

# FCC RF Exposure Report

For

**ORAIMO TECHNOLOGY LIMITED**

**FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT**

**HONGKONG**

**Model: OBS-682**

Test Engineer: Xu Yihan *Xu Yihan*

Report Number: WSCT-ANAB-R&E250200010A-SAR

Report Date: 25 February 2025

FCC ID: 2AXYP-OBS-682

Check By: Wei Liangmei *Wei Liangmei*

Approved By: Li Huaibi *Li Huaibi*

World Standardization Certification & Testing Group  
(Shenzhen) Co., Ltd.  
Prepared By: Building A-B, Baoli'an Industrial Park, No.58 and  
60, Tangtou Avenue, Shiyan Street, Bao'an District,  
Shenzhen City, Guangdong Province, China  
Tel: +86-755-26996192  
Fax: +86-755-86376605



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## Modified History

| REV.    | Modification Description    | Issued Date      | Remark    |
|---------|-----------------------------|------------------|-----------|
| REV.1.0 | Initial Test Report Release | 25 February 2025 | Li Huaibi |
|         |                             |                  |           |

## 1 General information

### 1.1 Notes

The test results of this test report relate exclusively to the test item specified in this test report. Shenzhen Timeway Testing Laboratories does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report is not to be reproduced or published in full without the prior written permission.

## 1.2 EUT Information

| Device Information:                     |                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------|
| Product Type:                           | Portable Wireless Speaker                                                              |
| Model:                                  | OBS-682                                                                                |
| Trade Name:                             | oraimo                                                                                 |
| Device Type:                            | Portable device                                                                        |
| Exposure Category:                      | uncontrolled environment / general population                                          |
| Production Unit or Identical Prototype: | Production Unit                                                                        |
| Antenna Type :                          | Integral Antenna                                                                       |
| Device Operating Configurations:        |                                                                                        |
| Modulation:                             | GFSK, $\pi/4$ -DQPSK, 8-DPSK                                                           |
| Channel Separation:                     | BT:1MHz<br>BLE: 2MHz                                                                   |
| Operation Frequency:                    | 2402MHz~2480MHz                                                                        |
| Antenna Gain:                           | 4.95dBi                                                                                |
| Power Source:                           | Li-ion Polymer Battery: 21700<br>Nominal Voltage: 7.4V<br>Rated Capacity: 5000mAh/37Wh |

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## 2 Testing laboratory

|               |                                                                                                                                                                      |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site     | World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.                                                                                             |
| Laboratory A: | Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China                       |
| Laboratory B: | Building J-7F and Building D, Dongjiang Science & Technology Park, Tangjia Community, Fenghuang Street, Guangming District, Shenzhen City, Guangdong Province, China |

## 3 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

|              |                                                                                              |                                                  |
|--------------|----------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>CBTL</b>  | IECEE (international Electrotechnical Commiss, The certificate registration number is TL672) | Laboratory A <input type="checkbox"/>            |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |
| <b>China</b> | CNAS (The certificated registration number: L3732)                                           | Laboratory A <input type="checkbox"/>            |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |
| <b>USA</b>   | A2LA (The certificated registration number: 5768.01)                                         | Laboratory A <input type="checkbox"/>            |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |
| <b>USA</b>   | ANAB (The certificated registration number: AT-3951)                                         | Laboratory A <input checked="" type="checkbox"/> |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.wsct-cert.com>

## 4 Applicant and Manufacturer

|                               |                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------|
| <b>Applicant/Client Name:</b> | ORAIMO TECHNOLOGY LIMITED                                                                  |
| <b>Applicant Address:</b>     | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE<br>19-25 SHAN MEI STREET FOTAN NT HONGKONG |
| <b>Manufacturer Name:</b>     | ORAIMO TECHNOLOGY LIMITED                                                                  |
| <b>Manufacturer Address:</b>  | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE<br>19-25 SHAN MEI STREET FOTAN NT HONGKONG |

## 5 Test standard/s:

| No. | Identity           | Document Title                                                  |
|-----|--------------------|-----------------------------------------------------------------|
| 1   | 47 CFR Part 15C    | Radio frequency devices intentional radiators                   |
| 2   | 47 CFR Part 2.1093 | Radio frequency radiation exposure evaluation: portable devices |
| 3   | KDB447498 D01      | General RF Exposure Guidance v06                                |

