

KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

LTE-FDD/HSPA MODULE

Model: SIM7600AH

Trade Name: SIMCOM

Issued to

Shanghai Simcom Ltd.

**SIM Technology Building, No. 633, Jinzhong Road, Changning District, Shanghai, P.R.
China 200233**

Issued by

Compliance Certification Services Inc.

Wugu Laboratory

No. 11, Wugong 6th Rd., Wugu Dist.,

New Taipei City, Taiwan. (R.O.C.)

Issue Date: April 8, 2021

Note: This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, NIST or any government agencies. The test results in the report only apply to the tested sample.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: T201221W04-MF2

Page: 2 / 7

Rev.: 02

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	February 05, 2021	Initial Issue	ALL	Mita Wu
01	March 11, 2021	See the following Note Rev.(01)	P.5	Mita Wu
02	April 8, 2021	See the following Note Rev.(02)	P.7	Allison Chen

Note:

Rev.(01)

1. Modify antenna gain and measurement average power.

Rev.(02)

1. Added remark description.



TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION 4

2. LIMIT 5

3. EUT SPECIFICATION..... 5

4. TEST RESULTS..... 6

5. MAXIMUM PERMISSIBLE EXPOSURE..... 7

1. TEST RESULT CERTIFICATION

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:



Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), 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 levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

EUT	LTE-FDD/HSPA MODULE
Model	SIM7600AH
Model Discrepancy	N/A
Frequency band (Operating)	<input checked="" type="checkbox"/> LTE Band 2: 1850MHz ~ 1910MHz <input checked="" type="checkbox"/> LTE Band 4: 1710MHz ~ 1755MHz <input checked="" type="checkbox"/> LTE Band 12: 699 MHz ~ 716 MHz <input type="checkbox"/> Others
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure ($S = 5\text{mW/cm}^2$) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ($S=1\text{mW/cm}^2$) Frequency Range 300MHz~1500MHz = $f/1500$ (mW/cm ²) Frequency Range 1500MHz~100000MHz = 1 (mW/cm ²)
Antenna Specification	WWAN FPC Antenna LTE Band 2: Gain : 1.84 dBi (Numeric gain: 1.53) Worst LTE Band 4: Gain : -0.10 dBi (Numeric gain: 0.98) Worst LTE Band 12: Gain : -3.42 dBi (Numeric gain: 0.45) Worst
Maximum Measurement Average Power	WWAN LTE Band 2: 23.48 dBm (222.844 mW) LTE Band 4: 21.89 dBm (154.525 mW) LTE Band 12: 16.85 dBm (48.417 mW)
Maximum tune up power	WWAN LTE Band 2: 25.70 dBm (371.535 mW) LTE Band 4: 25.70 dBm (371.535 mW) LTE Band 12: 25.70 dBm (371.535 mW)
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

LTE Band 2 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
18900	1880	371.535	1.53	20	0.1131	1

LTE Band 4 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
20300	1745	371.535	0.98	20	0.0725	1

LTE Band 12 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
23130	711	371.535	0.45	20	0.0333	0.474

Remark:

The WiFi function could not be transmitted with WWAN simultaneously. And allow in the specific host of Connectpoint Inc., FCC ID: 2AVTJ-CP13.

--End of Report--