

8 CONDUCTED RF OUPUT POWER

8.1	WIFI2.4G Output Power
8.2	WIFI5G Output Power

8.1 WIFI2.4G Output Power

WIFI2.4G-Ant.a						
2.4G	Mode	Channel	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
	11b	1	2412	13.09	13.50	Yes
		6	2437	13.02	13.50	Yes
		11	2462	12.91	13.50	Yes
	11g	1	2412	13.02	13.50	No
		6	2437	12.91	13.50	No
		11	2462	12.80	13.50	No
	11n-HT20	1	2412	12.88	13.50	No
		6	2437	12.85	13.50	No
		11	2462	13.17	13.50	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

- 1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11b/g/n) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.
- 3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, OFDM SAR test is not required. Adjusted SAR = $0.639 * (22.39\text{mW}/22.39\text{mW}) = 0.639$ W/Kg, so 2.4G OFDM SAR test is not required.

WIFI2.4G-Ant.b						
2.4G	Mode	Channel	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
	11b	1	2412	13.20	13.50	Yes
		6	2437	13.15	13.50	Yes
		11	2462	12.96	13.50	Yes
	11g	1	2412	12.98	13.50	No
		6	2437	13.07	13.50	No
		11	2462	13.00	13.50	No
	11n-HT20	1	2412	13.28	13.50	No
		6	2437	13.01	13.50	No
		11	2462	12.87	13.50	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, OFDM SAR test is not required. Adjusted SAR = $0.381 * (22.39\text{mW}/22.39\text{mW}) = 0.381$ W/Kg, so 2.4G OFDM SAR test is not required.

WIFI2.4G-Ant.mimo (Ant.a+b)						
2.4G	Mode	Channel	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
	11b	1	2412	12.75	13.50	Yes
		6	2437	12.47	13.50	Yes
		11	2462	12.27	13.50	Yes
	11g	1	2412	13.07	13.50	No
		6	2437	12.66	13.50	No
		11	2462	12.38	13.50	No
	11n-HT20	1	2412	12.95	13.50	No
		6	2437	12.57	13.50	No
		11	2462	12.29	13.50	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is $\leq 1.2 \text{ W/kg}$, OFDM SAR test is not required. Adjusted SAR = $0.317 * (22.39\text{mW}/22.39\text{mW}) = 0.317 \text{ W/Kg}$, so 2.4G OFDM SAR test is not required.

8.2 WIFI5G Output Power

WIFI5G-Ant.a						
5.2G	Mode	Channal	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
	11a	36	5180	12.68	13.00	No
		44	5220	12.19	13.00	No
		48	5240	12.19	13.00	No
	11n20	36	5180	12.48	13.00	No
		44	5220	12.36	13.00	No
		48	5240	12.36	13.00	No
	11n40	38	5190	12.60	13.00	Yes
		46	5230	12.38	13.00	Yes
	11ac20	36	5180	12.50	13.00	No
		44	5220	12.40	13.00	No
		48	5240	12.35	13.00	No
	11ac40	38	5190	12.61	13.00	No
46		5230	12.38	13.00	No	
5.6G	11a	100	5500	12.33	13.00	No
		116	5580	12.11	13.00	No
		140	5700	12.39	13.00	No
	11n20	100	5500	12.06	13.00	No
		116	5580	12.38	13.00	No
		140	5700	12.64	13.00	No
	11n40	102	5510	12.62	13.00	Yes
		118	5590	12.46	13.00	Yes
		134	5670	12.72	13.00	Yes
	11ac20	100	5500	12.60	13.00	No
		116	5580	12.38	13.00	No
		140	5700	12.63	13.00	No
	11ac40	102	5510	12.62	13.00	No
		118	5590	12.46	13.00	No
		134	5670	12.73	13.00	No
5.8G	11a	149	5745	10.46	11.00	No
		157	5785	10.00	11.00	No
		165	5825	10.43	11.00	No
	11n20	149	5745	10.70	11.00	No
		157	5785	10.23	11.00	No
		165	5825	10.17	11.00	No
	11n40	151	5755	10.75	11.00	Yes
		159	5795	10.38	11.00	Yes
	11ac20	149	5745	10.69	11.00	No
		157	5785	10.20	11.00	No
		165	5825	10.16	11.00	No
	11ac40	151	5755	10.74	11.00	No
159		5795	10.37	11.00	No	
Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially. 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power. 2) When multiple transmission modes (802.11a/g/n/ac) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac.						