## 6 Test result

### I .According KDB 447498 D01 4.3.1 General SAR test exclusion guidance

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 Test Exclusion Threshold condition(s), listed below, is (are) satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance defined in 4.1 f) is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified, typically in the SAR measurement or SAR analysis report, by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting are required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops and tablets, etc.

a) For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

$$[\sqrt{f \text{ (GHz)}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

1).f (GHz) is the RF channel transmit frequency in GHz

2) Power and distance are rounded to the nearest mW and mm before calculation

3) The result is rounded to one decimal place for comparison

4) The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

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.

## BT:

| Test Mode      | Channel Frequency (GHz) | Conducted power (dBm) | Conducted power (mW) | Max tune-up power (dBm) | Max tune-up power (mW) | Distance (mm) | Result calculation | SAR Exclusion threshold | SAR test exclusion |
|----------------|-------------------------|-----------------------|----------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| GFSK           | 2.402                   | 7.74                  | 5.94                 | 8.00                    | 6.31                   | 5.00          | 1.956              | 7.50                    | Yes                |
|                | 2.441                   | 6.79                  | 4.78                 | 8.00                    | 6.31                   | 5.00          | 1.972              | 7.50                    | Yes                |
|                | 2.480                   | 6.34                  | 4.31                 | 8.00                    | 6.31                   | 5.00          | 1.987              | 7.50                    | Yes                |
| $\pi/4$ -DQPSK | 2.402                   | 9.55                  | 9.02                 | 10.00                   | 10.00                  | 5.00          | 3.100              | 7.50                    | Yes                |
|                | 2.441                   | 8.72                  | 7.45                 | 10.00                   | 10.00                  | 5.00          | 3.125              | 7.50                    | Yes                |
|                | 2.480                   | 8.35                  | 6.84                 | 10.00                   | 10.00                  | 5.00          | 3.150              | 7.50                    | Yes                |
| 8-DPSK         | 2.402                   | 9.82                  | 9.59                 | 10.00                   | 10.00                  | 5.00          | 3.100              | 7.50                    | Yes                |
|                | 2.441                   | 9.17                  | 8.26                 | 10.00                   | 10.00                  | 5.00          | 3.125              | 7.50                    | Yes                |
|                | 2.480                   | 8.73                  | 7.46                 | 10.00                   | 10.00                  | 5.00          | 3.150              | 7.50                    | Yes                |

## BLE:

| Test Mode | Channel Frequency (GHz) | Conducted power (dBm) | Conducted power (mW) | Max tune-up power (dBm) | Max tune-up power (mW) | Distance (mm) | Result calculation | SAR Exclusion threshold | SAR test exclusion |
|-----------|-------------------------|-----------------------|----------------------|-------------------------|------------------------|---------------|--------------------|-------------------------|--------------------|
| BLE(1M)   | 2.402                   | 4.91                  | 3.10                 | 5.00                    | 3.16                   | 5.00          | 0.980              | 7.50                    | Yes                |
|           | 2.440                   | 4.09                  | 2.56                 | 5.00                    | 3.16                   | 5.00          | 0.988              | 7.50                    | Yes                |
|           | 2.480                   | 3.55                  | 2.26                 | 5.00                    | 3.16                   | 5.00          | 0.996              | 7.50                    | Yes                |
| BLE(2M)   | 2.402                   | 4.91                  | 3.10                 | 5.00                    | 3.16                   | 5.00          | 0.980              | 7.50                    | Yes                |
|           | 2.440                   | 4.14                  | 2.59                 | 5.00                    | 3.16                   | 5.00          | 0.988              | 7.50                    | Yes                |
|           | 2.480                   | 3.55                  | 2.26                 | 5.00                    | 3.16                   | 5.00          | 0.996              | 7.50                    | Yes                |

## 7 Conclusion

For the max result:  $3.150 \leq \text{FCC Limit } 7.5$  for 1g SAR.

--END OF REPORT--