



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR231100381104

Page: 1 of 7

# RF EXPOSURE EVALUATION REPORT

**Application No.:** SZCR2311003811AT  
**Applicant:** Voyetra Turtle Beach, Inc.  
**Address of Applicant:** 44 South Broadway 4th Floor, White Plains, New York, 10601, United States  
**Manufacturer:** Voyetra Turtle Beach, Inc.  
**Address of Manufacturer:** 44 South Broadway 4th Floor, White Plains, New York, 10601, United States  
**Factory:** Acoustic Innovation (Huizhou) Co., Ltd.  
**Address of Factory:** (Innovation Factory) Xiangshuihe, Dayawan, Huizhou City, Guangdong Province, P.R. China  
**Equipment Under Test (EUT):**  
**EUT Name:** Wireless Headset  
**Model No.:** HWBB0004  
**Trade Mark:** Turtle Beach  
**FCC ID:** XGB-HWBB0004  
**Standard(s) :** 47 CFR PART 1, Subpart I, Section 1.1310  
47 CFR PART 2, Subpart J, Section 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2023-11-24  
**Date of Evaluation:** 2023-11-28 to 2023-12-25  
**Date of Issue:** 2023-12-29

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

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

Keny Xu  
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (EMC) Laboratory

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No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2023-12-29 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                            |  |  |
|--------------------------|--|----------------------------|--|--|
| Authorized for issue by: |  |                            |  |  |
|                          |  | Gebin Sun                  |  |  |
|                          |  | Gebin Sun/Project Engineer |  |  |
|                          |  | Eric Fu                    |  |  |
|                          |  | Eric Fu/Reviewer           |  |  |



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中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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## 3 General Information

### 3.1 Details of E.U.T.

|                              |                                                                    |
|------------------------------|--------------------------------------------------------------------|
| Power supply:                | Rechargeable battery DC3.7V,800mAh for headset                     |
| Cable(s):                    | Type-C USB cable:185cm unshielded<br>AUX IN cable:190cm unshielded |
| For BT of headset            |                                                                    |
| Operation Frequency:         | 2402MHz to 2480MHz                                                 |
| Bluetooth Version:           | V5.3                                                               |
| Modulation Type:             | GFSK, Pi/4DQPSK, 8DPSK                                             |
| Number of Channels:          | 79                                                                 |
| Channel Spacing:             | 1MHz                                                               |
| Antenna Type:                | PIFA                                                               |
| Antenna Gain:                | 4.49dBi                                                            |
| For 2.4G property of headset |                                                                    |
| Operation Frequency:         | 2402MHz to 2480MHz                                                 |
| Modulation Type:             | GFSK                                                               |
| Channel Spacing:             | 2MHz                                                               |
| Number of Channels:          | 40                                                                 |
| Antenna Type:                | PIFA                                                               |
| Antenna Gain:                | 4.49dBi                                                            |

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.



## 3.2 Test Location

All tests were performed at:

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

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

## 3.3 Test Facility

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

### • A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

### • VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

### • FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

### • Innovation, Science and Economic Development Canada

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

CAB identifier: CN0006.

IC#: 4620C.

## 3.4 Deviation from Standards

None

## 3.5 Abnormalities from Standard Conditions

None



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## 4 SAR Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 4.1.2 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:

$$\left[ \frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] \cdot \left[ \sqrt{f(\text{GHz})} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion



### 4.1.3 EUT RF Exposure

#### For BT of Headset:

Antenna Gain:4.49dBi

The Max. power (including tune-up tolerance) is 7.42 dBm on the highest channel 2.48 GHz (\*)  
7.42 dBm logarithmic terms convert to numeric result is nearly 5.52 mW

According to the formula. calculate the test exclusion thresholds:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

$$\text{General RF Exposure} = (5.52 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 1.74 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.: SZCR231100381102

#### For 2.4G property of headset:

Antenna Gain:4.49dBi

The Max. power (including tune-up tolerance) is 7.3 dBm on the highest channel 2.48 GHz (\*)  
7.30 dBm logarithmic terms convert to numeric result is nearly 5.37 mW

According to the formula. calculate the test exclusion thresholds:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$$

$$\text{General RF Exposure} = (5.37 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 1.69 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.: SZCR231100381103

- End of the Report -

