



RF Exposure Evaluation for FCC:

SAR Test Exclusion Calculations

FCC: According to KDB 447498 D01 v06.

According to the KDB 447498 D01 v06 section 4.3.1, for 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ 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

Test Result of RF Exposure Evaluation

We use 5mm as separation distance to calculated.

DTS:BLE

Antenna Gain: 0dBi

Modulation	Channel Freq. (MHz)	Measured Power (dBm)	Tune-up power (dBm)	Max tune-up	Result	Limit 1-g SAR
				power(dBm)	calculation	
GFSK	2402	1.79	1±1	2	0.4913	3
	2441	2.14	2±1	3	0.6233	3
	2480	2.75	2±1	3	0.6284	3



DTS:2.4G WiFi

Antenna Gain: 0dBi

Modulation	Channel Freq. (MHz)	Measured Power (dBm)	Tune-up power (dBm)	Max tune-up	Result	Limit 1-g SAR
				power(dBm)	calculation	
802.11b	2402	8.19	8±1	9	2.4673	3
	2441	8.23	8±1	9	2.4800	3
	2480	8.35	8±1	9	2.4927	3
802.11g	2402	8.47	8±1	9	2.4673	3
	2441	8.62	8±1	9	2.4800	3
	2480	8.58	8±1	9	2.4927	3
802.11 n(HT20)	2402	8.52	8±1	9	2.4673	3
	2441	8.56	8±1	9	2.4800	3
	2480	8.57	8±1	9	2.4927	3
802.11 n(HT40)	2402	7.80	7±1	8	1.9639	3
	2441	7.95	7±1	8	1.9700	3
	2480	7.91	7±1	8	1.9760	3

Note: BLE and 2.4GHz WiFi cannot transmit simultaneously

Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure.