



## 1 Cover Page

# RF MPE REPORT

Application No.:	C190123R01
Applicant:	Ringway Tech(Jiangsu) Co.,Ltd.
Equipment Under Test (EUT):	
NOTE: The following sample(s) was/were submitted and identified by the client as	
Product Name:	ELECTRONIC DRUM
Model No.(EUT):	SD600
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2019-01-23
Date of Test:	2019-01-28 to 2019-01-29
Date of Issue:	2019-02-25
Test Result:	Pass*

\* In the configuration tested, the EUT complied with the standards specified above.

Jeff Fang

Jeff Fang  
EMC Lab 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.



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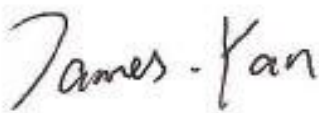
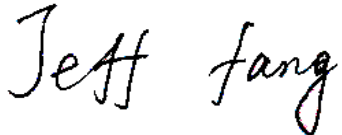
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Revision Record			
Version	Description	Date	Remark
00	Original	2019-02-25	/

Authorized for issue by:			
			
		James Yan / Project Engineer	
			
		Jeff Fang/Reviewer	

## 2 Contents

	Page
<b>1 COVER PAGE.....</b>	<b>1</b>
<b>2 CONTENTS .....</b>	<b>3</b>
<b>3 GENERAL INFORMATION.....</b>	<b>4</b>
3.1 CLIENT INFORMATION .....	4
3.1 GENERAL DESCRIPTION OF E.U.T.....	4
3.2 TECHNICAL SPECIFICATIONS .....	4
3.3 TEST LOCATION .....	5
3.4 TEST FACILITY.....	5
<b>4 TEST STANDARDS AND LIMITS .....</b>	<b>6</b>
4.1 FCC RADIOFREQUENCY RADIATION EXPOSURE LIMITS: .....	6
<b>5 MEASUREMENT AND CALCULATION.....</b>	<b>6</b>
5.1 MAXIMUM TRANSMIT POWER .....	6
5.2 MPE CALCULATION .....	7

### 3 General Information

#### 3.1 Client Information

Applicant:	Ringway Tech(Jiangsu) Co.,Ltd.
Address of Applicant:	No. 101 Hanjiang West Road, Changzhou,Jiangsu, China
Manufacturer:	Ringway Tech(Jiangsu) Co.,Ltd.
Address of Manufacturer:	No. 101 Hanjiang West Road, Changzhou,Jiangsu, China
Factory:	Ringway Tech(Jiangsu) Co.,Ltd.
Address of Factory:	No. 101 Hanjiang West Road, Changzhou,Jiangsu, China

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

Power supply:	Adapter: Model: OH-1048A0900600U4-UL Input:100-240V~50/60Hz,250mA Output: DC 9V ---600mA
Test voltage:	AC 120V/60Hz
Cable:	DC Cable 1.5m for adapter

#### 3.2 Technical Specifications

Operation Frequency:	BLE:2402MHz to 2480MHz
Modulation Technique:	BLE: GFSK
Number of Channel:	BLE: 40
Antenna Type:	chip Antenna
Antenna Gain:	2.5dBi

### 3.3 Test Location

All measurement facilities used to collect the measurement data are located at No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China. No tests were sub-contracted.

### 3.4 Test Facility

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

- **CNAS (No. CNAS L4354)**

CNAS has accredited Compliance Certification Services (Kunshan) Inc. 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. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC –Designation Number: CN1172**

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172. Test Firm Registration Number: 995260.

- **Industry Canada (IC) – IC Assigned Code: 2324E**

The 10m and 3m Semi-anechoic chamber of Compliance Certification Services (Kunshan) Inc. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 2324E-1 for 10m chamber, 2324E-2 for 3m chamber.

- **VCCI (Member No.: 1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1600, C-1707, T-1499, G-216 respectively.



## 4 Test Standards and Limits

### 4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report C190123R01

For BLE:

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
BLE-GFSK	2402	-1.29	0.74
	2440	-2.20	0.60
	2480	-3.01	0.50

## 5.2 MPE Calculation

According to the formula  $S = \frac{PG}{4R^2\pi}$ , we can calculate S which is MPE.

Note:

1) P (Watts) = Power Input to antenna =  $10^{\frac{dBm}{10}} / 1000$

2) G (Antenna gain in numeric) =  $10^{(Antenna\ gain\ in\ dBi / 10)}$

3) R = distance to the center of radiation of antenna (in meter) = 20cm

4) MPE limit = 1mW/cm<sup>2</sup>

For BLE:

The Max Conducted Peak Output Power is 0.74mW

The best case gain of the antenna is 2.5dBi. 2.5dB logarithmic terms convert to numeric result is nearly 1.778

$$\text{So, } S = \frac{PG}{4R^2\pi} = (0.74 * 1.778) / (4 * 0.2^2 * \pi) = 0.0003 \text{ mW/cm}^2$$

The maximum rate of MPE is 0.0003 <= 1.0. according to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

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