

## 1 Cover Page

# ***RF Exposure REPORT***

<b>Application No.:</b>	SHEM1908016531CR
<b>FCC ID:</b>	WWIOX200
<b>Applicant:</b>	Beijing Choice Electronic Technology Co., Ltd. Room 4104, No. A12 Yuquan Road, Haidian District, 100143 Beijing, PEOPLE'S REPUBLIC OF CHINA.
<b>Manufacturer:</b>	Beijing Choice Electronic Technology Co., Ltd. Room 4104, No. A12 Yuquan Road, Haidian District, 100143 Beijing, PEOPLE'S REPUBLIC OF CHINA.
<b>Address of Manufacturer:</b>	Beijing Choice Electronic Technology Co., Ltd. Room 4104, No. A12 Yuquan Road, Haidian District, 100143 Beijing, PEOPLE'S REPUBLIC OF CHINA.
<b>Factory:</b>	Beijing Choice Electronic Technology Co., Ltd. No.9 Shuangyuan Rd., Badachu Hi-tech Zone, Shijingshan District, 100041 Beijing, P.R. China.
<b>Address of Factory:</b>	Beijing Choice Electronic Technology Co., Ltd. No.9 Shuangyuan Rd., Badachu Hi-tech Zone, Shijingshan District, 100041 Beijing, P.R. China.
<b>Equipment Under Test (EUT):</b>	
<b>EUT Name:</b>	SMART pulse oximeter
<b>Model No.:</b>	OX200
<b>Trade mark:</b>	iChoice
<b>Standard(s) :</b>	FCC Rules 47 CFR §2.1093 KDB447498 D01 General RF Exposure Guidance v06
<b>Date of Receipt:</b>	2019-08-22
<b>Date of Test:</b>	2019-08-27 to 2019-09-05
<b>Date of Issue:</b>	2019-09-05
<b>Test Result:</b>	Pass*

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

paran zhau

Parlam Zhan  
E&F 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.

Unless otherwise agreed 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-Dокумент.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.

**Attention: To check the authenticity of testing inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, email: CN\_Recheck@cnrecheck.com**



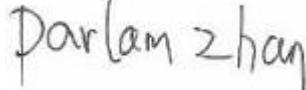
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.  
Testing Center EMC Laboratory

or email: CN.Doccheck@sgs.com  
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612  
中国·上海·松江区金都西路588号 邮编: 201612

t(86-21)61915666 f(86-21)61915678 e sgs.china@sgs.com  
www.sgsgroup.com.cn

Member of the SGS Group (SGS SA)

Revision Record			
Version	Description	Date	Remark
00	Original	2019-09-05	/

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

## **2 Contents**

	Page
<b>1 COVER PAGE.....</b>	<b>1</b>
<b>2 CONTENTS .....</b>	<b>3</b>
<b>3 GENERAL INFORMATION.....</b>	<b>4</b>
3.1 GENERAL DESCRIPTION OF E.U.T.....	4
3.2 DETAILS OF E.U.T.....	4
3.3 TEST LOCATION.....	5
3.4 TEST FACILITY.....	5
<b>4 TEST STANDARDS AND LIMITS .....</b>	<b>6</b>
4.1 FCC RADIOFREQUENCY RADIATION EXPOSURE LIMITS.....	6
<b>5 MEASUREMENT AND CALCULATION.....</b>	<b>7</b>
5.1 MAXIMUM TRANSMIT POWER .....	7
5.2 RF EXPOSURE CALCULATION.....	7

### **3 General Information**

#### **3.1 General Description of E.U.T.**

Power supply:	DC 3.7V 250mAh rechargeable lithium battery
Test voltage:	DC 3.7V
Cable:	USB Cable 20cm

#### **3.2 Details of E.U.T.**

Antenna Gain	0.5dBi
Antenna Type	Ceramic 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 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 17025:2005 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-3868,C-4336,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 SHEM190801653101.

**Test Data:**

Test Mode	Test Channel	Power[dBm]	Peak Power (mW)
BLE	2402	-0.84	0.82
BLE	2440	-0.8	<b>0.83</b>
BLE	2480	-1.15	0.77

### **5.2 RF Exposure Calculation**

The Max Conducted Peak Output Power is 0.83mW. The best case gain of the antenna is 0.5dBi. 0.5dBi logarithmic terms convert to numeric result is nearly 1.12

According to the formula. calculate the EIRP test result:

$$\text{EIRP} = P \times G = 0.83 \text{ mW} \times 1.12 = 0.93 \text{ mW} < 9.525 \text{ mW}$$

So the SAR report is not required.

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