

## RF Exposure Evaluation Report

**Product** : Smart Door Lock  
**Trade mark** : /  
**Model/Type reference** : 3109  
**Serial Number** : N/A  
**Report Number** : EED32P80445302  
**FCC ID** : 2BAX9-3109  
**Date of Issue** : May. 05, 2023  
**Test Standards** : 47 CFR Part 1.1307  
47 CFR Part 1.1310  
47 CFR Part 2.1091  
47 CFR Part 2.1093  
447498 D04 Interim General RF  
Exposure Guidance v01  
**Test result** : PASS

Prepared for:

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**No. 21 Shihua Road, Hualong Town, Panyu District, Guangzhou.**

Prepared by:

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2 Version

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## 4 General Information

### 4.1 Client Information

Applicant:	Guangdong HOTATA Technology Group Co.,Ltd.
Address of Applicant:	No. 21 Shihua Road, Hualong Town, Panyu District, Guangzhou.
Manufacturer:	Guangdong HOTATA Technology Group Co.,Ltd.
Address of Manufacturer:	No. 21 Shihua Road, Hualong Town, Panyu District, Guangzhou.
Factory:	zhongshan Fuyu Intelligent Lock Mfg. Co.,Ltd.
Address of Factory:	Liansheng South Road, Lianfeng Industrial Zone, Xiaolan town, Zhongshan city, Guangdong, China

### 4.2 General Description of EUT

Product Name:	Smart Door Lock
Model No.(EUT):	3109
Trade Mark:	/

### 4.3 Product Specification subjective to this standard

For BLE	
Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK
Test Power Grade:	Default
Test Software of EUT:	BK3256 RF Test
Antenna Type:	PCB Antenna
Antenna Gain:	1.43dBi
Power Supply:	Battery DC 6.0V
Max Conducted Peak Output Power:	-2.77dBm
	The Max Conducted Peak Output Power data refer to the report EED32P80445301
For NFC	
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Antenna Type:	PCB antenna
maximum Field Strength (E) @3m:	57.63 dBμV/m
	The maximum Field Strength data refer to the report EED32P80445303

Sample Received Date:	Mar. 31, 2023
Sample tested Date:	Mar. 31, 2023 to Apr. 20, 2023
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.	

## 4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

## 4.5 Deviation from Standards

None.

## 4.6 Abnormalities from Standard Conditions

None.

## 4.7 Other Information Requested by the Customer

None.

## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold  $P_{th}$  (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by Formula

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

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).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

#### 5.1.2 Test Procedure

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



**5.1.3 EUT RF Exposure Evaluation****For Stand alone:****For BLE**

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2440	-2.77	1.43	-1.34	-3.49	0.448	3060	PASS

**Note:**

- ① EIRP=conducted power + antenna gain;
- ② ERP=EIRP-2.15
- ③ Only the worst case data was recorded in the report.

**For NFC:**

Frequency (MHz)	maximum Field Strength (E) @3m (dB $\mu$ V/m)	EIRP (dBm)	ERP (mW)	Limit (mW)	Result
13.56	57.63	-37.67	0.000171	1	PASS

The maximum Field Strength of the transmitter was 57.63 dB $\mu$ V/m at 3m which equals 0.000171mW , which is well below the exemption limit of 1mW.

**Note:**

- ① EIRP (dBm) = E(dB $\mu$ V/m) -95.3

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\*\*\* End of Report \*\*\*