RF MEASUREMENT REPORT

FCC ID:	2AJYU-8XM0004
Application:	SIMCom Wireless Solutions Limited
Product:	SIMCom LTE Cat6 Module
Model No.:	SIM7906G-M2
Brand Name:	SIMCom
FCC Rule Part(s):	Part 96.47
Result:	Complies
Test Date:	2022-10-09

Reviewed By: Jame Yuan

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2302RSU033-U1	V01	Initial Report	2023-02-14	Valid

This report is a copy report, based on the original MRT report (Report No.: 2210RSU001-U1). This report is to update the model and product name. No additional testing is required. See Clause 1.4 for model difference.

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1. General Information

1.1. Applicant

SIMCom Wireless Solutions Limited

SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai, China

1.2. Manufacturer

SIMCom Wireless Solutions Limited

SIMCom Headquarters Building, Building 3, No.289 Linhong Road, Changning District, Shanghai, China

1.3. Testing Facility

☒	**Test Site - MRT Suzhou Laboratory**
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐R-20025 ☐G-20034 ☐C-20020 ☐T-20020 ☐R-20141 ☐G-20134 ☐C-20103 ☐T-20104
☐	**Test Site - MRT Shenzhen Laboratory**
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	**Test Site - MRT Taiwan Laboratory**
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	SIMCom LTE Cat6 Module
Model No.	SIM7906G-M2
Supply Voltage	3.3VDC
E-UTRA Band	Band 48
TDD T_X Frequency Range	LTE Band 48: 3550 ~ 3700 MHz
TDD R_X Frequency Range	LTE Band 48: 3550 ~ 3700 MHz
Modulation Type	DL up to 256QAM, UL up to 64QAM
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

The difference between SIM7906G-M2 and SIM7912G-M2 in the original report is as below:

Model	Hardware	Software	Note
SIM7912G-M2	Original	Original	The model is assessed in the original report.
SIM7906G-M2	No change	Changed	The software version of SIM7906G-M2 changes to distinguish the difference with SIM7912G-M2. SIM7912G-M2 supports 3CA, SIM7906G-M2 doesn't support 3CA. No effect on PCB Layout. No effect on B48.
Note: The above information is declared by the manufacturer.			

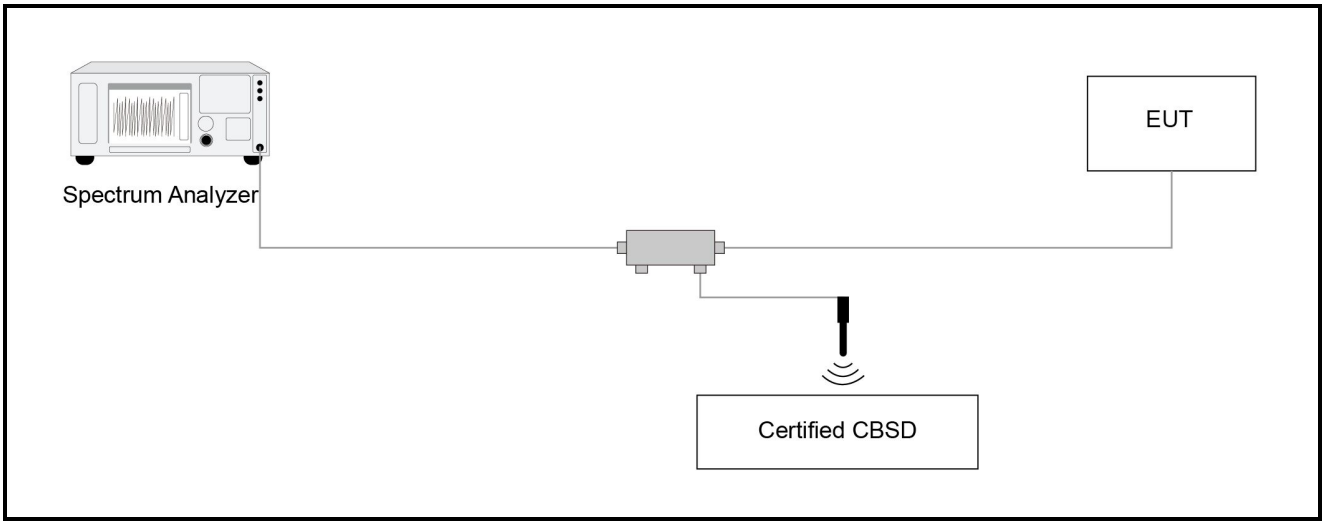
1.5. Test Methodology

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC 47 CFR Part 96.47
- FCC KDB 940660 D01 Part 96 CBRS Eqpt v02
- WINNF-TS-0122 V1.0.2: Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)

2. Test Configuration

2.1. Test System Connection Diagram



2.2. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
Thermohygrometer	testo	608-H1	MRTSUE06362	1 year	2023-02-15	WZ-SR6
Shielding Room	HUAMING	WZ-SR6	MRTSUE06443	N/A	N/A	WZ-SR6
Signal Analyzer	Keysight	N9020B	MRTSUE07037	1 year	2023-03-29	WZ-SR6
Attenuator	MVE	MVE2213	MRTSUE11092	1 year	2023-06-09	WZ
Attenuator	MVE	MVE2213	MRTSUE11093	1 year	2023-06-09	WZ
Directional Coupler	narda	4226-20	MRTSUE06065	1 year	2023-03-17	WZ

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Conducted Spurious Emissions
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result
96.47	End User Device Additional Requirements (CBSD Protocol)	Refer to section 5.2	Conducted	Pass

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part ofthe system to connect the EUT to the analyzer at all frequencies of interest.

