REPORT No.：SZ18080004S01

FCC RF EXPOSURE EVALUATION REPORT

APPLICANT	:	ShenZhen Kaadas Intelligent Technology Co.,Ltd
PRODUCT NAME	:	Smart Door Lock
MODEL NAME	:	DB2,DB2-B
BRAND NAME	:	KAADAS,Alfred
FCC ID	:	2AQY4-DB2BLEZWUS
STANDARD(S)	:	47CFR 2.1093 KDB 447498
ISSUE DATE	:	2018-08-28

Tested by: Gan Yueming

Gan Yueming(Test engineer)

Approved by: Peng Huarui

Peng Huarui (Supervisor)

MORLAB

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DIRECTORY

Change History		
Issue	**Date**	**Reason for change**
1.0	2018-08-28	First edition

1. Technical Information

Note: Provide by manufacturer.

1.1 Applicant and Manufacturer Information

Applicant:	ShenZhen Kaadas Intelligent Technology Co.,Ltd
Applicant Address:	Room 202, Unit 3, Block C, Kexing Industrial Park, Keyuan Road, Hi-Tech Middle Area, Nanshan District, Shenzhen,Guangdong, P.R.C.
Manufacturer:	ZhuHai Janes Intelligent Technology Co.,Ltd
Manufacturer Address:	Sancun Industry Area, Zhu Gang Road, Qianwu Town, Doumen District, Zhuhai, Guangdong, China

1.2 Equipment Under Test (EUT) Description

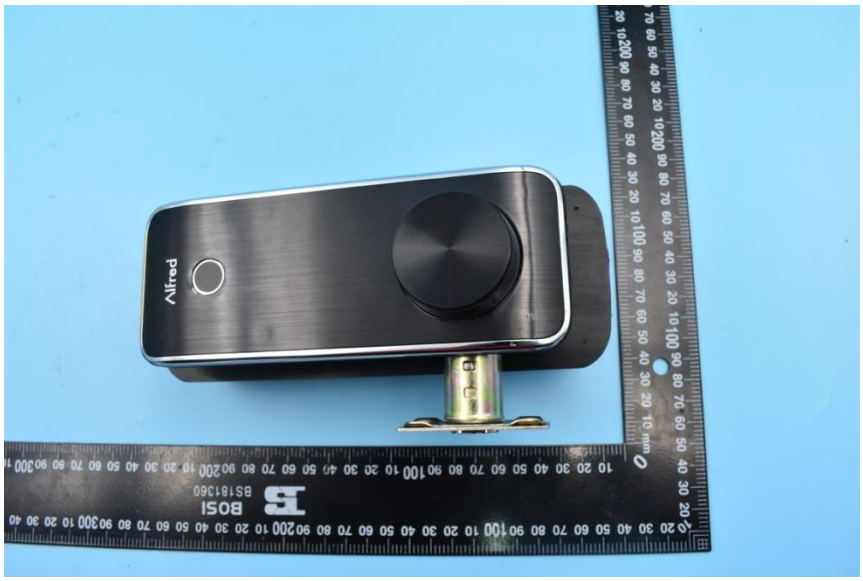
EUT Type:	Smart Door Lock
Hardware Version:	V4.0
Software Version:	V13
Frequency Bands:	Bluetooth: 2402 MHz ~ 2480 MHz z-wave: 908.40MHz,916MHz
Modulation/Mode:	Bluetooth: GFSK z-wave
Antenna Type:	FPC Antenna
Antenna Gain:	2dBi

Note:

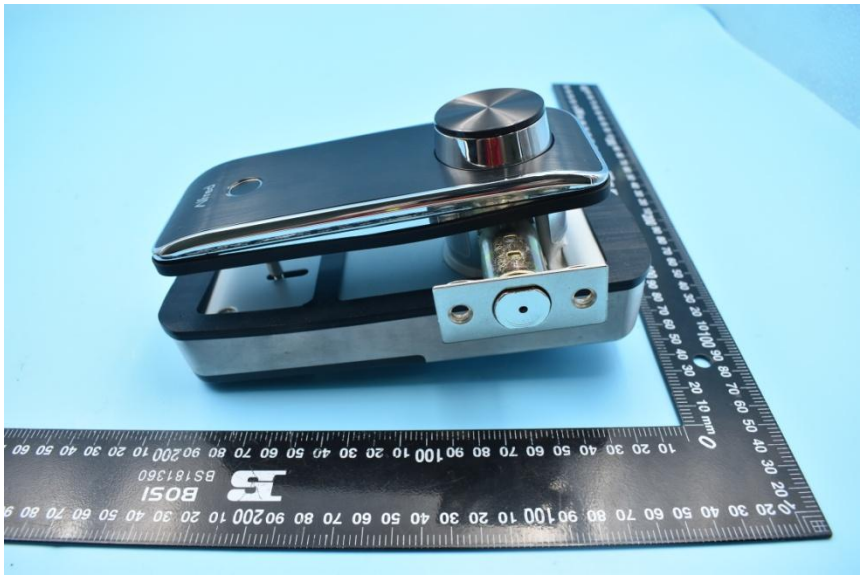
1. According to the certificate holder, they declared that the models: DB2 and DB2-B are accordant in both hardware and software. The two models only differ in the models name. The detailed difference is: Override key cylinder is different, DB2 has no override key cylinder, DB2-B has override key cylinder.
2. For a more detailed description, please refer to specification or user's manual supplied by the applicant and/or manufacturer

1.3 Photographs of the EUT

1. **EUT front view**



2. **EUT rear view**



1.4 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#	V4.0	V13

1.5 Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1093	Radio frequency Radiation Exposure Evaluation: Potable devices
2	KDB 447498 D01v06	General RF Exposure Guidance

2. Device Category and RF Exposure Limit

Per user manual, this device is a Smart Door Lock. 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 RF Output Power

<Bluetooth>

Mode	Channel	Frequency (MHz)	Peak power (dBm)
			GFSK
LE	CH 00	2402	1.88
	CH 19	2440	1.44
	CH 39	2480	1.09
Tune-up Limit			2

4. RF Exposure Evaluation

Guidance:

1. According to KDB 447498, maximum source-based time-average power will be used for calculating MPE.
2. 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 **1.58mW** @ **2.402GHz**
   When the Smart Door Lock is used on the hand, 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)] **=0.49** ≤ 3.0，Therefore SAR measurement is unnecessary.

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
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END OF REPORT