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

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RF Exposure Evaluation Report

Application No.:	SZEM1804003461CR (SGS SZ No.: T51810220173EM)
Applicant:	DOUBLEEAGLE INDUSTRY (CHINA) LIMITED
Address of Applicant:	Xingda Industrial Park, Chenghai District, Shantou City, Guangdong Province, China
Manufacturer/ Supplier:	DOUBLEEAGLE INDUSTRY (CHINA) LIMITED
Equipment Under Test (EUT):	
Product Name:	Building Blocks
Item No.:	Please refer to section 3 ♣
♣	Please refer to section 3 of this report which indicates which item was actually tested and which were electrically identical.
Country of Origin:	China
Request Age Grading:	3+
Standards:	EN 62479:2010
Date of Receipt:	2018-05-04
Date of Test:	2018-05-07 to 2018-05-10
Date of Issue:	2018-05-10
Test Result:	**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.

Keny Xu
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2018-05-10		Original

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

2 CONTENTS

3 General Information of EUT

Power supply:	3.0V DC(1.5V x 2 "AA" Size Batteries) for TX Rechargeable battery DC3.6V for RX
Cable:	USB Cable:60cm unshielded
Operating Frequency:	2.4GHz(2405MHz-2475MHz)
Channel number:	71
Modulation Type:	GFSK
Sample Type:	Portable production
Antenna Type:	Integral
Antenna Gain:	0dBi
EIRP:	-1.85dBm(0.65mW)*
*	The EIRP data refer to the report SZEM180400346102.

Remark:

Item No.: C51001W, C51002W, C51003W, C51004W, C51005W, C51006W, C51007W, C51008W, C51009W, C51010W, C51011W, C51012W, C51013W, C51014W, C51015W, C51016W, C51017W, C51018W, C51019W, C51020W, C51021W, C51022W, C51023W, C51024W, C51025W, C51026W, C51029W, C51030W, C51031W, C51032W, C51033W, C51034W, C51035W, C51036W, C51037W, C51038W, C51039W, C51040W, C52001W, C52002W, C52003W, C52004W, C52005W, C52006W, C52007W, C52008W, C52009W, C52010W, C52011W, C52012W, C52013W, C52014W, C52015W, C52016W, C52017W, C52018W, C52019W, C52020W, C53001W, C53002W

Only the item C51004W was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for all the above items, only different on decorations, colour and item No..

3.1 Test Location

All tests were performed at:

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

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No tests were sub-contracted.

3.2 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.

• **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber 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-1, 4620C-2, 4620C-3.

3.3 Deviation from Standards

None.

3.4 Abnormalities from Standard Conditions

None.

3.5 Other Information Requested by the Customer

None.

4 Equipment List

RF conducted test						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal. Date (yyyy-mm-dd)**	**Cal. Due date (yyyy-mm-dd)**
1	DC Power Supply	ZhaoXin	PS-3005D	SEM011-05	2017-09-27	2018-09-26
2	Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2018-04-13	2019-04-12
3	Signal Generator (9kHz-40GHz)	KEYSIGHT	N5173B	SEM006-05	2017-09-27	2018-09-26
4	Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A
5	Coaxial Cable	SGS	N/A	SEM031-01	2017-07-13	2018-07-12
6	Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A

5 EN 62479 REQUIREMENT

5.1 General Description of Applied Standards

Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

5.2 Human exposure to the Electromagnetic fields

This International Standard provides simple conformity assessment methods for low-power electronic and electrical equipment to an exposure limit relevant to electromagnetic fields (EMF). If such equipment cannot be shown to comply with the applicable EMF exposure requirements using the methods included in this standard for EMF assessment, then other standards, including IEC 62311 or other (EMF) product standards, may be used for conformity assessment.

5.3 RF Exposure Evaluation

5.3.1 Limit

According to EN 62479 clause 4.2 Low-power electronic and electrical equipment is deemed to comply with the provisions of thisstandard if it can be demonstrated using routes B, C or D that the available antenna powerand/or the average total radiated power is less than or equal to the applicable low-power exclusion level Pmax.

P max = 20 mW (13 dBm) according to ICNIRP guidelines, since the EUT is General public used.

Remark:

B: The input power level to electrical or electronic components that are capable of radiating electromagnetic energy in the relevant frequency range is so low that the available antenna power and/or the average total radiated power cannot exceed the low-power exclusion level defined in EN 62479 clause 4.2

C: The available antenna power and/or the average total radiated power are limited by product standards for transmitters to levels below the low-power exclusion level defined in EN 62479 clause 4.2

D: Measurements or calculations show that the available antenna power and/or the average total radiated power are below the low-power exclusion level defined in EN 62479 clauses 4.2.

5.3.2 Test Result

The EIRP of the EUT is -1.85dBm(0.65mW) which is below the max permitted sending level of 20 mW, and then the EUT is not need to conduct SAR measurement.

6 EUT Photos

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1804003461CR.

- End of the Report -