

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	NINA-B4
Model Name	NINA-B400, NINA-B410, NINA-B406, NINA-B416
FCC ID	XPYNINAB4

2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v05

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

When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

The exposure safety distance is less than 5mm.

3. CALCULATION

GFSK-1M

$P_t = 9.031 \text{ dBm} = 8.00 \text{ mW}$

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 $\text{SAR} = (8.00 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.48(\text{GHz})}] = 2.51 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

GFSK-2M

$P_t = 9.109 \text{ dBm} = 8.15 \text{ mW}$

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 $\text{SAR} = (8.15 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.48(\text{GHz})}] = 2.56 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

O-QPSK

$P_t = 5.698 \text{ dBm} = 3.71 \text{ mW}$

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 $\text{SAR} = (3.71 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.475(\text{GHz})}] = 1.16 < 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

4. CONCLUSION

The SAR evaluation is not required.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15 days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd

Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: <http://cn.agc-cert.com/>

