RF EXPOSURE REPORT



| Supersede Repor | t No.: N/A | | | |
|------------------|---------------------------|-----------------------------------|------------------------|--|
| Applicant | Medtrum Technologies Inc. | | | |
| Product Name | Personal D | Personal Diabetes Manager | | |
| Model No. | MD-FM-00 | 8 | | |
| Serial No. | N/A | N/A | | |
| Test Standard | FCC 2.109 | FCC 2.1093 | | |
| Test Date | August 03 | August 03 to September 05, 2018 | | |
| Issue Date | September | September 07, 2018 | | |
| Test Result | Pass Fail | | | |
| Equipment comp | lied with the | specification | | |
| Equipment did no | ot comply wit | h the specification | | |
| Aanon Li | O | David Huang | | |
| Aaron Lia | ang | David Huang | | |
| Test Engineer | | Checked By | | |
| | This test | report may be reproduced in | full only | |
| Test result p | presented in t | this test report is applicable to | the tested sample only | |

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108 Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn



Test Report18070636-FCC-HPage2 of 9

Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

| Country/Region | Scope |
|----------------|------------------------------------|
| USA | EMC, RF/Wireless, SAR, Telecom |
| Canada | EMC, RF/Wireless, SAR, Telecom |
| Taiwan | EMC, RF, Telecom, SAR, Safety |
| Hong Kong | RF/Wireless, SAR, Telecom |
| Australia | EMC, RF, Telecom, SAR, Safety |
| Korea | EMI, EMS, RF, SAR, Telecom, Safety |
| Japan | EMI, RF/Wireless, SAR, Telecom |
| Singapore | EMC, RF, SAR, Telecom |
| Europe | EMC, RF, SAR, Telecom, Safety |

Accreditations for Conformity Assessment



| Test Report | 18070636-FCC-H |
|-------------|----------------|
| Page | 3 of 9 |

This page has been left blank intentionally.



Test Report18070636-FCC-HPage4 of 9

CONTENTS

| 1. | REPORT REVISION HISTORY | 5 |
|-----|---|---|
| 2. | CUSTOMER INFORMATION | 5 |
| 3. | TEST SITE INFORMATION | 5 |
| 4. | EQUIPMENT UNDER TEST (EUT) INFORMATION | 6 |
| 5. | FCC §2.1093 - RADIOFREQUENCY RADIATION EXPOSURE EVALUATION: PORTABLE DEVICES. | 8 |
| 5.1 | RF EXPOSURE | 8 |
| 5.2 | TEST RESULT | 9 |



| Test Report | 18070636-FCC-H |
|-------------|----------------|
| Page | 5 of 9 |

1. Report Revision History

| Report No. | Report Version | Description | Issue Date |
|----------------|----------------|-------------|--------------------|
| 18070636-FCC-H | NONE | Original | September 07, 2018 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

2. Customer information

| Applicant Name | Medtrum Technologies Inc. |
|------------------|--|
| Applicant Add | 7F, Building 8, No.200 Niudun Road, Shanghai 201203, China |
| Manufacturer | Medtrum Technologies Inc. |
| Manufacturer Add | 7F,Building 8, No.200 Niudun Road, Shanghai 201203, China |

3. Test site information

| Lab performing tests | SIEMIC (Shenzhen-China) LABORATORIES |
|----------------------|---|
| | Zone A, Floor 1, Building 2 Wan Ye Long Technology Park |
| Lab Address | South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China |
| | 518108 |
| FCC Test Site No. | 535293 |
| IC Test Site No. | 4842E-1 |
| Test Software | Radiated Emission Program-To Shenzhen v2.0 |



| Test Report | 18070636-FCC-H |
|-------------|----------------|
| Page | 6 of 9 |

4. Equipment under Test (EUT) Information

| Description of EUT: | Personal Diabetes Manager |
|-------------------------------|---|
| Main Model: | MD-FM-008 |
| Serial Model: | N/A |
| Date EUT received: | August 02, 2018 |
| Test Date(s): | August 03 to September 05, 2018 |
| Antenna Gain: | BLE: 1.6dBi |
| Antenna Type: | Chip antenna |
| Type of Modulation: | BLE: GFSK |
| RF Operating Frequency (ies): | BLE: 2402-2480 MHz |
| Number of Channels: | BLE: 40CH |
| Port: | Please refer to user' s manual |
| Input Power: | Adapter: Model: UES06WNCPU-050100SPA Input: AC 100-240V~50/60Hz, 0.2A Output: DC 5.0V, 1.0A Battery: Model: RC2 Voltage: 3.8V Capacity: 490mAh(1.9Wh) Maximum Charge Voltage: 4.35V |
| Trade Name : | Medtrum |



 Test Report
 18070636-FCC-H

 Page
 7 of 9

FCC ID:

2AARU-FM008



 Test Report
 18070636-FCC-H

 Page
 8 of 9

5. <u>FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable</u> devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission' s guidelines.

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:

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

- $[\sqrt{f_{(GHz)}}] \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,¹⁶ where
- f_(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- 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 \leq 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result = $P\sqrt{F}/D$

P= Maximum turn-up power in mW

- F= Channel frequency in GHz
- D= Minimum test separation distance in mm



| Test Report | 18070636-FCC-H |
|-------------|----------------|
| Page | 9 of 9 |

5.2 Test Result

BLE Mode:

| Modulation | СН | Freq (MHz) | Conducted Power (dBm) | Tune Up Power (dBm) | Max Tune Up Power (dBm) | Max Tune Up Power (mW) | Result | Limit |
|------------|------|---------------|-----------------------------|---------------------------|-------------------------------|------------------------------|--------|-------|
| GFSK | Low | 2402 | -0.112 | 0±1 | 1 | 1.259 | 0.39 | 3 |
| | Mid | 2440 | -0.215 | 0±1 | 1 | 1.259 | 0.39 | 3 |
| | High | 2480 | -0.322 | 0±1 | 1 | 1.259 | 0.40 | 3 |

Result: Compliance

No SAR measurement is required.