

# SAR Evaluation Report

**Application No.:** SZEM1809008379CR  
**Applicant:** Creative Labs Pte. Ltd.  
**Address of Applicant:** 31 International Business Park, #03-01 Creative Resource, Singapore 609921  
**Manufacturer:** Creative Labs Pte. Ltd.  
**Address of Manufacturer:** 31 International Business Park, #03-01 Creative Resource, Singapore 609921  
**Equipment Under Test (EUT):**  
**EUT Name:** Creative SXFI TX  
**Model No.:** GH0380A  
**Trade mark:** CREATIVE  
**FCC ID:** 2AJIV-GH0380A  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2018-09-19  
**Date of Test:** 2018-09-30 to 2019-04-15  
**Date of Issue:** 2019-04-19

<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		2019-04-19		Original

<b>Authorized for issue by:</b>			
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		<i>Eric Fu</i>	
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## 4 General Information

### 4.1 General Description of EUT

Power supply:	USB Dongle powered by DC 5V, 0.5A from USB port;
Cable:	USB switch cable 143cm shielded
<b>For BLE</b>	
Operation Frequency	2402MHz to 2480MHz
Bluetooth version	5.0
Modulation Type	GFSK
Number of Channels	40
Channel Spacing	2MHz
Antenna Type	Chip Antenna
Antenna Gain	0.8dBi
<b>For 2.4G</b>	
Operation Frequency	2403.35-2479.35MHz
Modulation Type	GFSK
Number of Channels	39
Channel Spacing	2MHz
Antenna Type	Chip Antenna
Antenna Gain	-1.18dBi



## 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.F





#### 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg, for test separation distances } \leq 50 \text{ mm};$$

where  $x = 7.5$  for 1-g SAR and  $x = 18.75$  for 10-g SAR.

where

$f(\text{GHz})$  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 BLE:

The Max. power (including tune-up tolerance) is 0.26 dBm on the lowest channel 2.402 GHz (\*)

0.26 dBm logarithmic terms convert to numeric result is nearly 1.06 mW

According to the formula. calculate the test exclusion thresholds:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg, for test separation distances } \leq 50 \text{ mm};$$

where  $x = 7.5$  for 1-g SAR and  $x = 18.75$  for 10-g SAR.

$$\text{General RF Exposure} = 1.06\text{mW} / 5\text{mm} \times (\sqrt{2.402 / 7.5}) = 0.044 \text{ W/kg} \quad (1)$$

$$\text{SAR requirement: } < 1.6\text{W/kg} \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(\*) Max power refer to Report No.: SZEM180900837902



For 2.4G

For Dongle

The Max. power (including tune-up tolerance) is 1.84 dBm on the lowest channel 2.40335 GHz (\*)

1.84 dBm logarithmic terms convert to numeric result is nearly 1.53 mW

According to the formula. calculate the test exclusion thresholds:

*$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg, for test separation distances } \leq 50 \text{ mm;}$*

where  $x = 7.5$  for 1-g SAR and  $x = 18.75$  for 10-g SAR.

General RF Exposure =  $1.53\text{mW} / 5\text{mm} \times (\sqrt{2.40335/ 7.5}) = 0.063 \text{ W/kg}$  (1)

SAR requirement:  $< 1.6\text{W/kg}$  (2)

(1) < (2)

So the SAR report is not required.

(\*) Max power refer to Report No.: SZEM180900837903

Simultaneous transmission:

General RF Exposure =  $0.044 + 0.063 = 0.107\text{W/kg}$  (1)

SAR requirement:  $< 1.6\text{W/kg}$  (2)

(1) < (2)

So the SAR report is not required

- End of the Report -

