



RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	IoT Controller
Model Name	S010A
FCC ID	2AYT3-S010A

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

BR/EDR:

$P_t = -3.190\text{dBm} = 0.48\text{mW}$

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 $\text{SAR} = (0.48\text{mW} / 5\text{mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 0.15 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

BLE:

$P_t = -4.228\text{dBm} = 0.38\text{mW}$

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 $\text{SAR} = (0.38\text{mW} / 5\text{mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 0.12 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

2.4GWIFI:

$P_t = 3.19\text{dBm} = 2.08\text{mW}$

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 $\text{SAR} = (2.08\text{mW} / 5\text{mm}) \cdot [\sqrt{2.437(\text{GHz})}] = 0.65 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.

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