

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

WIFI2.4G-Ant.1						
2.4G	Mode	Channal	Frequency (MHz)	Conducted power (dBm)	Tune up (dBm)	SAR Test
	11b	1	2412	5.98	7.50	Yes
		6	2437	7.76	8.50	Yes
		11	2462	10.06	11.00	Yes
	11g	1	2412	8.98	9.50	No
		6	2437	8.74	9.50	No
		11	2462	10.12	11.00	No
	11n20	1	2412	6.93	8.00	No
		6	2437	7.74	9.00	No
11		2462	9.13	10.00	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) 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 = $0.797 * (12.59\text{mW}/12.59\text{mW}) = 0.797$ W/Kg, so 2.4G OFDM SAR test is not required.						

8.2 Bluetooth

8.2.1 Bluetooth Output Power

Bluetooth-Ant.1						
Test Mode	Modulation	Channel number	Frequency (MHz)	Conducted power (dBm)	Tune up (dBm))	SAR Test
BT	DH5	0	2402	1.36	2.00	No
		39	2441	2.41	3.00	No
		78	2480	2.61	3.00	No
	2DH5	0	2402	3.08	4.00	Yes
		39	2441	4.00	5.00	Yes
		78	2480	4.25	5.00	Yes
	3DH5	0	2402	2.97	4.00	No
		39	2441	3.97	5.00	No
		78	2480	4.25	5.00	No
	BLE-1M	0	2402	-2.33	-1.00	No
		19	2440	-1.21	0.00	No
		39	2480	-0.84	0.50	No
Note: Since bluetooth EDR mode is the maximum output power mode, SAR measurements were performed with test software using 2DH5 modulation, and SAR measurement is not required for the BR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.						

8.2.2 Bluetooth Duty Cycle

The Bluetooth 2DH5 duty cycle is 40.42% 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.

