8 CONDUCTED RF OUPUT POWER

8.1 WIFI Output Power

8.1.1 WIFI2.4G Output Power

Test Mode	Modulation	Channel number	Frequency	AV power (dBm)	Tune-up (dBm)	SAR Test
2.4G	11b	1	2412	15.38	16.00	Yes
		6	2437	15.58	16.00	Yes
		11	2462	15.69	16.00	Yes
	11g	1	2412	15.16	16.00	No
		6	2437	15.36	16.00	No
		11	2462	14.94	15.00	No
	11n-HT20	1	2412	14.35	15.00	No
		6	2437	15.12	16.00	No
		11	2462	14.79	15.00	No
	11n-HT40	3	2422	12.18	13.00	No
		6	2437	15.45	16.00	No
		9	2452	14.33	15.00	No
	11ax-HT20	1	2412	13.42	14.00	No
		6	2437	15.09	16.00	No
		11	2462	14.71	15.00	No
	11ax-HT40	3	2422	11.15	12.00	No
		6	2437	15.45	16.00	No
		9	2452	15.76	16.00	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 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/ax) 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,and 802.11n chosen over 802.11ax
(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 = 0.913 * (39.81mW/39.81mW) = 0.913 W/Kg, so 2.4G OFDM SAR test is not required.

8.1.2 WIFI5G Output Power

Test Mode	Modulation	Channal	Frequency	AV power (dBm)	Tune-up (dBm)	SAR Test
WIFI 5G Band1	11a	36	5180	10.88	11.50	No
		44	5220	11.11	11.50	No
		48	5240	10.91	11.50	No
	11n20	36	5180	11.12	11.50	No
		44	5220	11.41	11.50	No
		48	5240	11.18	11.50	No
	11n40	38	5190	10.77	11.50	No
		46	5230	10.81	11.50	No
	11ac20	36	5180	11.10	11.50	No
		44	5220	11.39	11.50	No
		48	5240	11.18	11.50	No
	11ac40	38	5190	10.82	11.50	No
		46	5230	10.83	11.50	No
	11ac80	42	5210	11.05	11.50	No
	11ac160	50	5250	11.18	11.50	No
	11ax20	36	5180	11.33	11.50	No
		44	5220	11.35	11.50	No
		48	5240	11.22	11.50	No
	11ax40	38	5190	10.93	11.50	No
		46	5230	10.85	11.50	No
	11ax80	42	5210	11.26	11.50	No
	11ax160	50	5250	11.29	11.50	No
WIFI 5G Band2	11a	52	5260	11.28	11.50	No
		60	5300	10.75	11.50	No
		64	5320	10.83	11.50	No
	11n20	52	5260	11.13	11.50	No
		60	5300	10.60	11.50	No
		64	5320	10.65	11.50	No
	11n40	54	5270	11.06	11.50	Yes
		62	5310	10.83	11.50	Yes
	11ac20	52	5260	11.14	11.50	No
		60	5300	11.18	11.50	No
		64	5320	11.35	11.50	No
	11ac40	54	5270	11.11	11.50	No
		62	5310	10.86	11.50	No
	11ac80	58	5290	10.74	11.00	No
	11ax20	52	5260	10.97	11.50	No
		60	5300	10.93	11.50	No
		64	5320	10.94	11.50	No
	11ax40	54	5270	11.12	11.50	No
		62	5310	11.01	11.50	No
	11ax80	58	5290	10.91	11.00	No
WIFI 5G Band3	11a	100	5500	13.72	14.00	No
		116	5580	13.68	14.00	No
		140	5700	13.70	14.00	No
	11n20	100	5500	13.57	14.00	No
		116	5580	13.44	14.00	No
		140	5700	13.50	14.00	No
	11n40	102	5510	13.35	14.00	Yes
		118	5590	13.58	14.00	Yes
		134	5670	13.69	14.00	Yes
	11ac20	100	5500	13.54	14.00	No
		116	5580	13.48	14.00	No
		140	5700	13.54	14.00	No
	11ac40	102	5510	13.39	14.00	No
		118	5590	13.59	14.00	No
		134	5670	13.81	14.00	No
	11ac80	106	5530	13.29	13.50	No
		122	5610	13.47	13.50	No
	11ac160	114	5570	13.38	13.50	No
	11ax20	100	5500	13.52	14.00	No
		116	5580	13.48	14.00	No
		140	5700	13.75	14.00	No
	11ax40	102	5510	13.45	14.00	No
		118	5590	13.61	14.00	No
		134	5670	13.30	14.00	No
	11ax80	106	5530	13.41	13.50	No
		122	5610	13.44	13.50	No
	11ax160	114	5570	13.46	13.50	No
WIFI 5G Band4	11a	149	5745	13.40	14.00	No
		157	5785	13.55	14.00	No
		165	5825	13.20	14.00	No
	11n20	149	5745	13.36	14.00	No
		157	5785	13.40	14.00	No
		165	5825	13.05	14.00	No
	11n40	151	5755	13.39	14.00	Yes
		159	5795	13.40	14.00	Yes
	11ac20	149	5745	13.24	14.00	No
		157	5785	13.35	14.00	No
		165	5825	13.07	14.00	No
	11ac40	151	5755	13.34	14.00	No
		159	5795	13.41	14.00	No
	11ac80	155	5775	13.27	13.50	No
	11ax20	149	5745	13.46	14.00	No
		157	5785	13.34	14.00	No
		165	5825	13.29	14.00	No
	11ax40	151	5755	13.43	14.00	No
		159	5795	13.45	14.00	No
	11ax80	155	5775	13.38	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 among the multiple configurations in a frequency band with the same maximum tune-up output power.
2) When multiple transmission modes (802.11a/n/ac/ax) 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, and 802.11n chosen over 802.11ac then 802.11ax.

8.2 Bluetooth

8.2.1 Bluetooth Output Power

Test Mode	Modulation	Channal	Frequency	AV power (dBm)	Tune-up (dBm)	SAR Test
BT	DH5	2402	2402	10.15	11.00	Yes
		2441	2441	10.19	11.00	Yes
		2480	2480	10.27	11.00	Yes
	2DH5	2402	2402	7.17	8.00	No
		2441	2441	6.99	7.00	No
		2480	2480	7.18	8.00	No
	3DH5	2402	2402	7.34	8.00	No
		2441	2441	7.18	8.00	No
		2480	2480	7.18	8.00	No
	BLE1M	2402	2402	7.15	8.00	No
		2440	2440	7.08	8.00	No
		2480	2480	7.26	8.00	No
	BLE2M	2404	2404	7.05	8.00	No
		2440	2440	7.09	8.00	No
		2478	2478	7.05	8.00	No

Note: Since bluetooth BR mode is the maximum output power mode，SAR measurements were performed with test software using DH5 modulation,and SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

8.2.2 Bluetooth Duty Cycle

The Bluetooth duty cycle is 57.55% as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.
Duty Cycle