

Report No.: SZEM200500408206  
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# SAR Evaluation Report

**Application No.:** SZEM2005004082CR (SGS SZ No.: T52010250051EM)**Applicant:** Waboba AB**Address of Applicant:** Hornsgatan 110, Stockholm, 11726, Sweden**Manufacturer:** Waboba AB**Address of Manufacturer:** Hornsgatan 110, Stockholm, 11726, Sweden**Equipment Under Test (EUT):****EUT Name:** Waboba Dinobytes Ball**Item No.:** 600C01**Requested Age Grading:** 3+**Country of Origin:** China**Country of Destination:** USA**FCC ID:** 2AWIN600**Standards:** 47 CFR Part 1.1307

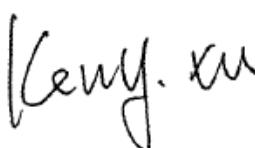
47 CFR Part 2.1093

KDB447498D01 General RF Exposure Guidance v06

**Date of Receipt:** 2020-05-21**Date of Test:** 2020-05-22 to 2020-07-14**Date of Issue:** 2021-04-02

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above. This report supersedes our previous report SZEM200500408203, issued on 2020-07-23, which is hereby deemed null and void.



Keny Xu  
EMC Laboratory Manager



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## 2 Version

<b>Revision Record</b>				
<b>Version</b>	<b>Chapter</b>	<b>Date</b>	<b>Modifier</b>	<b>Remark</b>
01		2020-07-23		Original
02		2021-04-02		Updated

<b>Authorized for issue by:</b>			
			
		<b>Gebin Sun /Project Engineer</b>	
			
		<b>Eric Fu /Reviewer</b>	

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## 4 General Information

### 4.1 General Description of EUT

Power Supply:	Rechargeable battery DC3.7V 100mAh Charged by DC5V
Cable:	USB cable:70cm unshielded
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V4.0 BLE
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	Integral
Antenna Gain:	0dBi

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## 4.2 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, Shenzhen, Guangdong, China  
518057  
Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594  
No tests were sub-contracted.

## 4.3 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**

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. 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: CN1178**

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

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **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.

## 4.4 Deviation from Standards

None.

## 4.5 Abnormalities from Standard Conditions

None.

## 4.6 Other Information Requested by the Customer

None.

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## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 Limits

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

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

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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

#### 5.1.3 EUT RF Exposure

The Max. power (including tune-up tolerance) is 0.40 dBm on the lowest channel 2.402 GHz (\*)

0.40 dBm logarithmic terms convert to numeric result is nearly 1.10 mW

According to the formula. calculate the test exclusion thresholds:

$$\text{General RF Exposure} = \frac{(\text{Max. Power of channel, including tune-up tolerance, mW}) \cdot \sqrt{f(\text{GHz})}}{(\text{min. test separation distance, mm})}$$

$$\text{General RF Exposure} = (1.10 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 0.34 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM200500408205.

- End of the Report -

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