



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

588 West Jindu Road, Songjiang District, Shanghai, China  
Telephone: +86 (0) 21 6191 5666  
Fax: +86 (0) 21 6191 5678  
ee.shanghai@sgs.com

Report No.: SHEM160400238004  
Page: 1 of 7

## 1 Cover Page

# FCC MPE REPORT

Application No.:	SHEM1604002380CR
Applicant:	Changzhou Sound Dragon Electronics And Acoustics Co., Ltd.
FCC ID:	2AGOQ-Y641
<b>Equipment Under Test (EUT):</b> <b>NOTE:</b> The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Bluetooth Speaker
Model No.(EUT):	Y641
Standards:	FCC Rules 47 CFR §2.1093 KDB 447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2016-04-26
Date of Test:	2016-05-03 to 2016-05-153
Date of Issue:	2016-06-06
Test Result:	<b>Pass*</b>

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



Parham Zhan

E&E Section Manager

SGS-CSTC (Shanghai) Co., Ltd.



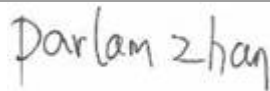
The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	2016-06-06	/	Original

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

### 3 Contents

	Page
<b>1 COVER PAGE.....</b>	<b>1</b>
<b>2 VERSION .....</b>	<b>2</b>
<b>3 CONTENTS .....</b>	<b>3</b>
<b>4 GENERAL INFORMATION .....</b>	<b>4</b>
4.1 CLIENT INFORMATION.....	4
4.2 GENERAL DESCRIPTION OF E.U.T.....	4
4.3 TECHNICAL SPECIFICATIONS .....	4
4.4 TEST LOCATION .....	5
4.5 TEST FACILITY .....	5
<b>5 TEST STANDARDS AND LIMITS .....</b>	<b>6</b>
<b>6 MEASUREMENT AND CALCULATION .....</b>	<b>7</b>
6.1 MAXIMUM TRANSMIT POWER .....	7
6.2 MPE CALCULATION.....	7
<b>7 EUT CONSTRUCTIONAL DETAILS.....</b>	<b>7</b>

## 4 General Information

### 4.1 Client Information

Applicant:	Changzhou Sound Dragon Electronics And Acoustics Co., Ltd.
Address of Applicant:	128 Zhenzhong Road, Xixiashu, New District, Changzhou, Jiangsu, 213135, P.R.China
Manufacturer:	Changzhou Sound Dragon Electronics And Acoustics Co., Ltd.
Address of Manufacturer:	128 Zhenzhong Road, Xixiashu, New District, Changzhou, Jiangsu, 213135, P.R.China
Factory:	Changzhou Sound Dragon Electronics And Acoustics Co., Ltd.
Address of Factory:	128 Zhenzhong Road, Xixiashu, New District, Changzhou, Jiangsu, 213135, P.R.China

### 4.2 General Description of E.U.T.

Product Description:	Mobile product with BT function		
Battery:	3.7 V DC, 4.4AH Li-on Rechargeable Battery		
Adapter:	Manufacturer:	SHENZHEN PENGSHENGYE ELECTRONIC CO.,LTD	
	Model No.	SAPA05005US	
	Rated Input:	100~240V AC, 50/60Hz Max. 0.6A	
	Rated Output:	DC 5.0V 1A	
	Cable length:	AC port:	2wires
		DC port:	60 cm

### 4.3 Technical Specifications

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	4.0 dual mode
Modulation Technique:	GFSK FHSS(GFSK, $\pi$ /4DQPSK, 8DPSK)
Number of Channel:	BLE mode: 40 Classic mode: 79
Antenna Type	Integral PCB Antenna
Antenna Gain	0 dBi

#### 4.4 Test Location

All tests were performed at:

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

No.588 West Jindu Road, Songjiang District, Shanghai, China.201612.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

#### 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. Date of expiry: 2017-07-14.

- **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, Expiry Date: 2017-09-16.

- **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. Expiry Date: 2017-06-18.

- **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. Date of Expiry: 2017-11-16.

## 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  $\leq 50$  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  $\leq 7.5$  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 practical use condition for this device is for someone carry it to listen music. So the applicable limit is 10-g extremity SAR

The minimum antenna separation distance to the front interface is  $< 5$  mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

$$P_{\text{max}} \leq 7.5 \cdot D_{\text{min}} / \sqrt{f} = 7.5 \cdot 5 / \sqrt{2.480} = 23.8 \text{ mW}$$

## 6 Measurement and Calculation

### 6.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM160400238002 & SHEM160400238002

Test Mode		Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
Classic	GFSK	2402	-2.25	0.60
		2441	-2.71	0.54
		2480	-2.93	0.51
	π/4DQPSK	2402	-1.08	0.78
		2441	-1.19	0.76
		2480	-1.42	0.72
	8DPSK	2402	<b>-0.32</b>	<b>0.93</b>
		2441	-0.95	0.80
		2480	-1.13	0.77
BLE		2402	-3.55	0.44
		2441	-3.43	0.45
		2480	-3.49	0.45

### 6.2 MPE Calculation

The Max Conducted Peak Output Power is 0.93mW in Lowest channel of 8DPSK;

The best case gain of the antenna is 0dBi. 0dB logarithmic terms convert to numeric result is nearly 1.0.

$EIRP = P \times G = 0.93 \text{ mW} \times 1.0 = 0.93\text{mW} < 23.8\text{mW}$

So the SAR report is not required.

## 7 EUT Constructional Details

Refer to the < Y641 \_External Photos > & < Y641 \_Internal Photos >.

**--End of the Report--**