Report No.: SZEM200800754705
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# SAR Evaluation Report

| | |
|---|---|
| **Application No.**: | SZEM2008007547CR |
| **Applicant:** | Shenzhen Breo Technology Co., Ltd |
| **Address of Applicant:** | 19/F Hisense Southen Buiding, 1777ChuangYe Road, NanShan District, Shenzhen City, 518000, China |
| **Manufacturer:** | SICTEC INSTRUMENTS COMPANY LIMITED |
| **Address of Manufacturer:** | SUITES 908-9 LEVEL 9 LANDMARK NORTH 39 LUNG SUM AVENUE SHEUNG SHUI NT |
| **Factory:** | Shenzhen Breo Technology Co., Ltd. |
| **Address of Factory:** | 19/F Hisense Southen Buiding,No.1777ChuangYe Road, Yuehai Street NanShan District, ShenZhen, China |
| **Equipment Under Test (EUT):** | |
| **EUT Name:** | Medcursor Massager Gun |
| **Model No.:** | MMG0401 |
| **Trade mark:** | MEDCURSOR |
| **FCC ID:** | PXUM0200 |
| **Standards:** | 47 CFR Part 1.1307<br>47 CFR Part 2.1093<br>KDB447498D01 General RF Exposure Guidance v06 |
| **Date of Receipt:** | 2020-08-05 |
| **Date of Test:** | 2020-08-07 to 2020-08-27 |
| **Date of Issue:** | 2020-08-27 |
| **Test Result :** | **PASS*** |

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

Keny Xu
EMC Laboratory Manager

# 2 Version

| Revision Record | | | | |
|---|---|---|---|---|
| **Version** | **Chapter** | **Date** | **Modifier** | **Remark** |
| 01 | | 2020-08-27 | | Original |
| | | | | |
| | | | | |

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|---|---|---|---|---|
| **Authorized for issue by:** | | | | |
| | | Peter Geng/Project Engineer | | |
| | | Eric Fu/Reviewer | | |

# 3 Contents

# 4 General Information

## 4.1 General Description of EUT

| | |
|---|---|
| Power adapter: | Model: MAUS-1501001801<br>Input: AC 100-240V, 50/60Hz, 0.5A<br>Output: DC 15V, 1A |
| Battery: | 11.4V rechargeable battery |
| BT: | |
| Operation Frequency: | 2402MHz to 2480MHz |
| Spectrum Spread Technology: | Frequency Hopping Spread Spectrum(FHSS) |
| Modulation Type: | GFSK, p/4DQPSK, 8DPSK |
| Number of Channels: | 79 |
| Channel Spacing: | 1MHz |
| Antenna type: | Integral antenna |
| Antenna gain: | 1.2 dBi |
| BLE: | |
| Operation Frequency: | 2402MHz to 2480MHz |
| Modulation Type: | GFSK |
| Channel Spacing: | 2MHz |
| Number of Channels: | 40 |
| Antenna type: | Integral antenna |
| Antenna gain: | 1.2 dBi |
| Wi-Fi: | |
| Operation Frequency: | 802.11b/g/n(HT20): 2412MHz to 2462MHz<br>802.11n(HT40): 2422MHz to 2452MHz |
| Modulation Type: | 802.11b: DSSS (CCK, DQPSK, DBPSK)<br>802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| Number of Channels: | 802.11b/g/n(HT20):11<br>802.11n(HT40):7 |
| Channel Spacing: | 5MHz |
| Antenna type: | Integral antenna |
| Antenna gain: | 1.2dBi |

## 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:

**• 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 ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 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[17]
The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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 2.22 dBm on the lowest channel 2.402 GHz (*)
2.22 dBm logarithmic terms convert to numeric result is nearly 1.67 mW
According to the formula. calculate the test exclusion thresholds:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (1.67\ mW / 5\ mm) \times \sqrt{2.402\ GHz} = 0.52 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZEM200800754702

For BLE:

The Max. power (including tune-up tolerance) is -0.36 dBm on the middle channel 2.44 GHz (*)
-0.36 dBm logarithmic terms convert to numeric result is nearly 0.92 mW
According to the formula. calculate the test exclusion thresholds:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (0.92\ mW / 5\ mm) \times \sqrt{2.44\ GHz} = 0.29 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZEM200800754703

For 2.4G wifi - AV:

The Max. power (including tune-up tolerance) is 4.5 dBm on the lowest channel 2.412 GHz (*)
4.50 dBm logarithmic terms convert to numeric result is nearly 2.82 mW
According to the formula. calculate the test exclusion thresholds:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (2.82\ mW / 5\ mm) \times \sqrt{2.412\ GHz} = 0.88 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZEM200800754704

- End of the Report -


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