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: SIM7600A-H

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: September 3, 2020

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 4, 2020	Initial Issue	ALL	Angel Cheng
01	September 3, 2020	1. Revised application information.	P.1, P.5	Angel Cheng

TABLE OF CONTENTS

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:

Dally Hong
Engineer
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	SIM7600A-H
Model Discrepancy	N/A
Frequency band (Operating)	☒ LTE Band 2: 1850MHz ~ 1910MHz ☒ LTE Band 4: 1710MHz ~ 1755MHz ☒ LTE Band 12: 699 MHz ~ 716 MHz ☐ Others
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation) ☐ Others
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2) Frequency Range 300MHz~1500MHz = f/1500 (mW/cm2) Frequency Range1500MHz~100000MHz = 1 (mW/cm2)
Antenna Specification	**WWAN** PIFA Antenna LTE Band 2: Directional Gain : 3.37 dBi (Numeric gain: 2.17) Worst LTE Band 4: Directional Gain : 3.14 dBi (Numeric gain: 2.06) Worst LTE Band 12: Directional Gain : 0.29 dBi (Numeric gain: 1.07) Worst
Maximum Measurement Average Power	**WWAN** LTE Band 2: 22.55 dBm (179.887 mW) LTE Band 4: 22.58 dBm (181.134 mW) LTE Band 12: 22.36 dBm (172.187 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	☒ MPE Evaluation* ☐ SAR Evaluation ☐ 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

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***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	179.887	2.17	20	0.0777	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	181.134	2.06	20	0.0743	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	172.187	1.07	20	0.0367	0.474

--End of Report--