WIFI5G-Ant.b						
5.2G	Mode	Channal	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
	11a	36	5180	12.28	13.00	No
		44	5220	12.08	13.00	No
		48	5240	12.15	13.00	No
	11n20	36	5180	12.53	13.00	No
		44	5220	12.35	13.00	No
		48	5240	12.47	13.00	No
	11n40	38	5190	12.68	13.00	Yes
		46	5230	12.23	13.00	Yes
	11ac20	36	5180	12.54	13.00	No
		44	5220	12.34	13.00	No
		48	5240	12.46	13.00	No
	11ac40	38	5190	12.18	13.00	No
46		5230	12.23	13.00	No	
5.6G	11a	100	5500	12.57	13.00	No
		116	5580	12.58	13.00	No
		140	5700	12.17	13.00	No
	11n20	100	5500	12.30	13.00	No
		116	5580	12.32	13.00	No
		140	5700	12.42	13.00	No
	11n40	102	5510	12.19	13.00	Yes
		118	5590	12.18	13.00	Yes
		134	5670	12.28	13.00	Yes
	11ac20	100	5500	12.79	13.00	No
		116	5580	12.31	13.00	No
		140	5700	12.40	13.00	No
	11ac40	102	5510	12.28	13.00	No
		118	5590	12.19	13.00	No
		134	5670	12.17	13.00	No
5.8G	11a	149	5745	10.21	11.00	No
		157	5785	10.29	11.00	No
		165	5825	10.12	11.00	No
	11n20	149	5745	10.59	11.00	No
		157	5785	10.06	11.00	No
		165	5825	10.39	11.00	No
	11n40	151	5755	10.07	11.00	Yes
		159	5795	10.05	11.00	Yes
	11ac20	149	5745	10.60	11.00	No
		157	5785	10.08	11.00	No
		165	5825	10.20	11.00	No
	11ac40	151	5755	10.42	11.00	No
159		5795	10.38	11.00	No	
Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially. 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power. 2) When multiple transmission modes (802.11a/g/n/ac) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac.						

WIFI5G-Ant.c						
	Mode	Channel	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
5.2G	11a	36	5180	12.40	13.00	No
		44	5220	12.65	13.00	No
		48	5240	12.71	13.00	No
	11n20	36	5180	12.14	13.00	No
		44	5220	12.46	13.00	No
		48	5240	12.42	13.00	No
	11n40	38	5190	12.31	13.00	Yes
		46	5230	12.66	13.00	Yes
	11ac20	36	5180	12.19	13.00	No
		44	5220	12.48	13.00	No
		48	5240	12.45	13.00	No
	11ac40	38	5190	12.31	13.00	No
		46	5230	12.68	13.00	No
5.6G	11a	100	5500	12.09	13.00	No
		116	5580	12.49	13.00	No
		140	5700	12.71	13.00	No
	11n20	100	5500	12.40	13.00	No
		116	5580	12.21	13.00	No
		140	5700	12.43	13.00	No
	11n40	102	5510	12.52	13.00	Yes
		118	5590	12.28	13.00	Yes
		134	5670	12.42	13.00	Yes
	11ac20	100	5500	12.41	13.00	No
		116	5580	12.21	13.00	No
		140	5700	12.43	13.00	No
	11ac40	102	5510	12.40	13.00	No
		118	5590	12.25	13.00	No
		134	5670	12.48	13.00	No
5.8G	11a	149	5745	10.34	11.00	No
		157	5785	10.23	11.00	No
		165	5825	10.37	11.00	No
	11n20	149	5745	10.64	11.00	No
		157	5785	10.46	11.00	No
		165	5825	10.58	11.00	No
	11n40	151	5755	10.03	11.00	Yes
		159	5795	10.32	11.00	Yes
	11ac20	149	5745	10.64	11.00	No
		157	5785	10.49	11.00	No
		165	5825	10.59	11.00	No
	11ac40	151	5755	10.04	11.00	No
		159	5795	10.29	11.00	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

- 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11a/g/n/ac) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac.

