

1 Cover Page

RF Exposure REPORT

Application No.: SHEM2007005983CR
FCC ID: 2AGOFRC421A
Applicant: HCS (Suzhou) Limited
Address of Applicant: 19F-20F, Building B-3rd, No. 209 Zhuyuan Road, New District, Suzhou, P.R. China
Factory: WUJIANG CENTURY BILLION ELECTRONIC TECHNOLOGY CO., LTD
Address of Factory: No.149 West Tun Cun Road Tongli Town Wujiang Suzhou Jiangsu People's Republic of China 215216

Equipment Under Test (EUT):
EUT Name: Remote Control
Model No.: RC4213403/02BR,
Add Model No.: RC4213801/02BR, RC4213401/02BR ,RC4213402/02BR, Babylon RCU,RC421XXXX/XXR,RC421XXXX/XXBR ("X"=0-9."B"means packed with battery)

Standard(s) : FCC Rules 47 CFR §2.1093
 KDB447498 D01 General RF Exposure Guidance v06

Date of Receipt: 2020-07-20
Date of Test: 2020-09-16 to 2020-10-17
Date of Issue: 2020-10-19

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan

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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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com



Revision Record			
Version	Description	Date	Remark
00	Original	2020-10-19	/

Authorized for issue by:			
			
		<hr/>	
		Bill Wu / Project Engineer	
			
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		Parlam Zhan /Reviewer	



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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 3.0V By 2*AAA size batteries
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3.2 Details of E.U.T.

BLE

Antenna Gain:	-5dBi
Antenna Type:	PCB Antenna
Bluetooth Version:	V5.0 LE
Data Rate:	1 Mbps,2 Mbps
Channel Spacing:	2MHz
Modulation Type:	GFSK
Number of Channels:	40
Operation Frequency:	2402MHz to 2480MHz

RF4CE

Antenna Gain:	-5dBi
Antenna Type:	PCB Antenna
Channel Spacing:	5MHz
Modulation Type:	O-QPSK
Number of Channels:	16
Operation Frequency:	2405MHz to 2480MHz

3.3 Test Location

All tests were performed at:

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

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

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

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 17025:2017 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 (LAB CODE: 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

• **FCC (Designation Number: CN5033)**

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

• **ISED (CAB Identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

• **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:

$[(\text{max power of channel})/(\text{min test separation distance})]^*[\sqrt{f(\text{GHz})}] \leq 3.0$ 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

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

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM200700598301& SHEM200700598302.

Test Data:

Test Mode	Test Channel	Power[dBm]		Power[mW]	
		1M	2M	1M	2M
BLE	2402	4.71	4.73	2.96	2.97
BLE	2440	5.03	5.01	3.18	3.17
BLE	2480	4.15	4.08	2.60	2.56

Test Mode	Test Channel	Power[dBm]	Power[mW]
RF4CE	2405	4.74	2.98
RF4CE	2440	5.02	3.18
RF4CE	2480	4.18	2.62

5.2 RF Exposure Calculation

The Max Conducted Peak Output Power is 3.18mW.

Conducted Peak Output Power =3.18mW < 9.525mW

So the SAR report is not required.

--End of the Report--