



SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

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Report No.: SHEM170500269602
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1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM1705002696CR
Applicant:	Ningbo Bestlite Electric Co., Ltd.
FCC ID:	2AMB7L7248
Equipment Under Test (EUT): NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Bluetooth Bicycle Light
Model No.(EUT):	L7248
Standards:	FCC Rules 47 CFR §2.1093 KDB 447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2017-05-11
Date of Test:	2017-06-01 to 2017-06-02
Date of Issue:	2017-06-13
Test Result:	Pass*

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





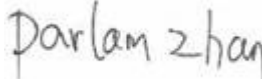
Parlam Zhan
E&E Section Manager
SGS-CSTC (Shanghai) Co., Ltd.

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.

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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	2017-06-13	/	Original

Authorized for issue by:				
Engineer		Eddy Zong		
		Print Name		
Clerk		Susie Liu		
		Print Name		
Reviewer		Parlam Zhan		

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4 General Information

4.1 Client Information

Applicant:	Ningbo Bestlite Electric Co., Ltd.
Address of Applicant:	Chalu Industrial Zone, Chalu Town, Ninghai County, Ninfbao, Zhejiang
Manufacturer:	Ningbo Bestlite Electric Co., Ltd.
Address of Manufacturer:	Chalu Industrial Zone, Chalu Town, Ninghai County, Ninfbao, Zhejiang
Factory:	Ningbo Bestlite Electric Co., Ltd.
Address of Factory:	Chalu Industrial Zone, Chalu Town, Ninghai County, Ninfbao, Zhejiang

4.2 General Description of E.U.T.

Product Description:	Portable product with BT function
Battery:	DC 3.7V rechargeable Li-ion battery
Test Voltage:	DC 3.7V

4.3 Technical Specifications

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	BT4.2
Modulation Technique:	GFSK, $\pi/4$ DQPSK
Number of Channel:	79
Antenna Type	PIFA Antenna
Antenna Gain	3.3dBi

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

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4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively.

5 Test Standards and 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:

$[(\text{max power of channel})/(\text{min test separation distance})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ 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
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds

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 according to 4.1 f) is applied to determine SAR test exclusion.

For 2.4G band device, the limit of worse case is

$$P_{\text{max}} \leq 3.0 \cdot D_{\text{min}} / \sqrt{f} = 3.0 \cdot 5 / \sqrt{2.480} = 9.525 \text{ mW}$$

6 Measurement and Calculation

6.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM170500269601.

Test Data:

Test mode	Channel	Peak Power (dBm)	Peak Power (mW)
GFSK	2402	-2.66	0.54
	2440	-1.44	0.72
	2480	-3.18	0.48
$\pi/4$ DQPSK	2402	-1.51	0.71
	2440	-1.41	0.72
	2480	-1.99	0.63

6.2 RF Exposure Calculation

The Max Conducted Peak Output Power is 0.72mW. The best case gain of the antenna is 3.3dBi.
3.3dBi logarithmic terms convert to numeric result is nearly 2.14

According to the formula. calculate the EIRP test result:

$$\text{EIRP} = P \times G = 0.72 \text{ mW} \times 2.14 = 1.54\text{mW} < 9.525\text{mW}$$

So the SAR report is not required.

7 EUT Constructional Details

Refer to the < External Photos > & < Internal Photos >.

--End of the Report--