# RF Exposure Evaluation Report

| | |
|---|---|
| **Application No.:** | DNT2412160414R5826-07794 |
| **Applicant:** | Rupt Group Corporation |
| **Address of Applicant:** | 800 Interchange Blvd Suite 103 Austin,Texas 78721 |
| **EUT Description:** | TWS earphone |
| **Model No.:** | Migobuds |
| **FCC ID:** | 2BOS6-MIGOBUDS |
| **Power Supply (Charging Box):** | Input:DC 5V;<br>DC 3.7V From 230mAh rechargeable lithium-ion battery |
| **Power Supply (Earphone ):** | DC 3.7V by 30mAh rechargeable lithium-ion battery |
| **Standards:** | 47 CFR Part 2.1093<br>FCC KDB 447498 D04 v01 |
| **Trade Mark:** | / |
| **Date of Receipt:** | 2024/12/17 |
| **Date of Test:** | 2024/12/18 to 2024/12/30 |
| **Date of Issue:** | 2024/12/30 |
| **Test Result:** | **PASS** |

**Prepared By:** Wayne.Lin (Testing Engineer)

**Reviewed By:** Pencils.Chen (Project Engineer)

**Approved By:** Yeise Chen (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

**Dongguan DN Testing Co., Ltd.**

Add: No. 1, West Fourth Street, Xingfa South Road, Wusha Community, Chang 'an Town, Dongguan City, Guangdong P.R.China

Web: www.dn-testing.com Tel:+86-769-88087383 E-mail: service@dn-testing.com

**Report Revise Record**

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|---|---|---|---|---|
| V2.0 | / | Dec.30, 2024 | Valid | Original Report |

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# 1 General Information

## 1.1 Test Location

| | |
|---|---|
| Company: | Dongguan DN Testing Co., Ltd |
| Address: | No. 1, West Fourth Street, South Xinfa Road, Wusha Liwu, Chang ' an Town, Dongguan City, Guangdong P.R.China |
| Test engineer: | Wayne Lin |

## 1.2 General Description of EUT

| | |
|---|---|
| Manufacturer: | Shenzhen YABITE international Electronics co.,Ltd |
| Address of Manufacturer: | 1504, W2 Chengxin Building, Tianan Shenchuanggu West District, Xiangxin East Road, Fenggang Town, Dongguan City Guangdong |
| EUT Description: | TWS earphone |
| Test Model No.: | Migobuds |
| Additional Model(s): | / |
| Chip Type: | AD6983D4 |
| Serial number: | PR2412160414R5826 |
| Trade Mark: | / |
| Hardware Version: | V1.0 |
| Software Version: | V1.0 |
| Sample Type: | ☒ Portable Device, ☐ Module,☐ Mobile Device |
| Antenna Type: | ☐ External, ☒ Integrated |
| Antenna Gain: | ☒ Provided by applicant |
| | 2.7dBi |

Remark:

*All models are just color differences, motherboard, PCB circuit board, chip, electronic components, appearance all the same.

*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.

## 1.3 Test Facility

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

**Lab A:**

**• FCC, USA**

Designation Number: CN1348

**• A2LA (Certificate No. 7050.01)**

DONGGUAN DN TESTING CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 7050.01.

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

DONGGUAN DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory. CAB identifier is CN0149.

IC#: 30755.

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## 1.4 Measurement Uncertainty (95% confidence levels, k=2)

| No. | Item | Measurement Uncertainty |
|---|---|---|
| 1 | 20dB Emission Bandwidth | ±0.0196% |
| 2 | Carrier Frequency Separation | ±1.9% |
| 3 | Number of Hopping Channel | ±1.9% |
| 4 | Time of Occupancy | ±0.028% |
| 5 | Max Peak Conducted Output Power | ±0.743 dB |
| 6 | Band-edge Spurious Emission | ±1.328 dB |
| 7 | Conducted RF Spurious Emission | 9KHz-1GHz:±0.746dB<br>1GHz-26GHz:±1.328dB |

| No. | Item | Measurement Uncertainty |
|---|---|---|
| 1 | Conduction Emission | ± 3.0dB (150kHz to 30MHz) |
| 2 | Radiated Emission | ± 4.8dB (Below 1GHz) |
| | | ± 4.8dB (1GHz to 6GHz) |
| | | ± 4.5dB (6GHz to 18GHz) |
| | | ± 5.02dB (Above 18GHz) |

