

FCC ID: 2A6VN-CAST001

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(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.

2.4GWIFI :

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
802.11b	2.412	7.566	5.71	7.5±0.5	8.00	6.31	<5	1.95983	3.00	YES
	2.437	7.267	5.33	7.5±0.5	8.00	6.31	<5	1.96996	3.00	YES
	2.462	7.582	5.73	7.5±0.5	8.00	6.31	<5	1.98004	3.00	YES
802.11g	2.412	6.853	4.85	7±0.5	7.50	5.62	<5	1.74670	3.00	YES
	2.437	6.395	4.36	7±0.5	7.50	5.62	<5	1.75573	3.00	YES
	2.462	6.838	4.83	7±0.5	7.50	5.62	<5	1.76471	3.00	YES
802.11n(HT20)	2.412	6.801	4.79	7±0.5	7.50	5.62	<5	1.74670	3.00	YES
	2.437	6.666	4.64	7±0.5	7.50	5.62	<5	1.75573	3.00	YES
	2.462	6.575	4.54	7±0.5	7.50	5.62	<5	1.76471	3.00	YES
802.11(HT40)	2.422	5.533	3.58	5.5±0.5	6.00	3.98	<5	1.23913	3.00	YES
	2.437	5.447	3.51	5.5±0.5	6.00	3.98	<5	1.24296	3.00	YES
	2.452	5.344	3.42	5.5±0.5	6.00	3.98	<5	1.24678	3.00	YES

Conclusion:

For the max result : 1.98004 ≤ FCC Limit 3.0 for 1g SAR.

5G WIFI :

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	5.180	7.405	5.50	7.5±0.5	8.00	6.31	<5	2.87207	3.00	YES
	5.200	7.6	5.75	7.5±0.5	8.00	6.31	<5	2.87761	3.00	YES
	5.240	7.567	5.71	7.5±0.5	8.00	6.31	<5	2.88865	3.00	YES
802.11ac20	5.180	7.818	6.05	7.5±0.5	8.00	6.31	<5	2.87207	3.00	YES
	5.200	7.172	5.21	7.5±0.5	8.00	6.31	<5	2.87761	3.00	YES
	5.240	7.394	5.49	7.5±0.5	8.00	6.31	<5	2.88865	3.00	YES
802.11ac40	5.190	6.554	4.52	7±0.5	7.50	5.62	<5	2.56220	3.00	YES
	5.230	6.815	4.80	7±0.5	7.50	5.62	<5	2.57206	3.00	YES
802.11ac80	5.210	5.26	3.36	5.5±0.5	6.00	3.98	<5	1.81739	3.00	YES
802.11n(HT20)	5.180	7.291	5.36	7.5±0.5	8.00	6.31	<5	2.87207	3.00	YES
	5.200	7.685	5.87	7.5±0.5	8.00	6.31	<5	2.87761	3.00	YES
	5.240	7.753	5.96	7.5±0.5	8.00	6.31	<5	2.88865	3.00	YES
802.11n(HT40)	5.190	6.793	4.78	7±0.5	7.50	5.62	<5	2.562204	3.00	YES
	5.230	6.686	4.66	7±0.5	7.50	5.62	<5	2.572058	3.00	YES

Conclusion:

For the max result : $2.88865 \leq \text{FCC Limit } 3.0$ for 1g SAR.

5G WIFI :

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	5.745	7.352	5.44	7.0±0.5	7.50	5.62	<5	2.69572	3.00	YES
	5.785	7.587	5.74	7.2±0.5	7.70	5.89	<5	2.83258	3.00	YES
	5.825	7.346	5.43	7.0±0.5	7.50	5.62	<5	2.71443	3.00	YES
802.11ac20	5.745	7.12	5.15	7.0±0.5	7.50	5.62	<5	2.69572	3.00	YES
	5.785	7.838	6.08	7.4±0.5	7.90	6.17	<5	2.96607	3.00	YES
	5.825	7.649	5.82	7.2±0.5	7.70	5.89	<5	2.84235	3.00	YES
802.11ac40	5.755	6.225	4.19	7±0.5	7.50	5.62	<5	2.69807	3.00	YES
	5.795	6.693	4.67	7±0.5	7.50	5.62	<5	2.70743	3.00	YES
802.11ac80	5.775	5.223	3.33	5.5±0.5	6.00	3.98	<5	1.91340	3.00	YES
802.11n(HT20)	5.745	7.583	5.73	7.2±0.5	7.70	5.89	<5	2.82277	3.00	YES
	5.785	7.13	5.16	7.0±0.5	7.50	5.62	<5	2.70509	3.00	YES
	5.825	7.373	5.46	7.0±0.5	7.50	5.62	<5	2.71443	3.00	YES
802.11n(HT40)	5.755	6.411	4.38	6.5±0.5	7.00	5.01	<5	2.40465	3.00	YES
	5.795	6.607	4.58	7±0.5	7.50	5.62	<5	2.70743	3.00	YES

Conclusion:

For the max result : $2.96607 \leq \text{FCC Limit } 3.0$ for 1g SAR.

Note: 2.4g WiFi and 5G WiFi do not support simultaneous transmission.