

# SAR Evaluation Report

**Application No.:** SZEM1907016100CR  
**Applicant:** PayClip Inc  
**Address of Applicant:** 2120 University Ave. Floor 3, Berkeley 94704, UNITED STATES  
**Manufacturer:** PayClip Inc  
**Address of Manufacturer:** 2120 University Ave. Floor 3, Berkeley 94704, UNITED STATES  
**Factory:** SHENZHEN WINSTAR PRECISION ELECTRONICS CO., LTD.  
**Address of Factory:** The East Side of the Floor 6, Floor 5, Building 28, Shancheng Industrial Park, Shixin Community, Langxin Community, Shiyuan Street, Bao'an District, Shenzhen City, Guangdong Province, P.R.China

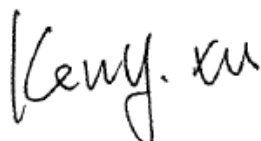
**Equipment Under Test (EUT):**

**EUT Name:** ClipPlus  
**Model No.:** ClipPlus  
**FCC ID:** 2AT3H-CLIPPLUS  
**Standards:** 47 CFR Part 1.1307  
 47 CFR Part 2.1093  
 KDB447498D01 General RF Exposure Guidance v06

**Date of Receipt:** 2019-07-09  
**Date of Test:** 2019-07-09 to 2019-08-30  
**Date of Issue:** 2019-09-03

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu  
 EMC Laboratory Manager



## 2 Version

<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2019-09-03		Original

<b>Authorized for issue by:</b>			
			
		<hr/> <b>Calvin Weng /Project Engineer</b>	
			
		<hr/> <b>Eric Fu /Reviewer</b>	





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## 4 General Information

### 4.1 General Description of EUT

Power supply:	DC 3.7V by rechargeable battery Recharged input: DC5V by power adapter
For BT:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	4.1
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Antenna Type:	PCB antenna
Antenna Gain:	-6.66dBi
For BLE:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	4.1
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	PCB antenna
Antenna Gain:	-6.66dBi
For NFC:	
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Antenna Type:	Loop antenna
Antenna Gain:	0



## 4.2 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, Shenzhen, Guangdong, China  
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

## 4.3 Test Facility

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

### • CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab 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. 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

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. 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: CN1178

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

Designation Number: CN1178. Test Firm Registration Number: 406779.

### • 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.







#### 4.4 Deviation from Standards

None.

#### 4.5 Abnormalities from Standard Conditions

None.

#### 4.6 Other Information Requested by the Customer

None.



## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 5.1.2 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:

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



**5.1.3 EUT RF Exposure**

For BT:

The Max. power (including tune-up tolerance) is -1.71 dBm on the middle channel 2.441 GHz (\*)  
-1.71 dBm logarithmic terms convert to numeric result is nearly 0.67 mW  
According to the formula. calculate the test exclusion thresholds:

$$\text{General RF Exposure} = \frac{(\text{Max. Power of channel, including tune-up tolerance, mW}) * \sqrt{f \text{ (GHz)}}}{(\text{min. test separation distance, mm})}$$

$$\text{General RF Exposure} = (0.67 \text{ mW} / 5 \text{ mm}) * \sqrt{2.441 \text{ GHz}} = 0.21 \tag{1}$$

SAR requirement:

$$S = 3.0 \tag{2}$$

$$(1) < (2)$$

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM190701610002

For BLE:

The Max. power (including tune-up tolerance) is -0.24 dBm on the middle channel 2.44 GHz (\*)  
-0.24 dBm logarithmic terms convert to numeric result is nearly 0.95 mW  
According to the formula. calculate the test exclusion thresholds:

$$\text{General RF Exposure} = \frac{(\text{Max. Power of channel, including tune-up tolerance, mW}) * \sqrt{f \text{ (GHz)}}}{(\text{min. test separation distance, mm})}$$

$$\text{General RF Exposure} = (0.95 \text{ mW} / 5 \text{ mm}) * \sqrt{2.44 \text{ GHz}} = 0.30 \tag{1}$$

SAR requirement:

$$S = 3.0 \tag{2}$$

$$(1) < (2)$$

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM190701610003

- End of the Report -

