

RF Exposure Evaluation Report

Applicant: Shenzhen Friendcom Technology Co., Ltd.

Address of Applicant: 3/F, 6 Building, Guangqian Industrial Park, Longzhu Road, Xili Town, Nanshan, Shenzhen, China

Equipment Under Test (EUT)

Product Name: IDUV915-LRW Inductive Sensor Endpoint

Model No.: FC-725

Trade mark: Friendcom

FCC ID: UU3FC-725

Applicable standards: FCC CFR Title 47 Part 2 Subpart J Section 2.1091

Date of sample receipt: 27 Dec., 2021

Date of Test: 28 Dec., 2021 to 08 Mar., 2022

Date of report issue: 05 May, 2023

Test Result: PASS*

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	05 May, 2023	Original

Remark: The data please refer to FCC ID: UU3FCWSL05-A0, report No. JYTSZB-R12-2100302. The differences between them as below: Applicant and applicant's address, Product name, model and antenna.

Tested by: Janet Wei
Test Engineer

Date: 05 May, 2023

Reviewed by: Winner Zhang
Project Engineer

Date: 05 May, 2023

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4 General Information

4.1 Client Information

Applicant:	Shenzhen Friendcom Technology Co., Ltd.
Address:	3/F, 6 Building, Guangqian Industrial Park, Longzhu Road, Xili Town, Nanshan, Shenzhen, China
Manufacturer:	Shenzhen Friendcom Technology Co., Ltd.
Address:	3/F, 6 Building, Guangqian Industrial Park, Longzhu Road, Xili Town, Nanshan, Shenzhen, China
Factory:	Shenzhen Friendcom Technology Co.,Ltd.
Address:	Building 20, Zhubaocheng industry park, 568 Huanchang North Road, Changping Town, Dongguan, Guangdong Province, China

4.2 General Description of E.U.T.

Product Name:	IDUV915-LRW Inductive Sensor Endpoint
Model No.:	FC-725
Operation Frequency:	902MHZ-928MHZ
Modulation technology:	LoRaWAN
Antenna Type:	Spring Antenna
Antenna gain:	0 dBi
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

4.3 Operating Modes

Operating mode	Detail description
LoRaWAN mode	Keep the EUT in continuously transmitting in LoRaWAN mode

4.4 Additions to, deviations, or exclusions from the method

No

4.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

4.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

5 Technical Requirements Specification in FCC CFR Title 47 Part 2.1091

5.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

5.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

5.3 Result

Frequency (MHz)	Maximum Output power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm ²)	Limits for General Population/ Uncontrolled Exposure (mW/cm ²)
LoRaWAN							
902.3	21.71	148.25	0	1	20.00	0.0295	0.60

Note: 1. Just the worst case mode was shown in report.

2. The Maximum Output power Please refer to FCC ID: UU3FCWSL05-A0, report No.: JYTSZB-R12-2100301 issue by JianYan Testing Group Shenzhen Co., Ltd.

5.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

-----End of report-----