



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

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. | | | |



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Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336

Tel: 0086-23-88069965

FAX: 0086-23-88608777

1. Test Laboratory

1.1. Testing Location

| | |
|---------------|---|
| Company Name: | Chongqing Academy of Information and Communications 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 |

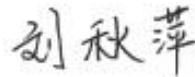
1.2. Testing Environment

| | |
|---------------------|-------|
| 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



2023-6-30

Liu Qiuping
(Prepared this test report)

Date

2023-6-30

Yu Chun
(Reviewed this test report)

Date

2023-6-30

Xiang Luoyong
Director of the laboratory
(Approved this test report)

Date

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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 manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance 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.

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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



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5.3. Results

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

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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/cm².

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

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/cm²

Therefore, at 20 cm the spectral power density is less than the 1.00 mW/cm² limit for uncontrolled exposure.



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ANNEX A: EUT photograph

See the document "4G Module Photos".

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

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