



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

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Report No.: SHEM180600507202

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## 1 Cover Page

# RF MPE REPORT

Application No.:	SHEM18060045072CR
Applicant:	HCS (Suzhou) Limited
FCC ID:	2AGOFRC354B
<b>Equipment Under Test (EUT):</b> <b>NOTE:</b> The following sample(s) was/were submitted and identified by the client as	
Product Name:	Remote Control
Model No.(EUT):	RC3544406/01BR
Add Model No.:	RC35444XX/XXBR, RC35444XX/XX ("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:	2018-06-26
Date of Test:	2018-07-02 to 2018-07-03
Date of Issue:	2018-07-05
Test Result:	<b>Pass*</b>

\* 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.

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Revision Record			
Version	Description	Date	Remark
00	Original	2018-07-06	/

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



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### 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 2*AAA batteries
Test voltage:	DC 3V

#### 3.2 Technical Specifications

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

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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  $\leq 50$  mm are determined by:

$[(\text{max power of channel})/(\text{min test separation distance})]*[\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  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  $\leq 50$  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

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



## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM180600507201.

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
BLE	2402	1.95	1.57
	2442	1.74	1.49
	2480	1.34	1.36



## **5.2 MPE Calculation**

*For FCC:*

The Max Conducted Peak Output Power is 1.57mW

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

$$E.I.R.P.=P*G=1.57mW*1.995=3.13mW<9.525mW$$

So the device is exclusion from SAR test.

**--End of the Report--**