

# RF EXPOSURE EVALUATION REPORT

**Application No.:** SZCR2308002783AT  
**Applicant:** Avantronics Limited  
**Address of Applicant:** The 4th Floor, Yuepeng Building, No.1019 Jiabin Rd, Luohu District, Shenzhen, 518002, China  
**Manufacturer:** Avantronics Limited  
**Address of Manufacturer:** The 4th Floor, Yuepeng Building, No.1019 Jiabin Rd, Luohu District, Shenzhen, 518002, China  
**Factory:** Shenzhen See Me Here Electronic Co.,Ltd  
**Address of Factory:** 1st Floor, 2nd Floor, 3rd Floor, 5th Floor, Building B, TongFuYu Industrial Park, No.32 Hangkong Road, Sanwei Community, Hangcheng Street, Ban'an district, Shenzhen, China.

### Equipment Under Test (EUT):

**EUT Name:** Boombyte  
**Model No.:** BTSP-870  
**Trade Mark:** Avantree  
**FCC ID:** WJ5-BTSP-870  
**Standard(s) :** 47 CFR PART 1, Subpart I, Section 1.1310  
47 CFR PART 2, Subpart J, Section 2.1093  
KDB447498D01 General RF Exposure Guidance v06

**Date of Receipt:** 2023-08-29  
**Date of Evaluation:** 2023-08-29 to 2023-09-06  
**Date of Issue:** 2023-09-12

<b>Evaluation Result:</b>	<b>Pass*</b>
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\* In the configuration evaluated, the EUT complied with the standards specified above.



Keny Xu  
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023-09-12		Original

<b>Authorized for issue by:</b>			
		<i>Bill Chen</i>	
		<b>Bill Chen/Project Engineer</b>	
		<i>Eric Fu</i>	
		<b>Eric Fu/Reviewer</b>	



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### 3 General Information

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

Product Type:	<input checked="" type="checkbox"/> Portable device
	<input type="checkbox"/> Mobile device
	<input type="checkbox"/> Fixed device

#### 3.2 Details of E.U.T.

Power supply:	Rechargeable battery:DC 3.7V 4000mAh 14.8Wh(Charging by USB cable)
Cable(s):	Type C cable:80cm unshielded
Bluetooth Version:	V5.3 Classic
Operation Frequency:	2402MHz to 2480MHz
Modulation Type:	GFSK, pi/4DQPSK
Number of Channels:	79
Channel Spacing:	1MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Antenna Type:	PCB Antenna
Antenna Gain:	0 dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

#### 3.3 Separation Distance

Minimum test separation distance:	5mm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.	



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### 3.4 Test Location

All tests were performed at:

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

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

### 3.5 Test Facility

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

#### • 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 (Member No. 1937)

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. Shenzhen EMC laboratory 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: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

#### • Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

### 3.6 Deviation from Standards

None

### 3.7 Abnormalities from Standard Conditions

None



## 4 Technical Requirements Specification

### 4.1 RF Exposure Evaluation

#### 4.1.1 Limit & Test Method

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:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]}{\leq 3.0}$$
 for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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 is applied to determine SAR test exclusion

#### 4.1.2 Conclusion

The Max. power (including tune-up tolerance) is 4.11 dBm on the highest channel 2.48 GHz (\*)  
4.11 dBm logarithmic terms convert to numeric result is nearly 2.58 mW

According to the formula. calculate the test exclusion thresholds:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]}{\leq 3.0}$$

General RF Exposure =  $(2.58 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 0.81$  (1)

SAR requirement:

$S = 3.0$  (2)

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZCR230800278302

## 5 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2308002783AT

--End of the Report--

