

# FCC TEST REPORT

For

**WCDMA/GPRS Module**

**Model Number: N51**

**FCC ID: PJ7-1712**

**Report Number : WT198006831**

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## TEST REPORT DECLARATION

Applicant : Shengzhen Neoway Technology Co.,Ltd  
Address : 4F-2#, Lianjian Science&Industry Park, Huarong Road,  
Dalang, Longhua District, Shenzhen City, Guangdong  
Province, P.R.China  
Manufacturer : Shengzhen Neoway Technology Co.,Ltd  
Address : 4F-2#, Lianjian Science&Industry Park, Huarong Road,  
Dalang, Longhua District, Shenzhen City, Guangdong  
Province, P.R.China  
EUT Description : WCDMA/GPRS Module  
Model No : N51  
Trade mark : Neoway  
FCC ID : PJ7-1712

Test Standards:

### FCC Part 2.1091 (2018)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:	 (Zhou Li 周立)	Date:	<u>Dec 20, 2019</u>
Checked by:	 (Lin Yi Xiang 林奕翔)	Date:	<u>Dec 20, 2019</u>
Approved by:	 (Lin Bin 林斌)	Date:	<u>Dec 20, 2019</u>

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## 1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
RF Exposure	Pass

Remark: "N/A" means "Not applicable."

## **2. GENERAL INFORMATION**

### **2.1. Report information**

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

### **2.2. Laboratory Accreditation and Relationship to Customer**

The testing report were performed by the Shenzhen Academy of Metrology and The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China.

At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

### 3. PRODUCT DESCRIPTION

#### 3.1.EUT Description

Table 2 Specification of the Equipment under Test

Product Type:	WCDMA/GPRS Module
Hardware Version:	1712-V1.0
Software Version :	N51WW_E2F368_BZ_V003B
FCC ID:	PJ7-1712
Frequency:	GSM850: TX 824MHz~849MHz RX 869MHz~894MHz PCS1900: TX 1850MHz~1910MHz RX 1930MHz~1990MHz WCDMA 850: TX 824MHz~849MHz RX 869MHz~894MHz WCDMA 1900: TX 1850MHz~1910MHz RX 1930MHz~1990MHz
Type(s) of Modulation:	GSM:GMSK WCDMA:QPSK
Antenna Type:	PIFA antenna
Operating voltage:	DC: 3.8V

Remark:

## 4. RF EXPOSURE

### 4.1. LIMIT FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

This product can be classified as mobile device, so the 20cm separation distance warning is required. In this section, the power density at 20cm location is calculated to examine if it is lower than the limit.

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	£1500	30
1500–100,000	/	/	1.0	30

### 4.2. MPE Calculation Method

Power Density:  $P_d(\text{Mw/cm}^2) = P \cdot G / 4\pi d^2$

P=Peak RF output power (mW)

G=EUT Antenna numeric gain (numeric)

Pi=3.14

d=Separation distance between radiator and human body (cm)

### 4.3. CALCULATED RESULT

GSM850:

P=395mW ( 1 Tx slot tune up power:35dBm, all 8 slot, duty cycle:1/8 )

G=1.0dBi (numeric: 1.25)

d=20cm

$P_d = 395 \cdot 1.25 / 4 \cdot 3.14 \cdot 400 = 0.098 < 850/1500$

PCS1900

P=198mW ( 1 Tx slot tune up power:32dBm, all 8 slot, duty cycle:1/8 )

G=1.0dBi (numeric: 1.25)

d=20cm

$P_d = 198 * 1.25 / 4 * 3.14 * 400 = 0.049 < 1$

WCDMA Band V:

P= 316mW (tune up power:25 dBm )

G=1.0dBi (numeric: 1.25)

d=20cm

$P_d = 316 * 1.25 / 4 * 3.14 * 400 = 0.078 < 850 / 1500$

WCDMA Band II

P=316mW ( tune up power:25 dBm )

G=1.0dBi (numeric: 1.25)

d=20cm

$P_d = 316 * 1.25 / 4 * 3.14 * 400 = 0.078 < 1$

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