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Report No.: SHEM180800686502  
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## 1 Cover Page

# ***RF Exposure Evaluation Report***

<b>Application No.:</b>	SHEM1808006865CR
<b>Applicant:</b>	Ningbo Richen Electrical Appliance Co.,LTD
<b>FCC ID:</b>	2AKF6-RCS12C
<b>IC</b>	24293- RCS12C
Equipment Under Test (EUT): NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
<b>Product Name:</b>	Remote controller
<b>Model No.:</b>	RCS12C
<b>Standards:</b>	RSS-102 Issue 5 (March 2015)
<b>Date of Receipt:</b>	2018-08-15
<b>Date of Test:</b>	2018-08-20 to 2018-09-05
<b>Date of Issue:</b>	2018-09-11
<b>Test Result:</b>	<b>Pass*</b>

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



Parlam Zhan  
 E&E Section 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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Revision Record			
Version	Description	Date	Remark
00	Original	2018-09-11	/

<b>Authorized for issue by:</b>			
			
		<hr/>	
		<b>Bill Wu /Project Engineer</b>	
			
		<hr/>	
		<b>Parlam Zhan /Reviewer</b>	



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### 3 General Information

#### 3.1 Client Information

Applicant:	Ningbo Richen Electrical Appliance Co.,LTD
Address of Applicant:	No.19 Yongdinghe Road,Xiapu,Beilun,Ningbo315807,Zhejiang,P.R.China
Manufacturer:	Ningbo Richen Electrical Appliance Co.,LTD
Address of Manufacturer:	No.19 Yongdinghe Road,Xiapu,Beilun,Ningbo315807,Zhejiang,P.R.China
Factory:	Ningbo Richen Electrical Appliance Co.,LTD
Address of Factory:	No.19 Yongdinghe Road,Xiapu,Beilun,Ningbo315807,Zhejiang,P.R.China

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

Product Description:	Remote controller
Power supply:	DC 3V by 2*AAA size batteries
Test voltage:	DC 3V
Operation Frequency:	433.92MHz
Modulation Technique:	ASK
Number of Channel:	1
Antenna Type	Loop Antenna



### 3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch  
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

### 3.4 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.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **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-13868, C-14336, T-12221, G-10830 respectively.



## 4 Test Standards and Limits

### 4.1 IC Radiofrequency radiation exposure limits

Accordinging RSS-102 Table 4(RF Field Strength Limits for Devices Used by the General Public)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m <sup>2</sup> )	Reference Period (minutes)
0.003-10	83	90	-	Instantaneous*
0.1-10	-	0.73/ <i>f</i>	-	6**
1.1-10	87/ <i>f</i> <sup>0.5</sup>	-	-	6**
10-20	27.46	0.0728	-2	6
20-48	58.07/ <i>f</i> <sup>0.25</sup>	0.1540/ <i>f</i> <sup>0.25</sup>	8.944/ <i>f</i> <sup>0.5</sup>	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 <i>f</i> <sup>0.3417</sup>	0.008335 <i>f</i> <sup>0.3417</sup>	0.02619 <i>f</i> <sup>0.6834</sup>	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ <i>f</i> <sup>1.2</sup>
150000-300000	0.158 <i>f</i> <sup>0.5</sup>	4.21 x 10 <sup>-4</sup> <i>f</i> <sup>0.5</sup>	6.67 x 10 <sup>-5</sup> <i>f</i>	616000/ <i>f</i> <sup>1.2</sup>

**Note:** *f* is frequency in MHz.

\* Based on nerve stimulation (NS).

\*\* Based on specific absorption rate (SAR).

For 433.92MHz Devices RF Field Strength Limits is 25.03V/m



## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM180800686501

Test channel	Freq. (MHz)	Result Level (dB $\mu$ V/m)	Limit Line (dB $\mu$ V/m)	Over Limit (dB)	Detector	Polarization
Channel 1	433.92	79.59	80.83	-1.24	Peak	Vertical
		78.99	80.83	-1.84	Peak	Horizontal

### 5.2 MPE Calculation

For 433.92MHz: 79.59dB $\mu$ V/m=0.010V/m<25.03V/m

So the device is exclusion from SAR test.

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