REPORT No. : SZ15100011S01

# RF EXPOSURE EVALUATION REPORT

| | | |
|---|---|---|
| **APPLICANT** | : | R. E. A. C. ELECTRONIC CO., LTD. |
| **PRODUCT NAME** | : | BLE Heart Rate Activity Tracker |
| **MODEL NAME** | : | BT008 |
| **TRADE NAME** | : | N/A |
| **BRAND NAME** | : | N/A |
| **FCC ID** | : | 2ABZ6-BT008 |
| **STANDARD(S)** | : | 47CFR 2.1093<br>KDB 447498 D01 General RF Exposure Guidance v05r02 |
| **ISSUE DATE** | : | 2015-10-20 |

**SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.**

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| Change History | | |
|---|---|---|
| Issue | Date | Reason for change |
| 1.0 | 2015-10-20 | First edition |
| | | |

# TEST REPORT DECLARATION

| | |
|---|---|
| Applicant | R. E. A. C. ELECTRONIC CO., LTD. |
| Applicant Address | 7/F.,O.T.B.Building, 259-265 Des Voeux Road Central, HongKong; |
| Manufacturer | REAC INDUSTRIAL CO.LTD. |
| Manufacturer Address | ZHONGFANG GONG YE QU, SHATOU GUAN LI QU, CHANGAN TOWN, DONGGUAN CITY, GUANGDONG, P. R. CHINA |
| Product Name | BLE Heart Rate Activity Tracker |
| Model Name | BT008 |
| Brand Name | N/A |
| HW Version | BT008-0(MB)R2 |
| SW Version | bt008 V2.0.8 |
| Test Standards | 47CFR 2.1093;<br>KDB 447498 D01 General RF Exposure Guidance v05r02 |
| Issue Date | 2015-10-20 |
| SAR Evaluation | Not Required |

Tested by : Liu Jun

Liu Jun

Reviewed by : Zhu Zhan

Zhu Zhan

Approved by : Zeng Dexin

Zeng Dexin

# 1. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

## 1.1. Identification of Applicant

| | |
|---|---|
| Company Name: | R. E. A. C. ELECTRONIC CO., LTD. |
| Address: | 7/F.,O.T.B.Building, 259-265 Des Voeux Road Central, HongKong; |

## 1.2. Identification of Manufacturer

| | |
|---|---|
| Company Name: | REAC INDUSTRIAL CO.LTD. |
| Address: | ZHONGFANG GONG YE QU, SHATOU GUAN LI QU, CHANGAN TOWN, DONGGUAN CITY, GUANGDONG, P. R. CHINA |

## 1.3. Equipment Under Test (EUT)

| | |
|---|---|
| Model Name: | BT008 |
| Trade Name: | N/A |
| Brand Name: | N/A |
| Hardware Version: | BT008-0(MB)R2 |
| Software Version: | bt008 V2.0.8 |
| Frequency Bands: | Bluetooth4.0:2402-2480MHz; |
| Modulation Mode: | Bluetooth4.0: GFSK |
| Antenna type: | Fixed Internal Antenna |
| Development Stage: | Identical prototype |

### 1.3.1. Photographs of the EUT

1. EUT front view

2. EUT rear view

### 1.3.2. Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

| EUT Identity | Hardware Version | Software Version |
|---|---|---|
| 1# | BT008-0(MB)R2 | bt008 V2.0.8 |

## 1.4. Applied Reference Documents

Leading reference documents for testing:

| No. | Identity | Document Title |
|---|---|---|
| 1 | **47 CFR§2.1093** | Radiofrequency Radiation Exposure Evaluation: portable devices |
| 2 | **KDB 447498 D01v05r02** | General RF Exposure Guidance |

# 2. DEVICE CATEGORY AND RF EXPOSURE LIMIT

Per user manual, this device is a Bluetooth Heart Rate Activity Tracker. Based on 47CFR 2.1093, this device belongs to portable device category with General Population/Uncontrolled exposure.

**Portable Devices:**

47CFR 2.1093(b)

For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

**GENERAL POPULATION / UNCONTROLLED EXPOSURE**

47CFR 2.1093(d) (2)

Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.

## 3. MEASUREMENT OF CONDUCTED PEAK OUTPUT POWER

1. BT peak output power

| Band | Channel | Frequency (MHz) | Output Power(dBm) |
|---|---|---|---|
| | | | GFSK |
| BT | 0 | 2402 | 1.10 |
| | 19 | 2440 | 1.31 |
| | 39 | 2480 | 1.00 |

## 4. RF EXPOSURE EVALUATION

The device only incorporates a Bluetooth transmitter, so standalone SAR evaluation is required for Bluetooth and simultaneous SAR is not required.

Standalone transmission SAR evaluation

According to KDB 447498 section 4.3.1, the 1-g SAR test exclusion thresholds at test separation Distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)] ≤ 3.0
The maximum tune-up limit power is **1.41mW @ 2.440GHz**
When Bluetooth Heart Rate Activity Tracker is worn on the hand, BT antenna spacing 0mm from body, so use **5mm** as the most conservative minimum test separation distance,
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)] **=0.44** ≤ 3.0
So SAR evaluation is not required for this device.

# ANNEX A GENERAL INFORMATION

## 1. Identification of the Responsible Testing Laboratory

| | |
|---|---|
| Company Name: | Shenzhen Morlab Communications Technology Co., Ltd. |
| Department: | Morlab Laboratory |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |
| Responsible Test Lab Manager: | Mr. Su Feng |
| Telephone: | +86 755 36698555 |
| Facsimile: | +86 755 36698525 |

## 2. Identification of the Responsible Testing Location

| | |
|---|---|
| Name: | Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |

## 3. Accreditation Certificate

Accredited Testing Laboratory: CNAS No. L3572
(Shenzhen Morlab Communications Technology Co., Ltd.)

***** END OF REPORT *****