



RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	ANNA-B4
Model Name	ANNA-B402
Series Model	ANNA-B412
FCC ID	XPYANNAB4

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

BLE 1M:

$P_t = 6.844 \text{ dBm} = 4.83 \text{ mW}$

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 $\text{SAR} = (4.83 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.480 \text{ GHz}}] = 1.52 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

BLE 2M:

$P_t = 6.829 \text{ dBm} = 4.81 \text{ mW}$

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 $\text{SAR} = (4.81 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.480 \text{ GHz}}] = 1.51 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

2.4G:

$P_t = 7.333 \text{ dBm} = 5.41 \text{ mW}$

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 $\text{SAR} = (5.41 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.480 \text{ GHz}}] = 1.70 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

O-QPSK:

$P_t = 7.335 \text{ dBm} = 5.41 \text{ mW}$

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 $\text{SAR} = (5.41 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.475 \text{ GHz}}] = 1.70 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.

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