

TEST REPORT

Reference No...... : WTF25D07192921W003
FCC ID : 2BGWZ-ORION
Applicant..... : Synchroni Scientific Instruments Inc.
Address..... : 11 Lazenby Crt, Markham ON, L6C 1S7, Canada
Manufacturer : Synchroni Scientific Instruments Inc.
Address..... : 11 Lazenby Crt, Markham ON, L6C 1S7, Canada
Product..... : Wearable Bio-Sensor
Model(s) : Orion-16, Orion-24, Orion-32
Standards..... : 47CFR FCC Part 2 Subpart J Section 2.1093
Date of Receipt Sample : 2025-07-23
Date of Test : 2025-07-29 to 2025-08-12
Date of Issue..... : 2025-08-25
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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2. Contents

	Page
1 COVER PAGE.....	1
2. CONTENTS	2
3. REVISION HISTORY	3
4. GENERAL INFORMATION.....	4
4.1. GENERAL DESCRIPTION OF E.U.T.....	4
4.2. DETAILS OF E.U.T.....	4
4.3. TEST FACILITY	5
4.4. SUBCONTRACTED.....	5
4.5. ABNORMALITIES FROM STANDARD CONDITIONS	5
5. TEST SUMMARY	6
6. RF EXPOSURE.....	7
6.1. PROCEDURES AND REQUIREMENTS	7
6.2. CALCULATION METHOD.....	7
6.3. TEST RESULT	8

3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF25D07192921W003	2025-07-23	2025-07-29 to 2025-08-12	2025-08-25	Version 1	Update	Valid
<p>Note:</p> <p>This report is based on WTF25D07192875W003 to update applicant and manufacturer information, product name and product model name, the update will not affect EMC test and is considered to meet the test requirements without further testing.</p>						

4. General Information

4.1. General Description of E.U.T.

Product:	Wearable Bio-Sensor
Model(s):	Orion-16, Orion-24, Orion-32
Model Description:	Only the model name, product name, the Dimension Size and number of channels are different.
Remark:	Model Orion-32 was tested in the report.
Test Sample No.:	1-1/1
Bluetooth Version:	5.0
Hardware Version:	V1
Software Version:	V1

4.2. Details of E.U.T.

Operation Frequency:	2402~2480MHz
Max. RF output power:	BLE 1M: -3.00dBm, BLE 2M: -3.07dBm
Type of Modulation:	GFSK
Antenna installation:	PCB Antenna
Antenna Gain:	-0.02dBi

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings:	DC 5V, 2A charging from adapter Battery DC 3.7V, 1000mAh
Adapter:	Model: DZ010DLU050200U Input: 100-240V~50/60Hz 0.4A Output: 5.0V==2.0A, 10.0W Manufacturer: Guangdong Keerda Electronics Co., Ltd.

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	47CFR FCC Part 2 Subpart J § 2.1093	PASS

6. RF Exposure

Test Requirement: 47CFR FCC Part 2 Subpart J § 2.1093

Evaluation Method: 47CFR FCC Part 1 Subpart I §1.1307,

KDB 447498 D01 General RF Exposure Guidance v06

6.1. Procedures and Requirements

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ 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 calculation
- The result is rounded to one decimal place for comparison

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.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

6.2. Calculation Method

$$\text{Result} = P\sqrt{F} / D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

6.3. Test Result

A distance of 5mm normally can be maintained between the user and the device.

Modulation	CH	Freq. (GHz)	Max Power (dBm)	Max. Tune-up Power (dBm)	Max. Tune- up Power (mW)	Distance (mm)	Result	Limit
GFSK (BLE 1M)	Low	2.402	-3.00	-2.00	0.63	5	0.20	3
GFSK (BLE 2M)	Low	2.402	-3.07	-2.07	0.62	5	0.19	3

Conclusion:

No SAR measurement is required.

=====End of Report=====