

8 CONDUCTED RF OUPUT POWER

8.1	WIFI Output Power
8.2	Bluetooth
8.2.1	Bluetooth Output Power
8.2.2	Bluetooth Duty Cycle

8.1 WIFI Output Power

test Mode	Modulation	Channel number	Fre.(MHz)	output power(dBm)	tune up power(dBm)	SAR Test
WIFI 2.4G	11b	1	2412	13.50	14.00	Yes
		6	2437	13.50	14.00	Yes
		11	2462	13.80	14.00	Yes
	11g	1	2412	13.50	14.00	No
		6	2437	13.50	14.00	No
		11	2462	13.55	14.00	No
	HT20	1	2412	13.80	14.00	No
		6	2437	13.80	14.00	No
		11	2462	13.87	14.00	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) 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) According KDB 248227, 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 = $0.368 * (25.12\text{mW}/25.12\text{mW}) = 0.368$ W/Kg, so 2.4G OFDM SAR test is not required.						

test Mode	Modulation	Channel number	Fre.(MHz)	output power(dBm)	tune up power(dBm)	SAR Test
5.2 WIFI	11a	36	5180	6.53	7.00	No
		44	5220	6.53	7.00	No
		48	5240	6.36	7.00	No
	11n20	36	5180	6.96	7.00	No
		44	5220	6.65	7.00	No
		48	5240	6.98	7.00	No
5.3 WIFI	11a	52	5260	6.75	7.00	Yes
		60	5300	6.64	7.00	Yes
		64	5320	6.87	7.00	Yes
	11n20	52	5260	6.70	7.00	No
		60	5300	6.78	7.00	No
		64	5320	6.74	7.00	No
5.6G WIFI	11a	100	5500	7.95	8.50	Yes
		116	5580	8.25	8.50	Yes
		140	5700	8.02	8.50	Yes
	11n20	100	5500	7.93	8.50	No
		116	5580	8.34	8.50	No
		140	5700	8.20	8.50	No
5.8G WIFI	11a	149	5745	10.19	10.50	Yes
		157	5785	10.41	10.50	Yes
		165	5825	10.34	10.50	Yes
	11n20	149	5745	10.13	10.50	No
		157	5785	10.19	10.50	No
		165	5825	10.13	10.50	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) 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 .						

8.2 Bluetooth

8.2.1 Bluetooth Output Power

Bluetooth					
test Mode	Modulation	Fre.(MHz)	AV output power(dBm)	Tune up power(dBm)	SAR Test
BT	DH5	2402	3.57	4.00	Yes
		2441	3.78	4.00	Yes
		2480	3.92	4.00	Yes
	2DH5	2402	0.98	1.50	No
		2441	0.98	1.50	No
		2480	1.08	1.50	No
	3DH5	2402	0.95	1.50	No
		2441	0.95	1.50	No
		2480	1.04	1.50	No
	BLE1M	2402	3.53	4.00	No
		2440	3.64	4.00	No
		2480	3.82	4.00	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 76.88% 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.

