 calculatio n	SAR Exclusion threshold	SAR test exclusion
802.11a20	5.18	4.286	2.68	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.537	2.84	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.766	3.00	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11ac(V HT20)	5.18	4.426	2.77	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.583	2.87	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.521	2.83	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11ac(V HT40)	5.19	4.481	2.81	4±1	5.00	3.16	<5	1.44083	3.00	YES
	5.23	4.558	2.86	4±1	5.00	3.16	<5	1.44637	3.00	YES
802.11n(H T20)	5.18	4.34	2.72	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.473	2.80	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.453	2.79	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11n(H T40)	5.19	4.528	2.84	4±1	5.00	3.16	<5	1.44083	3.00	YES
	5.23	4.243	2.66	4±1	5.00	3.16	<5	1.44637	3.00	YES
802.11ax(H E20)	5.18	4.284	2.68	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.486	2.81	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.358	2.73	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11ax(H E40)	5.19	4.343	2.72	4±1	5.00	3.16	<5	1.44083	3.00	YES
	5.23	4.462	2.79	4±1	5.00	3.16	<5	1.44637	3.00	YES

5.2GWIFI

ANT 2:

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
802.11a20	5.18	4.304	2.69	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.781	3.01	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.726	2.97	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11ac(V HT20)	5.18	4.483	2.81	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.573	2.87	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.707	2.96	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11ac(V HT40)	5.19	4.135	2.59	4±1	5.00	3.16	<5	1.44083	3.00	YES
	5.23	4.564	2.86	4±1	5.00	3.16	<5	1.44637	3.00	YES
802.11n(H T20)	5.18	4.579	2.87	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.56	2.86	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.199	2.63	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11n(H T40)	5.19	4.797	3.02	4±1	5.00	3.16	<5	1.44083	3.00	YES
	5.23	4.36	2.73	4±1	5.00	3.16	<5	1.44637	3.00	YES
802.11ax(H E20)	5.18	4.329	2.71	4±1	5.00	3.16	<5	1.43944	3.00	YES
	5.2	4.388	2.75	4±1	5.00	3.16	<5	1.44222	3.00	YES
	5.24	4.468	2.80	4±1	5.00	3.16	<5	1.44776	3.00	YES
802.11ax(H E40)	5.19	3.929	2.47	3±1	4.00	2.51	<5	1.14449	3.00	YES
	5.23	4.256	2.66	4±1	5.00	3.16	<5	1.44637	3.00	YES

5.8GWIFI

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
802.11a20	5.745	3.842	2.42	3±1	4.00	2.51	<5	1.20413	3.00	YES
	5.785	3.989	2.51	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	3.795	2.40	3±1	4.00	2.51	<5	1.21249	3.00	YES
802.11ac(V HT20)	5.745	3.825	2.41	3±1	4.00	2.51	<5	1.20413	3.00	YES
	5.785	3.718	2.35	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	4.472	2.80	4±1	5.00	3.16	<5	1.52643	3.00	YES
802.11ac(V HT40)	5.755	3.94	2.48	3±1	4.00	2.51	<5	1.20518	3.00	YES
	5.795	3.91	2.46	3±1	4.00	2.51	<5	1.20936	3.00	YES
802.11n(H T20)	5.745	4.246	2.66	4±1	5.00	3.16	<5	1.51592	3.00	YES
	5.785	4.157	2.60	4±1	5.00	3.16	<5	1.52118	3.00	YES
	5.825	4.099	2.57	4±1	5.00	3.16	<5	1.52643	3.00	YES
802.11n(H T40)	5.755	4.03	2.53	4±1	5.00	3.16	<5	1.51723	3.00	YES
	5.795	3.972	2.50	3±1	4.00	2.51	<5	1.20936	3.00	YES
802.11ax(H E20)	5.745	3.579	2.28	3±1	4.00	2.51	<5	1.20413	3.00	YES
	5.785	3.536	2.26	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	4.361	2.73	4±1	5.00	3.16	<5	1.52643	3.00	YES
802.11ax(H E40)	5.755	3.796	2.40	3±1	4.00	2.51	<5	1.20518	3.00	YES
	5.795	3.803	2.40	3±1	4.00	2.51	<5	1.20936	3.00	YES

5.8GWIFI

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
802.11a20	5.745	3.857	2.43	3±1	4.00	2.51	<5	1.20413	3.00	YES
	5.785	3.9	2.45	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	3.854	2.43	3±1	4.00	2.51	<5	1.21249	3.00	YES
802.11ac(V HT20)	5.745	4.222	2.64	4±1	5.00	3.16	<5	1.51592	3.00	YES
	5.785	3.721	2.36	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	4.132	2.59	4±1	5.00	3.16	<5	1.52643	3.00	YES
802.11ac(V HT40)	5.755	3.851	2.43	3±1	4.00	2.51	<5	1.20518	3.00	YES
	5.795	3.685	2.34	3±1	4.00	2.51	<5	1.20936	3.00	YES
802.11n(H T20)	5.745	3.827	2.41	3±1	4.00	2.51	<5	1.20413	3.00	YES
	5.785	3.649	2.32	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	4.026	2.53	4±1	5.00	3.16	<5	1.52643	3.00	YES
802.11n(H T40)	5.755	3.988	2.50	3±1	4.00	2.51	<5	1.20518	3.00	YES
	5.795	3.807	2.40	3±1	4.00	2.51	<5	1.20936	3.00	YES
802.11ax(H E20)	5.745	4.122	2.58	4±1	5.00	3.16	<5	1.51592	3.00	YES
	5.785	3.699	2.34	3±1	4.00	2.51	<5	1.20832	3.00	YES
	5.825	3.931	2.47	3±1	4.00	2.51	<5	1.21249	3.00	YES
802.11ax(H E40)	5.755	3.65	2.32	3±1	4.00	2.51	<5	1.20518	3.00	YES
	5.795	3.461	2.22	3±1	4.00	2.51	<5	1.20936	3.00	YES

Conclusion:

For the max result : $1.57280 \leq \text{FCC Limit } 3.0 \text{ for } 1\text{g SAR}.$