EMF TEST REPORT

Test Report No.	**: OT-204-RWD-080**
AGR No.	**: A203A-132**
Applicant	**: Tianjin Empecs Medical Device Co., Ltd.**
Address	**: No.35 and 37, Yingcheng Street, Hangu, Binhai New Area, 300480 Tianjin, China**
Manufacturer	**: Tianjin Empecs Medical Device Co., Ltd.**
Address	**: No.35 and 37, Yingcheng Street, Hangu, Binhai New Area, 300480 Tianjin, China**
Type of Equipment	**: Blood Beta-Ketone Monitoring System**
FCC ID.	**: 2AFE8BKABT**
Model Name	**: MediKeto 82 BT**
Multiple Model Name	**: MediKeto 83 BT, MediKeto 82, MediKeto 83**
Serial number	**: N/A**
Total page of Report	**: 7 pages (including this page)**
Date of Incoming	**: April 02, 2020**
Date of issue	**: April 27, 2020**

SUMMARY

The equipment complies with the regulation; ***FCC PART 15 SUBPART C Section 15.247***

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by: Ha-Ram Lee / Manager, ONETECH Corp.

Approved by: Jae-Ho Lee / Chief Engineer, ONETECH Corp.

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

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ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-204-RWD-080	April 27, 2020	Initial Issue	All

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1. VERIFICATION OF COMPLIANCE

Applicant : Tianjin Empecs Medical Device Co., Ltd.

Address : No.35 and 37, Yingcheng Street, Hangu, Binhai New Area, 300480 Tianjin, China

Contact Person : Dongeon Cho / Senior Research Engineer

Telephone No. : 82(0)70-7124-0476

FCC ID : 2AFE8BKABT

Model Name : MediKeto 82 BT

Brand Name : Medisign

Serial Number : N/A

Date : April 27, 2020

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	Blood Beta-Ketone Monitoring System
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. GENERAL INFORMATION

2.1 Product Description

The Tianjin Empecs Medical Device Co., Ltd., Model MediKeto 82 BT (referred to as the EUT in this report) is a Blood Beta-Ketone Monitoring System. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Blood Beta-Ketone Monitoring System
OPERATING FREQUENCY	2 402 MHz ~ 2 480 MHz
RF OUTPUT POWER	-8.25 dBm
NUMBER OF CHANNEL	40 Channels
MODULATION TYPE	GFSK(Bluetooth LE)
ANTENNA TYPE	PCB pattern Antenna
ANTENNA GAIN	-4.34 dBi
LIST OF EACH OSC. OR CRYSTAL. FREQ.(FREQ.>=1 MHz)	32.768 kHz, 32MHz
RATED SUPPLY VOLTAGE	DC 3.0 V

2.2 Alternative type(s)/model(s); also covered by this test report.

-. The following lists consist of the added model and their differences.

Model Name	Differences	Tested
MediKeto 82 BT	Basic Model	☑
MediKeto 83 BT	This model is identical to the basic model except for appearance of top case.	☐
MediKeto 82		☐
MediKeto 83		☐

Note: 1. Applicant consigns only basic model to test. Therefore, this test report just guarantees the units, which have been tested.

2. The Applicant/manufacturer is responsible for the compliance of all variants.

3. EUT MODIFICATIONS

-. None

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4. MAXIMUM PERMISSIBLE EXPOSURE

4.1 RF Exposure Calculation

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

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

[(Max. Power of channel, including tune-up tolerance, mW)/(Min. test separation distance, mm)] X [√ f(GHz)] < 3

4.2 EUT Description

Kind of EUT	Blood Beta-Ketone Monitoring System
Operating Frequency Band	☐ Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz ☐ WLAN: 2 412 MHz ~ 2 462 MHz ☐ WLAN: 2 422 MHz ~ 2 452 MHz ☐ WLAN: 5 180 MHz ~ 5 240 MHz ☐ WLAN: 5 745 MHz ~ 5 825 MHz ☐ Bluetooth: 2 402 MHz ~ 2 480 MHz ■ Bluetooth BLE: 2 402 MHz ~ 2 480 MHz ☐ NFC：13.56 MHz
MAX. RF OUTPUT POWER	-8.25 dBm
Antenna Gain	-4.34 dBi
Exposure Evaluation Applied	☐ MPE ☐ SAR ■ SAR Test Exclusion Evaluation

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4.3 Test Result of SAR Exclusion

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

[(Max. Power of channel, including tune-up tolerance, mW)/(Mim. test separation distance, mm)] X [√ f(GHz)]

= (0.17/5) X √ 2.402 = 0.05 < 3

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.

Mode	Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
Bluetooth LE	2 402	-8.25 ± 0.5	-7.75	0.17	5	0.05

Tested by: Yu-Seog Sim / Assistant Manager

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