5.2. End User Device Additional Requirement (CBSD Protocol) Measurement

5.2.1. Test Limit

End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by aCBSD, including the frequencies and power limits for their operation.

An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD

5.2.2. Test Procedure

KDB 940660 D01 v02, WINNF-TS-0122 V1.0.2

5.2.3. Test Setting

The EUT was connected via an RF cable to a certified CBSD (Sercomm Corp. FCC ID: P27-SCE4255W) and spectrum analyzer. The following procedure is performed by applying WINNF-TS-0122 CBRS CBSD Test Specification.

Step 1:

a. Setup WINNF.PT.C.HBT.1 with 3570 ~ 3590MHz and power level at 6 dBm/MHz.

b. Enable Smallcell service from EPC Manage Tool.

c. Check EUT Tx frequency and power.

d. Disable Smallcell service from EPC Manage Tool and check EUT stop transmission within 10s.

Step 2:

a. Setup WINNF.PT.C.HBT.1 with 3670 ~ 3690MHz and power level at 11 dBm/MHz.

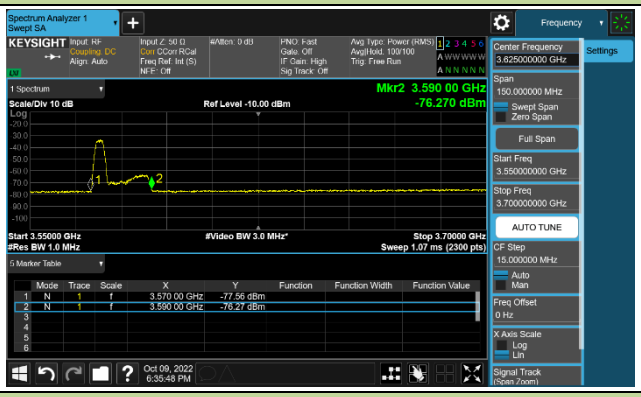
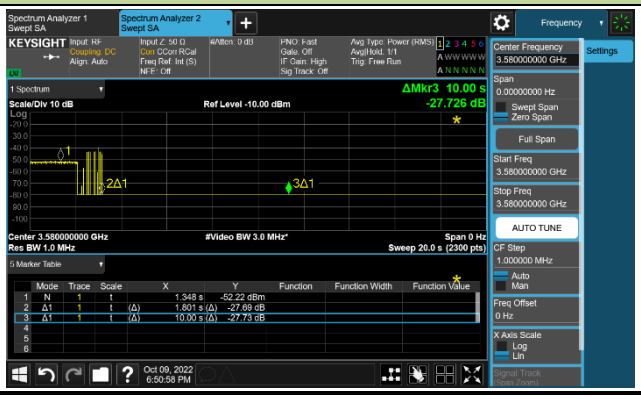
b. Enable Smallcell service from EPC Manage Tool.

c. Check EUT Tx frequency and power.

d. Disable Smallcell service from EPC Manage Tool and check EUT stop transmission within 10s.

5.2.4. Test Result

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-10-09	Test Band	CBSD transmit at 3580MHz (20MHz BW), 6 dBm/MHz

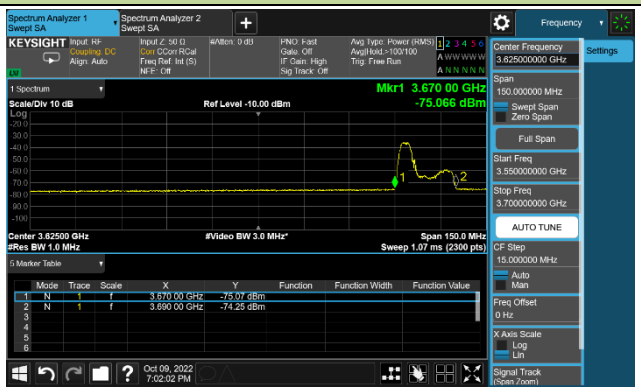
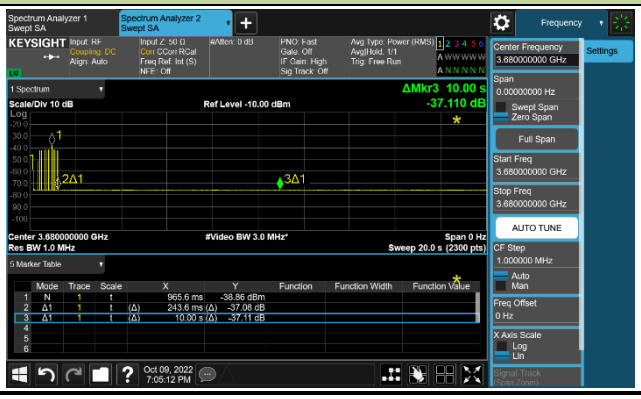
Frequency Operation

Discontinues Operations within 10s


Marker 1: CBSD sends instructions to discontinue LTE operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

Test Site	WZ-SR6	Test Engineer	Larry Yan
Test Date	2022-10-09	Test Band	CBSD transmit at 3680MHz (20MHz BW), 11 dBm/MHz

Frequency Operation

Discontinues Operations within 10s


Marker 1: CBSD sends instructions to discontinue LTE operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

Appendix A - Test Setup Photograph

Refer to “2302RSU033-UT” file.

Appendix B - EUT Photograph

Refer to other documents.

The End