



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Telephone: +86 (0) 21 6191 5666

Fax: +86 (0) 21 6191 5678

ee.shanghai@sgs.com

Report No.: SHEM180600492002

Page: 1 of 7

1 Cover Page

RF MPE REPORT

Application No.:	SHEM1806004920CR
Applicant:	HCS (Suzhou) Limited
FCC ID:	2AGOFRC354A
Equipment Under Test (EUT): NOTE: The following sample(s) was/were submitted and identified by the client as	
Product Name:	Remote Control
Model No.(EUT):	RC3544407/01BR
Add Model No.:	RC35444XX/XXR, RC35444XX/XXBR ("XX"=00-99."B"means packed with battery)
Standards:	FCC Rules 47 CFR §2.1093 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2018-06-19
Date of Test:	2018-06-20 to 2018-06-21
Date of Issue:	2018-06-27
Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards specified above.



Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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 instructions, 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Revision Record			
Version	Description	Date	Remark
00	Original	2018-06-27	/

Authorized for issue by:				
				
		<hr/> Vincent Zhu / Project Engineer		
				
		<hr/> Parlam Zhan / Reviewer		



2 Contents

	Page
1 COVER PAGE.....	1
2 CONTENTS	3
3 GENERAL INFORMATION	4
3.1 CLIENT INFORMATION.....	4
3.1 GENERAL DESCRIPTION OF E.U.T.	4
3.2 TECHNICAL SPECIFICATIONS	4
3.3 TEST LOCATION	5
3.4 TEST FACILITY	5
4 TEST STANDARDS AND LIMITS	6
4.1 FCC RADIOFREQUENCY RADIATION EXPOSURE LIMITS:	6
5 MEASUREMENT AND CALCULATION	7
5.1 MAXIMUM TRANSMIT POWER	7
5.2 MPE CALCULATION.....	7



3 General Information

3.1 Client Information

Applicant:	HCS (Suzhou) Limited
Address of Applicant:	209 Zhu Yuan road, Building 3rd, 19-20 floor, Suzhou new district, P.R.C
Manufacturer:	HCS (Suzhou) Limited
Address of Manufacturer:	209 Zhu Yuan road, Building 3rd, 19-20 floor, Suzhou new district, P.R.C
Factory:	WuJiang Century Billion Electronic Technology Co., Ltd
Address of Factory:	No.149 Tuncun West RD., Tongli Town, Wujiang City, Jiangsu Province, P.R. China

3.1 General Description of E.U.T.

Power supply:	DC 3V by 2xAAA batteries
Test voltage:	DC 3V

3.2 Technical Specifications

Internal source:	24MHz
Antenna Gain	3dBi
Antenna Type	Monopole Antenna
Channel Spacing	2MHz
Modulation Type	GFSK
Number of Channels	40
Operation Frequency	2402MHz to 2480MHz



3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.



4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max power of channel})/(\text{min test separation distance})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion. For 2.4G band device, the limit of worse case is

$$P_{\max} \leq 3.0 \cdot D_{\min} / \sqrt{f} = 3.0 \cdot 5 / \sqrt{2.480} = 9.525 \text{ mW}$$



5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM180600492001.

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
BLE	2402	0.3	1.07
	2442	0.4	1.10
	2480	0.1	1.02

5.2 MPE Calculation

For FCC:

The Max Conducted Peak Output Power is 1.10mW

The best case gain of the antenna is 3dBi. 3dB logarithmic terms convert to numeric result is nearly 1.995.

$$E.I.R.P.=P*G=1.10mW*1.995=2.19mW<9.525mW$$

So the device is exclusion from SAR test.

--End of the Report--