BCTC

FCC ID: 2BE6M-ALDERLAKEN
Portable device

According to §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance V06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * [√ f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz；

Power and distance are rounded to the nearest mW and mm before calculation；

The result is rounded to one decimal place for comparison；

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz.   When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. We use 5mm as separation distance to calculate.

Maximum measured transmitter power:

BT

	Channel Freq. (MHz)	Max Transmit Power (dBm)	Max tune-up power (dBm)	Result calculation	1-g SAR
GFSK	2402	1.35	2	0.49	3.0
	2441	1.80	2	0.49	3.0
	2480	2.28	3	0.63	3.0
pi/4-DQPSK	2402	-1.26	0	0.31	3.0
	2441	-1.60	0	0.31	3.0
	2480	-1.64	0	0.31	3.0
8DPSK	2402	-1.58	0	0.31	3.0
	2441	-1.93	0	0.31	3.0
	2480	-2.00	-1	0.24	3.0

BLE

BLE 1M	2402	-2.12	-1	0.24	3.0
	2441	-2.44	-1	0.25	3.0
	2480	-2.50	-1	0.24	3.0

WIFI2.4G

WIFI802.11b	2412	4.53	5	0.98	3.0
	2437	5.24	6	1.24	3.0
	2462	5.31	6	1.25	3.0
WIFI802.11g	2412	4.8	5	0.98	3.0
	2437	5.58	6	1.24	3.0
	2462	5.55	6	1.25	3.0
WIFI802.11n20	2412	4.59	5	0.98	3.0
	2437	5.48	6	1.24	3.0
	2462	5.43	6	1.25	3.0
WIFI802.11n40	2422	4.42	5	0.98	3.0
	2437	5.46	6	1.24	3.0
	2452	5.33	6	1.25	3.0

WIFI 5.1G

WIFI802.11a	5180	5.3	6	1.81	3.0
	5200	5.95	6	1.81	3.0
	5240	5.06	6	1.82	3.0
WIFI802.11n20	5180	4.93	5	1.44	3.0
	5200	5.73	6	1.81	3.0
	5240	4.83	5	1.44	3.0
WIFI802.11n40	5190	2.1	3	0.91	3.0
	5230	5.42	6	1.82	3.0
WIFI802.11 ac20	5180	5.14	6	1.81	3.0
	5200	5.79	6	1.81	3.0
	5240	5.09	6	1.82	3.0
WIFI802.11 ac40	5190	2.16	3	0.91	3.0
	5230	6.03	7	2.29	3.0
WIFI802.11 ac80	5210	4.05	5	1.44	3.0

WIFI5.8G

WIFI802.11a	5745	4.81	5	1.51	3.0
	5785	5.35	6	1.92	3.0
	5825	5.15	6	1.92	3.0
WIFI802.11n20	5745	4.92	5	1.51	3.0
	5785	5.19	6	1.92	3.0
	5825	4.13	5	1.53	3.0
WIFI802.11n40	5755	5.67	6	1.91	3.0
	5795	5.44	6	1.92	3.0
WIFI802.11 ac20	5745	5.08	6	1.91	3.0
	5785	4.38	5	1.52	3.0
	5825	4.24	5	1.53	3.0
WIFI802.11 ac40	5755	4.8	5	1.52	3.0
	5795	5.27	6	1.92	3.0
WIFI802.11 ac80	5775	4.24	5	1.52	3.0

CONCLUSION of simultaneous transmitter

Both of the （WiFi5G/WFIF2.4） and （BT&BLE） can transmit simultaneously,

（WiFi5G and WFIF2.4 cannot be launched at the same time,BT&BLE cannot be

launched simultaneously）

the formula of calculated the MPE is:

CPD1/LPD1+CPD2/LPD2+······etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore the worst-case situation is 2.29 /1.00+0.63 /1 =2.92which is less

Conclusion:
For the max result : 2.92≤ 3.0 for 1-g SAR extremity SAR, No SAR is required.