



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400172002

Page: 1 of 8

RF EXPOSURE EVALUATION REPORT

Application No.: SZCR2504001720AT
Applicant: ZIRCON CORPORATION
Address of Applicant: 1580 Dell Ave, Campbell, 95008, USA
Manufacturer: ROMPA ShunXing (JiangMen) Plastics Co., Ltd.
Address of Manufacturer: No.290, Qinglan Road, Jianghai District, Jiangman, Guangdong, China
Factory: ROMPA ShunXing (JiangMen) Plastics Co., Ltd.
Address of Factory: No.290, Qinglan Road, Jianghai District, Jiangman, Guangdong, China
Equipment Under Test (EUT):
EUT Name: Water Sensor
Model No.: 5A4330XX(XX=00 to FF) ♣
♣ Please refer to section 3.2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark: ZIRCON
FCC ID: N94-NODE-74426
Standard(s) : 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2025-04-29
Date of Evaluation: 2025-05-22 to 2025-06-10
Date of Issue: 2025-06-10

Evaluation Result:

Pass*

* In the configuration evaluated, the EUT complied with the standards specified above.

Kenx. Xu

Kenx Xu

EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (EMC Laboratory)

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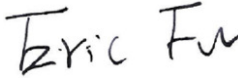
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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-06-10		Original

Authorized for issue by:				
				
		Bill Chen/Project Engineer		
				
		Eric Fu/Reviewer		

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3 General Information

3.1 General Description of E.U.T.

Product Type:	☒ Portable device
	☐ Mobile device
	☐ Fixed device

3.2 Details of E.U.T.

Power supply:	Rechargeable battery DC 3.7V (Charging by Type C cable)
RF cable(Provided by the customer):	0.5dB
Operation Frequency:	902.68MHz-926.205MHz
Modulation Type:	GFSK
Number of Channels:	26
Channel Spacing:	0.941Mhz
Antenna Type:	Built-in Antenna
Antenna Gain:	-5.85dBi

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

Declaration of EUT Family Grouping:

Model No.: 5A4330XX(XX=00 to FF)

Only the model 5A433000 was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used and internal wiring and functions were identical for the above models, with only difference being of model No.

3.3 Separation Distance

Minimum test separation distance:	5mm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.	

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3.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.5 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

3.6 Deviation from Standards

None

3.7 Abnormalities from Standard Conditions

None



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4 Technical Requirements Specification

4.1 RF Exposure Evaluation

4.1.1 Limit & Test Method

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0$$
 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 calculation¹⁷
- The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

4.1.2 Conclusion

The Max. power (including tune-up tolerance) is 10.59 dBm on the highest channel 0.903 GHz (*)
10.59 dBm logarithmic terms convert to numeric result is nearly 11.46 mW

According to the formula, calculate the test exclusion thresholds:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})}$$

General RF Exposure = $(11.46 \text{ mW} / 5 \text{ mm}) \times \sqrt{0.90268 \text{ GHz}} = 2.18$ (1)

SAR requirement:

$S = 3.0$ (2)

(1) < (2)

So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR250400172001

5 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for SZCR2504001720AT

-End of the Report-