

RF Exposure Requirements

Product Description: Bluetooth wifi recorder

Model No.: R1

FCC ID: 2ACB3-R1

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 calculation¹⁷

- The result is rounded to one decimal place for comparison

Calculation Result:

BT & Wi-Fi can't transmitting at the same time

BT

Tx frequency range: 2402-2480MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: 5.23dBm

Tune-Up output power: 5.5dBm

RF channel transmit frequency: 2480MHz

Result: 1.1

Limit: 3.0

Wi-Fi

Tx frequency range: 2412-2462MHz

Min. test separation distance: 5mm

Maximum Conducted Output Power: 9.39dBm

Tune-Up output power: 9.5dBm

RF channel transmit frequency: 2462MHz

Result: 2.8

Limit: 3.0

The max exclusion thresholds is $2.8 < 3$, so the transmitter complies with the RF exposure requirements and the SAR is not required.