

RF Exposure Evaluation Declaration

Product Name : ZC179 module
Model No. : ZC179
FCC ID : 2AJVONLS20160926

Applicant : Nordic Light (Suzhou) Co., Ltd
Address : No 53 East Loufeng District, Suzhou, Industrial Park
Suzhou, 215 123 China

Date of Receipt : Sep. 22, 2016
Test Date : Sep. 22, 2016~ Oct. 12, 2016
Issued Date : Oct. 25, 2016
Report No. : 1692081R-RF-US- P20V02
Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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Test Report Certification

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Suzhou, 215 123 China
Manufacturer : Nordic Light (Suzhou) Co., Ltd
Address : No 53 East Loufeng District, Suzhou, Industrial Park
Suzhou, 215 123 China
Model No. : ZC179
FCC ID : 2AJVONLS20160926
EUT Voltage : AC 110-240V; 50/60Hz; 1W
Applicable Standard : KDB 447498 D01v06
Test Result : Complied
Performed Location : Quietek Corporation - Suzhou EMC Laboratory
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,
215006, Jiangsu, China
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Registration Number: 800392;

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(Engineering Manager : Harry Zhao)

Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	:	BSMI, NCC, TAF
USA	:	FCC
Japan	:	VCCI
China	:	CNAS

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://www.quietek.com/english/about/certificates.aspx?bval=5>
The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

1. RF Exposure Evaluation

1.1. Limits

According to **KDB 447498 D01 General RF Exposure Guidance v06**

4.3.1 Standalone SAR test exclusion considerations

1) 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:

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

≤ 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
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:

- a) $\left[\text{Power allowed at numeric threshold for 50 mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot \left(\frac{f(\text{MHz})}{150} \right) \right]$ mW, at 100 MHz to 1500 MHz
- b) $\left[\text{Power allowed at numeric threshold for 50 mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot 10 \right]$ mW at > 1500 MHz and ≤ 6 GHz

3) The 1-g and 10-g SAR test exclusion thresholds for below 100 MHz at test separation distances ≤ 50 mm are determined by:

- a) The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $\left[1 + \log(100/f(\text{MHz})) \right]$ for test separation distances > 50 mm and < 200 mm
- b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm
- c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable. Note: when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	ZC179 module
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

Based on The 1-g and 10-g SAR test exclusion thresholds for below 100 MHz at test separation distances \leq 50 mm and the table below:

Exposure Condition	Pmax	Pmax	Distance	f(KHz)	Stand-alone Test exclusion threshold	SAR Test
	(dBm)	(mw)	(mm)			
Body	-11.7	0.07	5	125	925mw	No

Conclusion: 125KHz SAR was not required.

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