RF Exposure Evaluation Report

Application No.:	DNT2409140180R1733-03310
Applicant:	Yiwu Ruzheng Technology Co., Ltd
Address of Applicant:	501 Baogang Road, Chengxi Street, Yiwu City, Jinhua City, Zhejiang Province
EUT Description:	Wireless bicycle computer
Model No.:	SD-589
FCC ID:	2BLO5-SD-589
Power supply	DC 3V
Trade Mark:	/
Standards:	FCC CFR 47 Part 1.1307(b)&1.1310 KDB 680106 D01 RF Exposure Wireless Charging Apps V03r01
Date of Receipt:	2024/9/20
Date of Test:	2024/9/24 to 2024/9/27
Date of Issue:	2024/10/11
Test Result:	**PASS ***

Prepared By: Wayne. Lin (Testing Engineer)

Reviewed By: Pencils. chen (Project Engineer)

Approved By: Yeise Chen (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

Dongguan DN Testing Co., Ltd.

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Oct.11, 2024	Valid	Original Report

Test Summary

No.	Description of Test Item	FCC Standard Section	Results
1	Maximum Permissible Exposure	Part 1.1307(b)&1.1310	PASS

Contents

TEST SUMMARY 3

1 GENERAL INFORMATION 5

1.1 TEST LOCATION 5
1.2 GENERAL DESCRIPTION OF EUT 5
1.3 TEST MODE 6
1.4 TEST EQUIPMENT LIST 6

2 MAXIMUM PERMISSIBLE EXPOSURE 7

2.1 LIMIT 7
2.2 TEST SETUP A 8
2.3 TEST PROCEDURE 8
2.4 EQUIPMENT APPROVAL CONSIDERATIONS 9
2.5 TEST RESULT FOR TEST SETUP A: 10

1 General Information

1.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfa Road, Wusha Liwu, Chang ' an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

1.2 General Description of EUT

Manufacturer:	Yiwu Ruzheng Technology Co., Ltd
Address of Manufacturer:	501 Baogang Road, Chengxi Street, Yiwu City, Jinhua City, Zhejiang Province
EUT Description::	Wireless bicycle computer
Test Model No.:	SD-589
Additional Model(s):	/
Chip Type:	MT87PL36H
Serial Number	PR2409140180R1733
Power Supply	DC 3V
Maximum Wireless Output Power	3W
Trade Mark:	/
Hardware Version:	V1.0
Software Version:	V1.0
Sample Type:	☐ Portable Device, ☐ Module, ☒ Mobile Device
Antenna Type:	☐ External, ☒ Integrated

Remark:

*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.

1.3 Test Mode

Test Item	Test Mode
Maximum Permissible Exposure	Working
Note： The worst Full Load status is recorded in the report	

1.4 Test Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Electric and Magnetic Field Probe-Analyzer	Senfu STT	LF-04	I-1044	Oct 18,2021	Oct 17,2024

2 Maximum Permissible Exposure

2.1 Limit

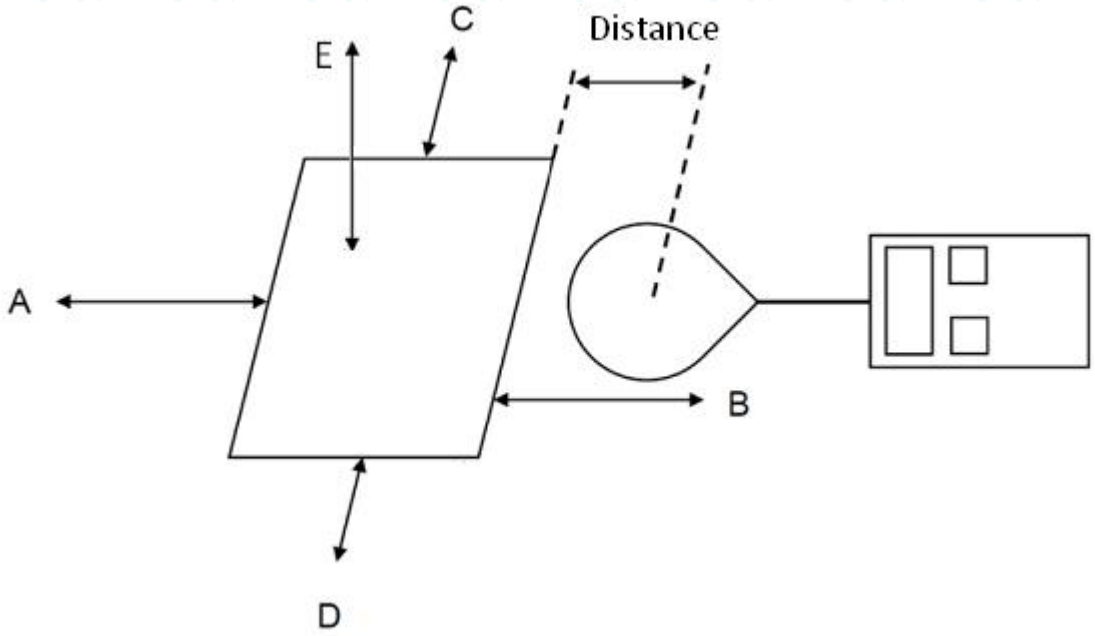
Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

Note:

1. f = frequency in MHz * = Plane-wave equivalent power density.
2. For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

2.2 Test Setup A



2.3 Test Procedure

a. The test was performed on 360 degree turn table in anechoic chamber.

b. The probe was placed at 15 cm surrounding the device and 20 cm above the top of the charger and the geometric centre of the probe, for test setup A.

d. The highest emission level was recorded and compared with limit as soon as measurement of each point; A, B, C, D, E were completed.

2.4 Equipment Approval Considerations

Inductive wireless power transfer applications with supporting field strength results and meeting all of the following requirements are not required to submit a KDB inquiry for devices approved using SDoC or a PAG for equipment approved using certification to address RF exposure compliance.

1	Power transfer frequency is less that 1 MHz
	YES; the device operated in the frequency range from 110.5-205KHz.
2	Output power from each primary coil is less than or equal to 15 watts.
	YES; the maximum output power of the primary coil is 3W.
3	The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
	YES; the transfer system includes only single primary and secondary coils.
4	Client device is placed directly in contact with the transmitter.
	YES; Client device is placed directly in contact with the transmitter.
5	Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
	No.
6	The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
	YES; The EUT field strength levels are 50% x MPE limts.

2.5 Test Result for Test setup A:

E-field strength	
Frequency range (KHz)	110.5 to 205
Test Mode	Full Load
Position A(V/m)	2.324
Position B(V/m)	2.775
Position C(V/m)	2.134
Position D(V/m)	2.094
Position E(V/m)	5.564
Limits (V/m)	614
50% Limits(V/m)	307

H-field strength	
Frequency range (KHz)	110.5 to 205
Test Mode	Full Load
Position A(A/m)	0.018
Position B(A/m)	0.021
Position C(A/m)	0.016
Position D(A/m)	0.019
Position E(A/m)	0.052
Limits (A/m)	1.630
50% Limits (A/m)	0.815

END REPORT