

FCC RF Exposure

EUT Description: **600Mbps bluetooth wifi adapter**

Model No.: **FX-8821**

FCC ID: **2A45N-FX-8821**

1. Limits

According to KDB 447498 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:

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

Where:

Result = $P/D \cdot \sqrt{F}$

F = the RF channel transmit frequency in GHz

P = Maximum turn-up power in mw

D = Min. test separation distance in mm

2. Test Result of RF Exposure Evaluation

	Output power (dBm)	Tune Up Power (dBm)	Max Tune Up power dBm/mW	Min test separation distance mm	Result	Limit (mW/cm ²)	SAR Test Exclusion
EDR	3.64	2.7±1(3.7)	2.344	5	0.733	3.0	Pass
2.4GWIFI	3.42	2.5±1(3.5)	2.239	5	0.699	3.0	Pass
5.8GWIFI	3.47	2.5±1(3.5)	2.239	5	1.077	3.0	Pass

Note:

PK Output power = conducted power.

Conducted power see the test report **HK2202230604-1E/2E/3E**,

BT antenna gain = 2dBi

2.4GWIFI antenna gain = 2dBi

Per KDB 447498 D01, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 1.077 which is ≤ 3 , SAR testing is not required.

Note: Exclusion Thresholds Results = $[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Distance = 5mm

Note: the device could not transmit simultaneously in 2.4G and 5G.