

TEST REPORT

RF Exposure Evaluation

Report No.:	CISRR26012018102
Project No.:	CISR260120181
FCC ID:	2BTC8-RF-A1
Applicant:	Shenzhen Rongfu Tiancheng Industrial Co., Ltd.
Address:	Building D, 11th Floor, Zone B Huilongda Industrial Park Shilong Community Shiyan Subdistrict Bao'an District Shenzhen
Manufacturer:	Shenzhen Rongfu Tiancheng Industrial Co., Ltd.
Address:	Building D, 11th Floor, Zone B Huilongda Industrial Park Shilong Community Shiyan Subdistrict Bao'an District Shenzhen
Product Name:	smart lock
Trade Mark:	-
Model/Type reference:	RF-A1
Listed Model(s):	RF-A2,RF-A11,RF-A12,RF-A13,RF-A15,RF-A16,RF-A18,RF-A19,RF-A20
Standard:	47 CFR Part 2.1093
Issue date:	January 26, 2026
Test result:	Complied

Morgan Tan

Reviewed by: Morgan Tan



Approved by: Hans Hu

The test results relate only to the tested samples.

The test report should not be reproduced except in full without the written approval of Shenzhen Bangce Testing Technology Co., Ltd.

Contents

1. APPLICABLE STANDARD	3
2. REPORT VERSION	3
3. RADIO SPECIFICATION DESCRIPTION	4
4. SIMULTANEOUS TRANSMISSION ANALYSIS	4
5. TEST RESULT	5
5.1. STANDALONE TRANSMISSION	5
5.2. SIMULTANEOUS TRANSMISSION	6

1. APPLICABLE STANDARD

[47 CFR Part2.1093](#): Radio frequency radiation exposure evaluation: portable devices

[ANSI C95.1–2019](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

[FCC KDB publication 447498 D01](#) General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

[47 CFR Part1.1307](#): Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.

2. REPORT VERSION

Version No.	Issue date	Description
00	January 26, 2026	Original

3. RADIO SPECIFICATION DESCRIPTION

WIFI-2.4GHz Band			
Supported type:	☒ 802.11b	☒ 802.11g	☒ 802.11n
	☐ 802.11ax		

Note: Please refer to RF report for detailed technical specifications

4. SIMULTANEOUS TRANSMISSION ANALYSIS

These devices use a single transmitter module and antenna for both WLAN , WLAN cannot transmit simultaneously.

5. TEST RESULT

5.1. Standalone transmission

Limit:

KDB447498 D01 v06, Clause 4.3.1 a)

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation³¹
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

Result:

Passed

Test Data

Radio type	Frequency (GHz)	Maximum output power #1 (dBm)	Maximum tune-up power #2 (dBm)	Minimum distance (mm)	Evaluated value	Limit	Result
WIFI-2.4G	2.462	7.93	8.00	5.00	1.9800	3.00	PASS

Note

#1: This value comes from the RF test report.

#2: This value is declared by the applicant.

5.2. Simultaneous transmission

Limit:

KDB447498 D01 v06, Clause 4.3.2, 47 CFR Part1.1307

In the case of xed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Where

- a = number of fied, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for P , including existing exempt transmitters and those being added.
- b = number of fied, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.
- c = number of existing fixed, mobile, or portable RF sources with known evaluation for the speci ed minimum distance including existing evaluated transmitters.
- P_j = the available maximum time-averaged power or the ERP, whichever is greater, for xed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).
- $P_{th,i}$ = the exemption threshold power (P) according to paragraph (b)(3)(i)(B) of this section for xed, mobile, or portable RF source i.
- ERP_j = the ERP of fixed, mobile, or portable RF source j.
- $ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph (b)(3)(i)(C) of this section.
- $Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.
- $Exposure Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or speci c absorption rate (SAR) limit for each xed, mobile, or portable RF source k, as applicable from § 1.1310 of this chapter.

Result:

Not Applicable

-----End of Report-----