



Report No.: SZEM190101047704  
Page: 1 of 8

## SAR Evaluation Report

**Application No.:** SZEM1901010477CR(SGS SZ No.:T51910200055EM)  
**Applicant:** Storyball  
**Address of Applicant:** 31465 Juliana Farms Road, San Juan Capistrano, California United States 92675  
**Manufacturer/ Supplier:** STH Something High Electric (Xiamen) Company Inc.  
**Address of Manufacturer/ Supplier:** unit 1, 4 Fl, No.903 Tonglong Second Road, Torch Hi-tech Zone, Xiang'an Industrial District, Xiamen, China 361100  
**Equipment Under Test (EUT):**  
**EUT Name:** Storyball with skin  
**Model No.:** SB001 01-06  
**Requested Age Grading:** 4+  
**Country of Origin:** China  
**Country of Destination:** US  
**FCC ID:** 2ASDPSB00101-06  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2019-01-21  
**Date of Test:** 2019-01-24 to 2019-02-26  
**Date of Issue:** 2019-02-27

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu  
EMC Laboratory Manager



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## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-02-27		Original

Authorized for issue by:	 _____ Leo Li /Project Engineer		
	 _____ Eric Fu /Reviewer		

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## 4 General Information

### 4.1 General Description of EUT

Power supply:	DC 5V Lithium Ion Battery: 3.7V 500mAh rechargeable battery which charged by USB port
For BT	
Operation Frequency:	2402MHz to 2480MHz
Spectrum Technology:	Spread Frequency Hopping Spread Spectrum(FHSS)
Bluetooth Version:	V4.1 Classic
Channel Spacing:	1MHz
Modulation Type:	GFSK, π/4DQPSK, 8DPSK
Number of Channels:	79
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
For BLE	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V4.0 LE
Channel Spacing:	2MHz
Modulation Type:	GFSK
Number of Channels:	40
Antenna Type:	PCB Antenna
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:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **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.

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#### **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

##### 1) exposure conditions for standalone operations

For BT

The Max. power (including tune-up tolerance) is 1.90 dBm on the lowest channel	2.402	GHz (*)
1.90 dBm logarithmic terms convert to numeric result is nearly 1.55 mW		
According to the formula. calculate the test exclusion thresholds:		
$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$		
$\text{General RF Exposure} = (1.55 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 0.48$ (1)		
SAR requirement:		
$S = 3.0$ (2)		
$(1) < (2)$		
So the SAR report is not required.		
(*) Max. power refer to Report No.:SZEM190101047702		

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For BLE

The Max. power (including tune-up tolerance) is 0.33 dBm on the lowest channel	2.402	GHz (*)
0.33 dBm logarithmic terms convert to numeric result is nearly 1.08 mW		
According to the formula. calculate the test exclusion thresholds:		
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [ $\sqrt{f(\text{GHz})}$ ]		
$\text{General RF Exposure} = (1.08 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 0.33$ (1)		
SAR requirement:		
$S = 3.0$ (2)		
(1) < (2)		
So the SAR report is not required.		
(*) Max. power refer to Report No.:SZEM190101047703		

## 2) exposure conditions for simultaneous transmission operations

Simultaneous transmission MPE test is not required,because the Max. sum of the MPE ratios for BLE and BT is  $0.33+0.48=0.81 < 3.0$

- End of the Report -

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