

8 CONDUCTED RF OUPUT POWER

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8.1 WIFI Output Power

Ant.1						
test Mode	Modulation	Channel number	Fre. (MHz)	output power (dBm)	Tune-up Power (dBm)	SAR Test
WIFI 2.4G	11b	1	2412	11.14	12.00	Yes
		6	2437	10.93	12.00	Yes
		11	2462	11.94	12.00	Yes
	11g	1	2412	16.13	16.50	No
		6	2437	15.88	16.50	No
		11	2462	16.10	16.50	No
	11n20	1	2412	16.27	16.50	No
		6	2437	16.42	16.50	No
		11	2462	16.41	16.50	No
	11n40	3	2422	16.00	16.50	No
		6	2437	16.03	16.50	No
		9	2452	16.09	16.50	No
	11ax20	1	2412	16.20	17.00	No
		6	2437	16.17	17.00	No
		11	2462	16.36	17.00	No
	11ax40	3	2422	16.87	17.00	Yes
		6	2437	16.82	17.00	Yes
		9	2452	16.84	17.00	Yes

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) SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure.

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

(3) 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.

Ant.1						
test Mode	Modulation	Channel number	Fre. (MHz)	output power (dBm)	Tune-up Power(dBm)	SAR Test
WIFI 5.2G	11a	36	5180	12.25	13.00	No
		44	5220	12.66	13.00	No
		48	5240	12.42	13.00	No
	11n20	36	5180	12.08	13.00	No
		44	5220	12.45	13.00	No
		48	5240	12.29	13.00	No
	11n40	38	5190	12.48	13.00	No
		46	5230	12.49	13.00	No
	11ac20	36	5180	12.16	13.00	No
		44	5220	12.48	13.00	No
		48	5240	12.38	13.00	No
	11ac40	38	5190	12.55	13.00	No
		46	5230	12.52	13.00	No
	11ac80	42	5210	12.15	13.00	No
	11ac160	50	5250	12.37	13.00	No
	11ax20	36	5180	12.53	13.50	No
		44	5220	12.63	13.50	No
		48	5240	12.52	13.50	No
	11ax40	38	5190	12.80	13.50	No
		46	5230	12.79	13.50	No
	11ax80	42	5210	12.73	13.00	No
	11ax160	50	5250	12.83	13.00	No
WIFI 5.3G	11a	52	5260	12.95	13.00	No
		60	5300	12.42	13.00	No
		64	5320	12.64	13.00	No
	11n20	52	5260	12.24	13.00	No
		60	5300	12.43	13.00	No
		64	5320	12.01	13.00	No
	11n40	54	5270	12.25	13.00	No
		62	5310	12.26	13.00	No
	11ac20	52	5260	12.26	13.00	No
		60	5300	12.51	13.00	No
		64	5320	12.03	13.00	No
	11ac40	54	5270	12.18	13.00	No
		62	5310	12.21	13.00	No
	11ac80	58	5290	12.47	13.00	No
	11ax20	52	5260	12.97	13.50	No
		60	5300	12.87	13.50	No
		64	5320	12.99	13.50	No
	11ax40	54	5270	13.13	13.50	Yes
		62	5310	13.19	13.50	Yes
	11ax80	58	5290	12.38	13.00	No

WIFI 5.6G	11a	100	5500	12.43	12.50	No
		116	5580	12.09	12.50	No
		140	5700	12.11	12.50	No
	11n20	100	5500	12.15	12.50	No
		116	5580	12.10	12.50	No
		140	5700	12.12	12.50	No
	11n40	102	5510	12.41	12.50	No
		118	5590	12.15	12.50	No
		134	5670	12.22	12.50	No
	11ac20	100	5500	12.16	12.50	No
		116	5580	12.14	12.50	No
		140	5700	12.08	12.50	No
	11ac40	102	5510	11.87	12.50	No
		118	5590	12.24	12.50	No
		134	5670	12.10	12.50	No
	11ac80	106	5530	11.67	12.50	No
		122	5610	12.15	12.50	No
	11ac160	114	5570	11.93	12.50	No
	11ax20	100	5500	12.50	13.00	No
		116	5580	12.81	13.00	No
		140	5700	12.39	13.00	No
	11ax40	102	5510	12.30	13.00	Yes
		118	5590	12.57	13.00	Yes
		134	5670	12.48	13.00	Yes
	11ax80	106	5530	12.35	12.50	No
		122	5610	11.94	12.50	No
	11ax160	114	5570	12.09	12.50	No
WIFI 5.8G	11a	149	5745	14.26	14.50	No
		157	5785	14.37	14.50	No
		165	5825	13.95	14.50	No
	11n20	149	5745	14.13	14.50	No
		157	5785	14.23	14.50	No
		165	5825	13.82	14.50	No
	11n40	151	5755	14.21	14.50	No
		159	5795	14.27	14.50	No
	11ac20	149	5745	14.08	14.50	No
		157	5785	14.16	14.50	No
		165	5825	14.31	14.50	No
	11ac40	151	5755	14.22	14.50	No
		159	5795	14.25	14.50	No
	11ac80	155	5775	14.19	14.50	No
	11ax20	149	5745	14.35	15.00	No
		157	5785	14.33	15.00	No
		165	5825	14.15	15.00	No
	11ax40	151	5755	14.57	15.00	Yes
		159	5795	14.55	15.00	Yes
	11ax80	155	5775	14.47	14.50	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) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

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

3) 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, 802.11a is chosen over 802.11ac then 802.11ax.

8.2 Bluetooth

8.2.1 Bluetooth Output Power

Ant.0					
test Mode	Modulation	Fre. (MHz)	AV output power(dBm)	Tune-up Power(dBm)	SAR Test
BT	DH5	2402	11.50	12.00	Yes
		2441	11.49	12.00	Yes
		2480	11.48	12.00	Yes
	2DH5	2402	8.64	9.00	No
		2441	8.60	9.00	No
		2480	8.26	9.00	No
	3DH5	2402	8.72	9.00	No
		2441	8.33	9.00	No
		2480	8.32	9.00	No
	BLE1M	2402	8.53	9.00	No
		2440	8.34	9.00	No
		2480	8.31	9.00	No
	BLE2M	2404	8.31	9.00	No
		2440	8.17	9.00	No
		2478	8.32	9.00	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 $\leq \frac{1}{4}$ 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-DH5

