REPORT No.：SZ17110015S01

RF EXPOSURE

EVALUATION REPORT

APPLICANT	:	SHENZHEN FEIBIT ELECTRONIC TECHNOLOGY CO.,LTD
PRODUCT NAME	:	USB Dongle
MODEL NAME	:	FED87F3-TTHW
BRAND NAME	:	N/A
FCC ID	:	2AE8B-FPUGW01
STANDARD(S)	:	47CFR 2.1093 KDB 447498 D01 General RF Exposure Guidance v06
ISSUE DATE	:	2017-12-13

Tested by: Peng Fuwei

Peng Fuwei (Test engineer)

Approved by:

Peng Huarui (Supervisor)

MORLAB

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DIRECTORY

Change History		
Issue	**Date**	**Reason for change**
1.0	2017-12-13	First edition

1. Technical Information

Note: Provide by manufacturer.

1.1. Applicant and Manufacturer Information

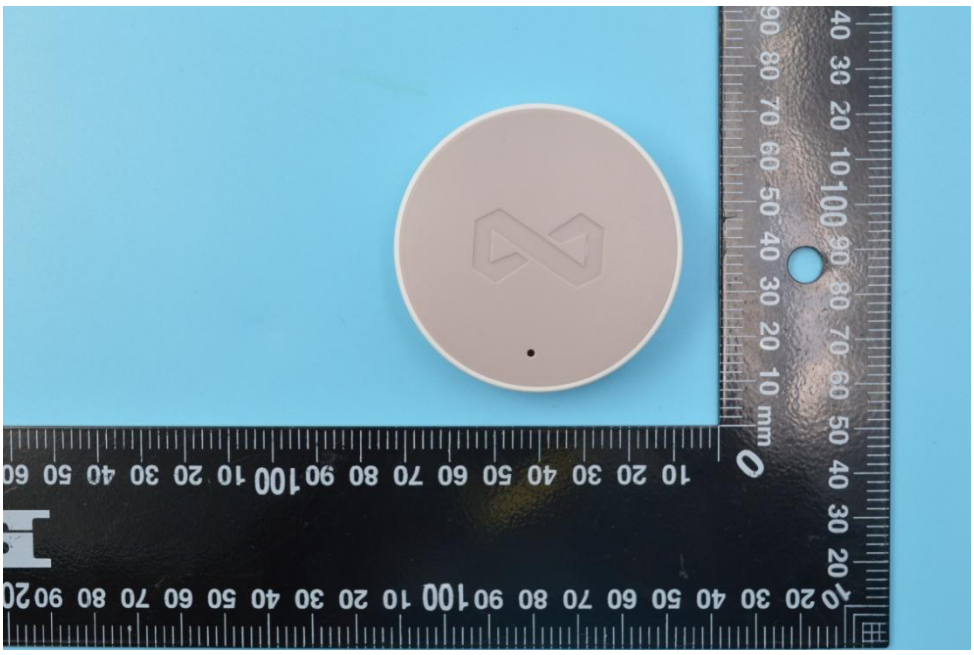
Applicant:	SHENZHEN FEIBIT ELECTRONIC TECHNOLOGY CO.,LTD
Applicant Address:	Room 505, Building A1, Lilang Software Park No 31. Bulan Road, Nanwan Street, Longgang District, Shenzhen, China
Manufacturer:	SHENZHEN FEIBIT ELECTRONIC TECHNOLOGY CO.,LTD
Manufacturer Address:	Room 505, Building A1, Lilang Software Park No 31. Bulan Road, Nanwan Street, Longgang District, Shenzhen, China

1.2. Equipment Under Test (EUT) Description

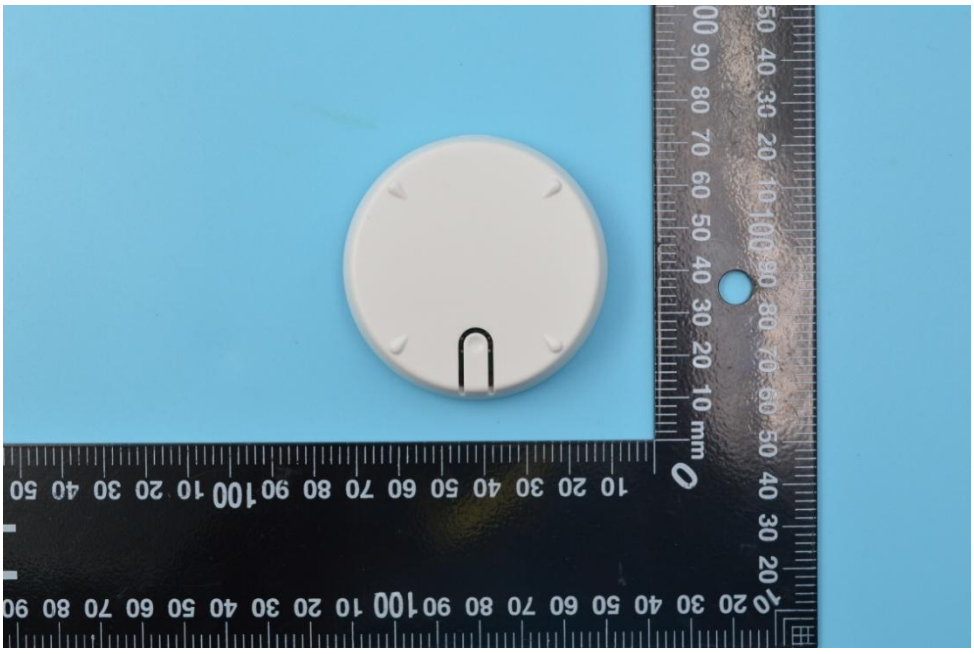
EUT Type:	USB Dongle
Hardware Version:	V1.0
Software Version:	4.4.0
Frequency Bands:	2405MHz-2480MHz
Modulation Mode:	Zigbee
Antenna type:	FPC Antenna

1.3. Photographs of the EUT

1. EUT front view



2. EUT rear view



1.3.1. 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	4.4.0

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 D01v06**	General RF Exposure Guidance

2. Device Category And RF Exposure Limit

Per user manual, this device is a USB Dongle. 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. Zigbee Peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)
			GFSK
2.4G	11	2405	4.96
	19	2445	4.26
	26	2480	3.74

4. RF Exposure Evaluation

The device only incorporates a Zigbee transmitter, so standalone SAR evaluation is required for Zigbee 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 **3.13mW** @ **2.405GHz**
When USB Dongle is used close to the human body, so use **5mm** as the most conservative minimum test separation distance,
[(max. power of channel, including tune-up tolerance, m W)/ (min. test separation distance, mm)]·[√f(GHz)] **=0.98** ≤ 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
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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

END OF REPORT