# 2 RF Exposure Evaluation

## 2.1 RF Exposure Compliance Requirement

### 2.1.1 Limits

Human exposure to RF emissions from portable devices (47 CFR §2.1093), as defined by the FCC, must be evaluated with respect to the FCC-adopted limits for SAR. Evaluation of mobile devices, as defined by the FCC, may also be performed with respect to SAR limits, but in such cases it is usually simpler and more cost-effective to evaluate compliance with respect to field strength or power density limits. For certain devices that are designed to be used in both mobile and portable configurations similar to those described in 47 CFR §2.1091(d)(4), such as certain desktop phones and wireless modem modules, compliance for mobile configurations is also satisfied when the same device is evaluated for SAR compliance in portable configurations.

Refer to 47 CFR §2.1093:

A portable device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that the RF source's radiating structure(s) is/are within 20 centimeters of the body of the user.

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for portable devices having single RF sources with more than an available maximum time-averaged power of 1 mW, more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), or more than the Pth in the following formula, whichever is greater. The following formula shall only be used in conjunction with portable devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 0.5 centimeters to 20 centimeters and frequencies from 0.3 GHz to 6 GHz.

$$P_{th}\ (\text{mW}) = \begin{cases} ERP_{20\ \text{cm}}(d/20\ \text{cm})^x & d \le 20\ \text{cm} \\ ERP_{20\ \text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \quad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ \text{cm}}\sqrt{f}}\right)$$

and $f$ is in GHz, $d$ is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

| Frequency (MHz) | Distance (mm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 300 | 39 | 65 | 88 | 110 | 129 | 148 | 166 | 184 | 201 | 217 |
| 450 | 22 | 44 | 67 | 89 | 112 | 135 | 158 | 180 | 203 | 226 |
| 835 | 9 | 25 | 44 | 66 | 90 | 116 | 145 | 175 | 207 | 240 |
| 1900 | 3 | 12 | 26 | 44 | 66 | 92 | 122 | 157 | 195 | 236 |
| 2450 | 3 | 10 | 22 | 38 | 59 | 83 | 111 | 143 | 179 | 219 |
| 3600 | 2 | 8 | 18 | 32 | 49 | 71 | 96 | 125 | 158 | 195 |
| 5800 | 1 | 6 | 14 | 25 | 40 | 58 | 80 | 106 | 136 | 169 |

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 300 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.

### 2.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

### 2.1.3 EUT RF Exposure Evaluation

| Mode | Fre (MHz) | Peak Conducted output Power (dBm) | Target power (dBm) | Antenna Gain (dBi) | Max. E.R.P (dBm) | Max. Target power (mW) | SAR Test Exemption Limit (mW) | Distance (mm) |
|---|---|---|---|---|---|---|---|---|
| GFSK | 2402 | -6.07 | -6±1 | 2.7 | -4.45 | 0.359 | 3 | 5 |
| | 2441 | -5.31 | -5±1 | 2.7 | -3.45 | 0.452 | 3 | 5 |
| | 2480 | -8.01 | -8±1 | 2.7 | -6.45 | 0.226 | 3 | 5 |
| π/4-DPQSK | 2402 | -4.88 | -4±1 | 2.7 | -2.45 | 0.569 | 3 | 5 |
| | 2441 | -4.54 | -4±1 | 2.7 | -2.45 | 0.569 | 3 | 5 |
| | 2480 | -7.27 | -7±1 | 2.7 | -5.45 | 0.285 | 3 | 5 |

Note:

1. E.R.P=Conducted output Power+Antenna Gain -2.15.
2. SAR Test Exclusion Thresholds is 3mW for separation distance 5mm. Therefore, SAR test is not required.

The End Report