WIFI5G-Ant.d						
	Mode	Channel	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
5.2G	11a	36	5180	12.60	13.00	No
		44	5220	12.68	13.00	No
		48	5240	12.78	13.00	No
	11n20	36	5180	12.37	13.00	No
		44	5220	12.49	13.00	No
		48	5240	12.10	13.00	No
	11n40	38	5190	12.69	13.00	Yes
		46	5230	12.43	13.00	Yes
	11ac20	36	5180	12.42	13.00	No
		44	5220	12.37	13.00	No
		48	5240	12.42	13.00	No
	11ac40	38	5190	12.73	13.00	No
		46	5230	12.50	13.00	No
5.6G	11a	100	5500	12.52	13.00	No
		116	5580	12.02	13.00	No
		140	5700	12.19	13.00	No
	11n20	100	5500	12.26	13.00	No
		116	5580	12.23	13.00	No
		140	5700	12.48	13.00	No
	11n40	102	5510	12.13	13.00	Yes
		118	5590	12.11	13.00	Yes
		134	5670	12.63	13.00	Yes
	11ac20	100	5500	12.27	13.00	No
		116	5580	12.23	13.00	No
		140	5700	12.47	13.00	No
	11ac40	102	5510	12.13	13.00	No
		118	5590	12.12	13.00	No
		134	5670	12.65	13.00	No
5.8G	11a	149	5745	10.43	11.00	No
		157	5785	10.07	11.00	No
		165	5825	10.37	11.00	No
	11n20	149	5745	10.56	11.00	No
		157	5785	10.21	11.00	No
		165	5825	10.07	11.00	No
	11n40	151	5755	10.62	11.00	Yes
		159	5795	10.43	11.00	Yes
	11ac20	149	5745	10.58	11.00	No
		157	5785	10.25	11.00	No
		165	5825	10.09	11.00	No
	11ac40	151	5755	10.63	11.00	No
		159	5795	10.35	11.00	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

- 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11a/g/n/ac) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac.

WIFI5G-Ant.mimo (Ant.a+b+c+d)						
	Mode	Channel	Frequency (MHz)	AV power (dBm)	Tune up (dBm)	SAR Test
5.2G	11a	36	5180	12.40	13.00	No
		44	5220	12.29	13.00	No
		48	5240	12.63	13.00	No
	11n20	36	5180	12.12	13.00	No
		44	5220	12.49	13.00	No
		48	5240	12.37	13.00	No
	11n40	38	5190	12.24	13.00	Yes
		46	5230	12.51	13.00	Yes
	11ac20	36	5180	12.11	13.00	No
		44	5220	12.48	13.00	No
		48	5240	12.35	13.00	No
	11ac40	38	5190	12.24	13.00	No
		46	5230	12.52	13.00	No
5.6G	11a	100	5500	12.48	13.00	No
		116	5580	12.54	13.00	No
		140	5700	12.50	13.00	No
	11n20	100	5500	12.19	13.00	No
		116	5580	12.28	13.00	No
		140	5700	12.21	13.00	No
	11n40	102	5510	12.31	13.00	Yes
		118	5590	12.29	13.00	Yes
		134	5670	12.24	13.00	Yes
	11ac20	100	5500	12.19	13.00	No
		116	5580	12.28	13.00	No
		140	5700	12.22	13.00	No
	11ac40	102	5510	12.27	13.00	No
		118	5590	12.32	13.00	No
		134	5670	12.34	13.00	No
5.8G	11a	149	5745	10.45	11.00	No
		157	5785	10.06	11.00	No
		165	5825	9.47	11.00	No
	11n20	149	5745	10.16	11.00	No
		157	5785	9.77	11.00	No
		165	5825	9.23	11.00	No
	11n40	151	5755	10.17	11.00	Yes
		159	5795	9.68	11.00	Yes
	11ac20	149	5745	10.16	11.00	No
		157	5785	9.78	11.00	No
		165	5825	9.24	11.00	No
	11ac40	151	5755	10.17	11.00	No
		159	5795	9.68	11.00	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

- 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11a/g/n/ac) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac.