Certificate#4897.01

TEST REPORT

REPORT NUMBER: I23W00006-MPE-Rev2

ON

Type of Equipment:	4G Module
Type of Designation:	SIM7912A, SIM7906A
Manufacturer:	SIMCom Wireless Solutions Limited
Brand Name:	SIMCom
FCC ID:	2AJYU-8XM0001

ACCORDING TO

FCC CFR 47 Part 2.1091《Radiofrequency radiation exposure evaluation: mobile devices》
FCC CFR 47 Part1.1310《Radiofrequency radiation exposure limits》

Chongqing Academy of Information and Communication Technology

Month date, year

Jun. 30th, 2023

Signature

向罗勇

Xiang Luoyong

Director

Note:
The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.

Revision Version

Report Number	Revision	Date	Memo
I23W00006-MPE	00	2023-3-3	Initial creation of test report
I23W00006-MPE-Rev1	01	2023-5-17	First change of test report
I23W00006-MPE-Rev2	02	2023-6-30	Second change of test report
Note: This version has changed software version, and the test model is SIM7912A, the differences between the two models are the category of SIM7912A is CAT12, with 3CA and 2CA, and the category of SIM7906A is CAT6, only 2CA, their difference is achieved through software, there is no hardware difference between the two models.			

CONTENTS

1. Test Laboratory

1.1. Testing Location

Company Name:	Chongqing Academy of Information andCommunications Technology
Address:	Building C, Technology Innovation Center, No.8, Yuma Road, Chayuan New Area, Nan'an District, Chongqing, People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

1.2. Testing Environment

Normal Temperature:	21.3℃
Relative Humidity:	65.0%

1.3. Project Data

Testing Start Date:	2023-3-3
Testing End Date:	2023-3-3

1.4. Signature

刘秋萍	**2023-6-30**
Liu Qiuping **(Prepared this test report)**	**Date**
喻春	**2023-6-30**
Yu Chun **(Reviewed this test report)**	**Date**
向罗勇	**2023-6-30**
Xiang Luoyong **Director of the laboratory** **(Approved this test report)**	**Date**

2. Client Information

2.1. Applicant Information

Company Name:	SIMCom Wireless Solutions Limited
Address /Post:	SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai, China
Country:	China
Telephone:	86 2131575100
Fax:	--
Email:	Yongsheng Li@simcom.com
Contact Person:	Yongsheng Li

2.2. Manufacturer Information

Company Name:	SIMCom Wireless Solutions Limited
Address /Post:	SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai, China
Country:	China
Telephone:	86 2131575100
Fax:	--
Email:	Yongsheng Li@simcom.com
Contact Person:	Yongsheng Li

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description:	4G Module
Model name:	SIM7912A,SIM7906A
LTE Frequency Band:	2/4/5/7/12/13/14/17/25/26/41/48/66/71
LTE_CA Frequency Band	CA_7C/41C
WCDMA Frequency Band	B2/4/5
Note：Photographs of EUT are shown in ANNEX A of this test report.	

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
/	/	V1.02	SIM7912A: 2110B02X12M42A-LGA SIM7906A: 2110B02X12M43A-LGA	2023-2-21

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

EUT ID*	SN	Description
NA	NA	NA

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1. Applicable Standards

The MPE report was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part 2.1091.

FCC CFR 47 Part 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

4.2. Test Limits

Systems operating under the provisions of this section shall be operated in a mannerthat ensures that the public is not exposed to radio frequency energy level in excesslimit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2Subpart J, section 2.1091 this device has been defined as a mobile device whereby adistance of 0.2m normally can be maintained between the user and the device.

MPE for the upper tier (people in controlled environments)

Frequency Range [MHz]	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100000	--	--	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

For the DUT, the limits for the general public when an RF safety program is unavailable.

5. Test Results

5.1. Tune Up Power

Frequency Band	Highest Averaged Tunne Up Power(dBm)	Highest Frame-Averaged Tunne Up Power (dBm)	Antenna Gain(dBi)
LTE Band48	20	20	1
Notes: 1) Disclaimers： The highest tunne up power and antenna gain in the above table are provided by the customer			

5.2. Calculation Information

For conservative evaluation consideration, only maximum power of each frequency band based on the tighter limits respectively are used to calculate the boundary power density.

Based on the FCC KDB 447498 D01 and 47 CFR §2.1091, the DUT is evaluated as a mobile device.

$$S = \frac{PG}{4\pi d^2}$$

Where
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

5.3. Results

Frequency range	Limit(mW/cm^2)	Results(mW/cm^2)	Verdict
LTE Band48	1.00	0.03	PASS

5.4. Result of LTE Band 48

Test Results: MPE Limit Calculation: the EUT'S operating frequencies @ 3550.00 MHz～3700.00MHz; The maximum conducted is 20.00 dBm. The maximum gain is 1.00 dBi. Therefore, maximum limit for general public RF exposure: 1.00mW/cm^2.

$$S = \frac{PG}{4\pi d^2}$$

P= input power of the antenna（mW）

G = antenna gain（numeric）

r = distance to the center of radiation of antenna (in meter)=20 cm

S=0.03 mW/cm^2

Therefore, at 20 cm the spectral power density is less than the 1.00 mW/cm^2 limit for uncontrolled exposure.

ANNEX A: EUT photograph

See the document" 4G Module Photos".

*****END OF REPORT*****