



RF EXPOSURE REPORT

Report No.: SET2022-13155

Product Name: Pulse Oximeter

Model No.: CMS50F

FCC ID: 2ABOGCMS50F

Applicant: Contec Medical Systems Co., Ltd.

No.112 Qinhuang West Street, Economic & Technical Development

Address: Zone, Qinhuangdao, Hebei Province, PEOPLE`S REPUBLIC OF CHINA

Dates of Testing: 09/16/2022 - 09/26/2022

Issued by: CCIC Southern Testing Co., Ltd.

Lab Location: Electronic Testing Building, No. 43 Shahe Road, Xili Street,
Nanshan District, Shenzhen, Guangdong, China.

Tel: 86 755 26627338 **Fax:** 86 755 26627238

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Test Report

Product: Pulse Oximeter

Trade Name: **CONTEC**

Applicant.....: Contec Medical Systems Co., Ltd.


Applicant Address: No.112 Qinhuang West Street, Economic &Technical
Development Zone, Qinhuangdao, Hebei Province,
PEOPLE`S REPUBLIC OF CHINA

Manufacturer: Contec Medical Systems Co., Ltd.

Manufacturer Address: No.112 Qinhuang West Street, Economic &Technical
Development Zone, Qinhuangdao, Hebei Province,
PEOPLE`S REPUBLIC OF CHINA

Test Standards: 47 CFR Part 2.1091

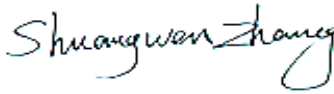
Test Result.....: Pass

Tested by:  2022.09.27

Chuiwang Zhang, Test Engineer

Reviewed by:  2022.09.27

Chris You, Senior Engineer

Approved by:  2022.09.27

Shuangwen Zhang, Manager



Table of Contents

1. GENERAL INFORMATION.....	5
1.1. EUT Description	5
1.2. EUT Description	6
1.3. Laboratory Facilities	6
1.4. Laboratory Location.....	6
2. TECHNICAL REQUIREMENTS SPECIFICATION IN CFR TITLE 47 PART 2.1093	7
2.1. Evaluation method	7
2.2. Evaluation Results.....	8
2.3. Conclusion	8



Change History		
Issue	Date	Reason for change
1.0	2022.09.27	First edition



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Pulse Oximeter
Model No.	CMS50F
Device Type	Portable Device
EUT supports Radios application	Bluetooth V5.0 LE
Frequency Range(Tx)	2402MHz~2480MHz
Modulation Type	GFSK
Antenna gain	-0.48dBi
Antenna Type	Internal Antenna



1.2. EUT Description

EUT has been tested according to the following standards.

No.	Identity	Document Title
1	47 CFR Part 1	Practice and Procedure
2	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
3	KDB 447498 D01 General RF Exposure Guidance v06	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices

1.3. Laboratory Facilities

FCC-Registration No.: 406086

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until April 19th, 2023.

ISED Registration: 11185A-1

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Jun. 30th, 2023.

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

1.4. Laboratory Location

Company Name:	CCIC Southern Testing Co., Ltd.		
Address:	Electronic Testing Building, No. 43 Shahe Road, Xili Street,	Nanshan	
	District, Shenzhen, Guangdong, China		

2. Technical Requirements Specification in CFR Title 47 Part 2.1093

2.1. Evaluation method

According to KDB447498 D01 General RF Exposure Guidance v06 Section 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 Test Exclusion Threshold condition(s), listed below, is (are) satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance defined in 4.1 f) is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified, typically in the SAR measurement or SAR analysis report, by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting are required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops and tablets, etc..

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

- $[\sqrt{f_{(\text{GHz})}}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity 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
 - 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 according to 4.1 f) is applied to determine SAR test exclusion.



2.2. Evaluation Results

Maximum Conducted Power Results

Bluetooth BLE			
Frequency (MHz)	2402	2440	2480
Test Results (dBm)	-2.561	-3.118	-3.886
Target (dBm)	-3.0 ± 1	-3.0 ± 1	-3.0 ± 1

Maximum Evaluation Results

Bluetooth BLE					
Frequency (MHz)	Antenna Distance (mm)	RF output power (including tune-up tolerance)		SAR Test Exclusion Threshold	SAR Test Exclusion
		dBm	mW		
2402	5	-2.0	0.631	$0.20 < 3.0$	Yes

2.3. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB447498 D01 General RF Exposure Guidance v06 section 4.3.1.

** END OF REPORT **