



RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Sound Blaster X5
Model Name	SB1820
FCC ID	2AJIV-SB1820

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

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$$P_t = -1.155\text{dBm} = 0.76\text{mW}$$

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 $\text{SAR} = (0.76\text{mW} / 5\text{mm}) \cdot [\sqrt{2.480\text{GHz}}] = 0.24 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

BLE

$$P_t = -6.664\text{dBm} = 0.22\text{mW}$$

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 $\text{SAR} = (0.22\text{mW} / 5\text{mm}) \cdot [\sqrt{2.480\text{GHz}}] = 0.07 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.

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