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Report No.: SZEM151200812803
Page: 1 of 6

SAR Evaluation Report

Application No.: SZEM1512008128CR
Applicant: Flyball Electronic (Shenzhen) Co., Ltd
Manufacturer/ Factory: Flyball Electronic (Shenzhen) Co., Ltd
EUT Name: Outdoor Bluetooth Speaker
Model No.: S34B
Add Model No.: 45305
Trade mark: BAUHN
FCC ID: 2AD33S34B2
Standards: 47 CFR Part 1.1307 (2015)
47 CFR Part 2.1093 (2015)
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2016-01-07
Date of Test: 2016-01-13 to 2016-01-21
Date of Issue: 2016-01-25

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang
EMC Laboratory Manager



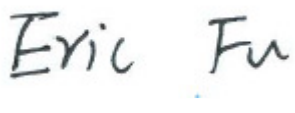
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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2016-01-25		Original

Authorized for issue by:			
Tested By			2016-01-21
	(Bill Chen) /Project Engineer		Date
Prepared By			2016-01-25
	(Jade Chen) /Clerk		Date
Checked By			2016-01-25
	(Eric Fu) /Reviewer		Date



3 Contents

	Page
1 COVER PAGE	1
2 VERSION	2
3 CONTENTS	3
4 GENERAL INFORMATION	4
4.1 CLIENT INFORMATION.....	4
4.2 GENERAL DESCRIPTION OF EUT	4
4.3 TEST LOCATION.....	5
4.4 TEST FACILITY	5
4.5 DEVIATION FROM STANDARDS	5
4.6 ABNORMALITIES FROM STANDARD CONDITIONS.....	5
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	5
5 SAR EVALUATION	6
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT	6
5.1.1 <i>Standard Requirement</i>	6
5.1.2 <i>Limits</i>	6
5.1.3 <i>EUT RF Exposure</i>	6



4 General Information

4.1 Client Information

Applicant:	Flyball Electronic (Shenzhen) Co., Ltd
Address of Applicant:	5-6 Building, Zhiji Industrial Park No.92. KuiChong Street. DaPeng District, ShenZhen. China
Manufacturer:	Flyball Electronic (Shenzhen) Co., Ltd
Address of Manufacturer:	5-6 Building, Zhiji Industrial Park No.92. KuiChong Street. DaPeng District, ShenZhen. China
Factory:	Flyball Electronic (Shenzhen) Co., Ltd
Address of Factory:	5-6 Building, Zhiji Industrial Park No.92. KuiChong Street. DaPeng District, ShenZhen. China

4.2 General Description of EUT

Product Name:	Outdoor Bluetooth Speaker
Model No.:	S34B
Trade mark:	BAUHN
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V3.0+EDR
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Sample Type:	Portable production
Antenna Type:	PCBA
Antenna Gain:	0dBi
Power Supply:	Battery: Li-ion Battery: 7.4V (charge by USB)
Cable length/material:	USB 103cm shielded AUX IN Cable 55cm unshielded

Remark:

Model No.: S34B, 45305

Only the model S34B was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being of color and item number.



4.3 Test Location

All tests were performed at:

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

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.

4.4 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 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

• **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen 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 No.: 556682.

• **Industry Canada (IC)**

The 3m Semi-anechoic chambers and the 10m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-2, 4620C-3.

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.



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 ≤ 50 mm are determined by:

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right] \leq 3.0$$
 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

5.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is -0.58dBm in Lowest channel(2.402GHz);

The best case gain of the antenna is 0dBi.

$EIRP = -0.58\text{dBm} + 0\text{dBi} = -0.58\text{dBm}$

-0.58dBm logarithmic terms convert to numeric result is nearly 0.875mW

According to the formula. calculate the EIRP test result:

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

General RF Exposure = $(0.875\text{mW} / 5 \text{ mm}) \times \sqrt{2.402\text{GHz}} = 1.356$ ①

SAR requirement:

$S = 3.0$

② ;

① < ②.

So the SAR report is not required.