



**1 Cover Page**

# ***RF Exposure REPORT***

**Application No.:** SHEM1810009626CR  
**FCC ID:** KWC-RC1  
**Applicant:** Sonova USA Inc.  
**Address of Applicant:** 4520 Weaver Parkway,Warrenville Illinois United States.  
**Manufacturer:** Sonova AG  
**Address of Manufacturer:** Laubisrütistrasse 28, CH-8712 Stäfa • Switzerland  
**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.:** Phonak RemoteControl  
**Add Model No.:** Remote Control  
**Standard(s) :** FCC Rules 47 CFR §2.1093  
 KDB447498 D01 General RF Exposure Guidance v06

**Date of Receipt:** 2018-10-31  
**Date of Test:** 2019-04-17 to 2019-04-22  
**Date of Issue:** 2019-04-24

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>Pass*</b> |
|---------------------|--------------|

\* 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](mailto:CN.Doccheck@sgs.com)**

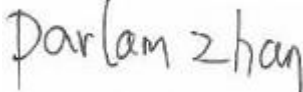
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| Revision Record |             |            |        |
|-----------------|-------------|------------|--------|
| Version         | Description | Date       | Remark |
| 00              | Original    | 2019-04-24 | /      |
|                 |             |            |        |
|                 |             |            |        |

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|-----------------------------|--|--|--|
| Authorized for issue<br>by: |  |  |  |
|                             |  |   |  |
|                             |  | <hr/>  |  |
|                             |  | Bill Wu / Project Engineer   |  |
|                             |  |  |  |
|                             |  | <hr/>  |  |
|                             |  | 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 3V By CR2032 |
| Cable:        | DC 3V           |

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

|                     |                    |
|---------------------|--------------------|
| 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 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.

- **Innovation, Science and Economic Development Canada**

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

IC Registration No.: 8617A-1. CAB identifier: CN0020.

- **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:

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

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

## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM181000962601.

**Test Data:**

| Test Mode | Test Channel | Power[dBm] | Peak Power (mW) |
|-----------|--------------|------------|-----------------|
| BLE       | 2402         | 1.34       | <b>1.36</b>     |
| BLE       | 2442         | 0.91       | 1.23            |
| BLE       | 2480         | -0.05      | 0.99            |

### 5.2 RF Exposure Calculation

The Max Conducted Peak Output Power is 1.36mW. The best case gain of the antenna is -3dBi. -3dBi logarithmic terms convert to numeric result is nearly 0.5

According to the formula. calculate the EIRP test result:

$$\text{EIRP} = P \times G = 1.36 \text{ mW} \times 0.5 = 0.68\text{mW} < 9.525\text{mW}$$

So the SAR report is not required.

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