



REPORT No. : SZ17050127S03

# RF EXPOSURE EVALUATION REPORT

**APPLICANT** : FenSens, Inc

**PRODUCT NAME** : Tap QuickLaunch Button

**MODEL NAME** : FEN-BTTNV1

**TRADE NAME** : FenSens

**BRAND NAME** : FenSens

**IC** : 22794-BTTNV1

**STANDARD(S)** : RSS-102, Issue 5-2015

**ISSUE DATE** : 2017-07-03

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

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## DIRECTORY

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| Change History |            |                   |
|----------------|------------|-------------------|
| Issue          | Date       | Reason for change |
| 1.0            | 2017-07-03 | First edition     |
|                |            |                   |

**TEST REPORT DECLARATION**

|                      |  |
|----------------------|--|
| Applicant            | FenSens, Inc   |
| Applicant Address    | 383 E. Laurel Rd, Bellingham, WA 98226, USA  |
| Manufacturer         | NOA Labs Ltd.  |
| Manufacturer Address | 709 Bldg C HuangDu GuangChang Building YiTian Road,<br>Futian District, Shenzhen, 518000, Guangdong, China |
| Product Name         | Tap QuickLaunch Button   |
| Model Name           | FEN-BTTNV1   |
| Brand Name           | FenSens  |
| HW Version           | V1.0.0   |
| SW Version           | V1.0.2   |
| Test Standards       | RSS-102, Issue 5-2015  |
| Issue Date           | 2017-07-03   |
| SAR Evaluation       | Not Required   |

Tested by : Peng Fuwei  
Peng Fuwei (Test engineer)

Approved by : Peng Huarui  
Peng Huarui (Supervisor)



## 1. TECHNICAL INFORMATION

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

### 1.1. Identification of Applicant

|               |   |
|---------------|---|
| Company Name: | FenSens, Inc                                |
| Address:      | 383 E. Laurel Rd, Bellingham, WA 98226, USA |

### 1.2. Identification of Manufacturer

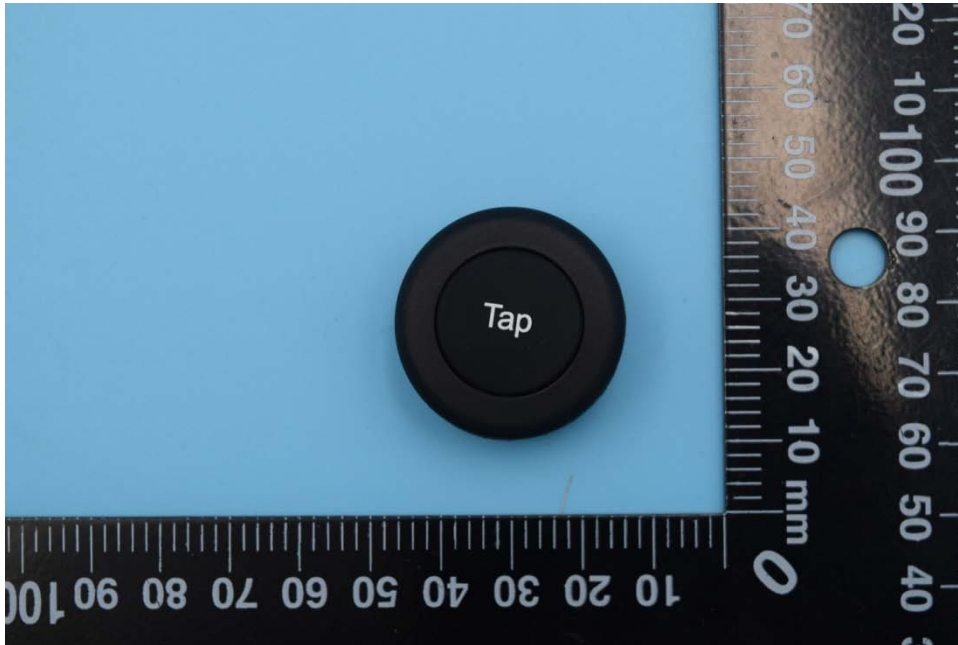
|               |  |
|---------------|--|
| Company Name: | NOA Labs Ltd.  |
| Address:      | 709 Bldg C HuangDu GuangChang Building YiTian Road,<br>Futian District, Shenzhen, 518000, Guangdong, China |

### 1.3. Equipment Under Test (EUT)

|                    |                             |
|--------------------|-----------------------------|
| Model Name:        | FEN-BTTNV1                  |
| Trade Name:        | FenSens                     |
| Brand Name:        | FenSens                     |
| Hardware Version:  | V1.0.0                      |
| Software Version:  | V1.0.2                      |
| Frequency Bands:   | Bluetooth 4.1:2402-2480MHz; |
| Modulation Mode:   | Bluetooth 4.1: GFSK;        |
| Antenna type:      | PCB Antenna                 |
| Development Stage: | -2.49dBi                    |

### 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#           | V1.0.0           | V1.0.2           |

### 1.4. Applied Reference Documents

Leading reference documents for testing:

| No. | Identity                         | Document Title  |
|-----|----------------------------------|---|
| 1   | <b>RSS-102,<br/>Issue 5-2015</b> | Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands) |

## 2. MEASUREMENT OF CONDUCTED PEAK OUTPUT POWER

### 1. Bluetooth Peak output power

| Band | Channel | Frequency (MHz) | Output Power(dBm) |
|------|---------|-----------------|-------------------|
|      |         |                 | GFSK              |
| BT   | 0       | 2402            | -2.30             |
|      | 19      | 2440            | -2.19             |
|      | 39      | 2480            | -1.65             |

## 3. RF EXPOSURE EVALUATION

According to the section 2.5.1of RSS-102 Issue 5,SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

**Table 1: SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance**

| Frequency (MHz) | Exemption Limits (mW)           |                                 |                                 |                                 |                                 |
|-----------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                 | At separation distance of ≤5 mm | At separation distance of 10 mm | At separation distance of 15 mm | At separation distance of 20 mm | At separation distance of 25 mm |
| ≤300            | 71 mW                           | 101 mW                          | 132 mW                          | 162 mW                          | 193 mW                          |
| 450             | 52 mW                           | 70 mW                           | 88 mW                           | 106 mW                          | 123 mW                          |
| 835             | 17 mW                           | 30 mW                           | 42 mW                           | 55 mW                           | 67 mW                           |
| 1900            | 7 mW                            | 10 mW                           | 18 mW                           | 34 mW                           | 60 mW                           |
| <b>2450</b>     | <b>4 mW</b>                     | 7 mW                            | 15 mW                           | 30 mW                           | 52 mW                           |
| 3500            | 2 mW                            | 6 mW                            | 16 mW                           | 32 mW                           | 55 mW                           |
| 5800            | 1 mW                            | 6 mW                            | 15 mW                           | 27 mW                           | 41 mW                           |

When Bluetooth Watch is worn on the hand, BT antenna spacing 0mm from body, the maximum tune-up limit power is **0.71mW<4mW**.

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.<br>Morlab Laboratory   |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |

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