TEST REPORT

REPORT No.: R2SH180725F0511E Date: August 31, 2018 Page 1 of 7

Shanghai SIMCom Wireless Solutions Ltd
SIM Technology Building, No. 633, Jinzhong Road, Changning District, Shanghai, P.R. China

Report on the submitted samples said to be:

Sample Name	:	LTE/HSPA/GSM/GNSS MODULE
Style/Item No.	:	SIM7600SA,SIM7600SA-H
Brand	:	SIMCom
Sample Receiving Date	:	July 25, 2018
Testing Period	:	From July 25, 2018 to August 7, 2018
Results	:	Please refer to next page(s).

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Summary of Test Results:

TEST REQUEST	**CONCLUSION**
A RoHS Directive 2011/65/EU and its amendment directives	
XRF screening test and Wet Chemical Testing (Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs & PBDEs content)	**Pass**
Phthalates(DBP、BBP、DEHP、DIBP)content	**Pass**

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Signed for and on behalf of BACL

Checked by: _____
Jane Xu
Technical Supervisor

Approved by: _____
William Wei
Laboratory Manager

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Results:

A、RoHS Directive 2011/65/EU and its amendment directives

XRF screening test

Test method: With reference to IEC62321-3-1:2013 screening by X-ray Fluorescence Spectroscopy (XRF)

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
1	White adhesive plastic with black printing (label, shield, PCB)①.②	BL	BL	BL	BL	BL
2*	Silvery metal (shield, PCB) ①.②	BL	BL	BL	IN	---
3	Brown body(capacitor, PCB) ①.②	BL	BL	BL	BL	BL
4	Black body(resistor, PCB) ①.②	BL	BL	BL	BL	BL
5	Black body with white printing(IC, PCB) ①.②	BL	BL	BL	BL	BL
6	Black body with yellow printing(IC, PCB) ①.②	BL	BL	BL	BL	BL
7	Silvery body(crystal, PCB) ①.②	BL	BL	BL	BL	BL
8	Black body(diode, PCB) ①.②	BL	BL	BL	BL	BL
9	Brown magnet (core, inductor, PCB) ①.②	BL	BL	BL	BL	BL
10	Coppery metal(coil, inductor, PCB) ①.②	BL	BL	BL	BL	---
11	Grey body(EC, PCB) ①.②	BL	BL	BL	BL	BL
12	Blue body(EC, PCB) ①.②	BL	BL	BL	BL	BL
13	White body(EC, PCB) ①.②	BL	BL	BL	BL	BL
14	White/grey body(EC, PCB) ①.②	BL	BL	BL	BL	BL
15	Orange body(EC, PCB) ①.②	BL	BL	BL	BL	BL
16	Green PCB(PCB) ①.②	BL	BL	BL	BL	BL
17	Black body(EC, PCB) ①.②	BL	BL	BL	BL	BL
18	Silvery solder(PCB) ①.②	BL	BL	BL	BL	---

Remark: ①SIM7600SA ②SIM7600SA-H

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Remark:
(1)

--- = Not Conducted

* = Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(Ⅵ)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC62321-3-1:2013.

Element	Unit	Polymers	Metal	Composite Material
Cd	mg/kg	BL≤70-3σ< X <130+3σ≤OL	BL≤70-3σ< X <130+3σ≤OL	LOD < X <150+3σ≤OL
Pb	mg/kg	BL≤700-3σ< X <1300+3σ≤OL	BL≤700-3σ< X <1300+3σ≤ OL	BL≤500-3σ< X <1500+3σ≤OL
Hg	mg/kg	BL≤700-3σ< X <1300+3σ≤OL	BL≤700-3σ< X <1300+3σ≤OL	BL≤500-3σ< X <1500+3σ≤OL
Cr	mg/kg	BL≤700-3σ< X	BL≤700-3σ< X	BL≤500-3σ< X
Br	mg/kg	BL≤300-3σ< X	---	BL≤250-3σ< X

BL = Below Limit
OL = Over Limit
IN = Inconclusive
LOD = Limit of Detection

(2) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

(3) The maximum permissible limit is quoted from RoHS directive 2011/65/EU:

RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium(Cd)	100
Lead(Pb)	1000
Mercury (Hg)	1000
Hexavalent Chromium (Cr(Ⅵ))	1000
Polybrominated biphenyls (PBBs)	1000
Polybrominate ddiphenylethers (PBDEs)	1000

(4) As requested by applicant, only components shown in this report were screened by XRF spectroscopy for 2011/65/EU and its amendment directives, other components were not screened included in this report.

(5) Photo appendix is included.

Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

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Wet Chemical Testing：

Test method:

Hexavalent Chromium Content (For metal material):
With reference to IEC 62321-7-1:2015, by boiling-water-extraction and analysis was performed by UV-visible spectrophotometer (UV-Vis)

1) The test results of Cr (Ⅵ)

Item	Unit	MDL	Results	Limit
			2	
Hexavalent Chromium (Cr(Ⅵ))	μg/cm^2	0.10	N.D.	**
Conclusion	/	/	**Pass**	/

Note:

- N.D. = Not Detected or less than MDL
- MDL = Method Detection Limit
- mg/kg = ppm
- ** =
  a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13μg/cm^2. The sample coating is considered to contain CrVI
  b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10μg/cm^2). The coating is considered a non-CrVI based coating
  c. The result between 0.10μg/cm^2 and 0.13μg/cm^2 is considered to be inconclusive -unavoidable coating variations may influence the determination

  For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

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Phthalates(DBP、BBP、DEHP、DIBP)content

Test method: With reference to IEC 62321-8:2017, by gas chromatographic-mass spectrometer (GC-MS)

Item	Unit	MDL	Results		Limit
			1	16	
Dibutyl Phthalate (DBP)	%	0.003	N.D.	N.D.	0.1
Benzylbutyl Phthalate (BBP)	%	0.003	N.D.	N.D.	0.1
Bis-(2-ethylhexyl) Phthalate (DEHP)	%	0.003	N.D.	N.D.	0.1
Diisobutyl Phthalate(DIBP)	%	0.003	N.D.	N.D.	0.1
Conclusion	**/**	**/**	**Pass**	**Pass**	/

Note:

- The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- N.D. = Not Detected or less than MDL
- MDL = Method Detection Limit
- mg/kg = ppm
- Photo is included.

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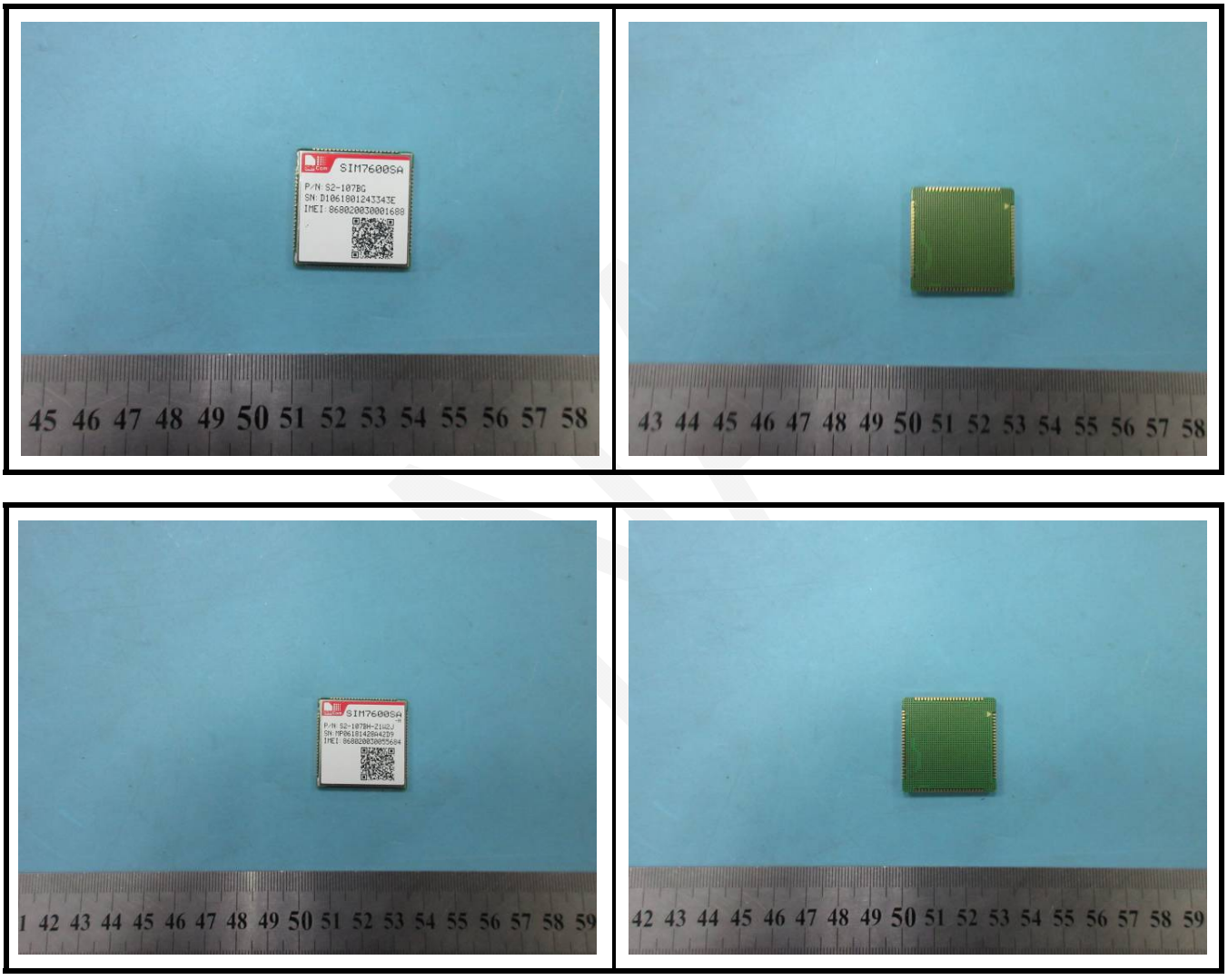
Photograph of Sample



BACL authenticate the photo on original report only

*** End of Report ***