

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Wireless USB Adapter
Model Name	6B17, 6B29
FCC ID	2AKC6XHT-6B17

2. EVALUATION METHOD

According to 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:

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

3. CALCULATION

2.4G WIFI of antenna 1:

$P_t=6.10\text{dBm}=4.07\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR}=(4.07\text{mW}/5\text{mm}) \cdot [\sqrt{2.412(\text{GHz})}]= 1.26<3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

2.4G WIFI of antenna 2:

$P_t=6.50\text{dBm}=4.47\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR}=(4.47\text{mW}/5\text{mm}) \cdot [\sqrt{2.472(\text{GHz})}]= 1.40<3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

2.4G WIFI of MIMO:

$P_t=8.83\text{dBm}=7.64\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR}=(7.64\text{mW}/5\text{mm}) \cdot [\sqrt{2.452(\text{GHz})}]= 2.40<3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

5G WIFI of antenna 1:

$P_t=4.98\text{dBm}=3.15\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR}=(3.15\text{mW}/5\text{mm}) \cdot [\sqrt{5.825(\text{GHz})}]= 1.52<3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

5G WIFI of antenna 2:

$P_t=4.82\text{dBm}=3.03\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR}=(3.03\text{mW}/5\text{mm}) \cdot [\sqrt{5.775(\text{GHz})}] = 1.45 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

5G WIFI of MIMO:

$P_t=7.81\text{dBm}=6.04\text{mW}$

The value of the Maximum output power P_t is referred to the test report of the CFR47 §15.247.

The result for RF exposure evaluation $\text{SAR}=(6.04\text{mW}/5\text{mm}) \cdot [\sqrt{5.23(\text{GHz})}] = 2.77 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.