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FCC RF Exposure

Project No. : NK-24-R-043**Dates of receipt :** February 1, 2024**Applicant :** SD Biosensor, Inc.**Dates of Issue :** November 25, 2025C-4th&5th, 16, Deogyong-daero, 1556beon-gil,
Yeongtong-gu, Suwon-si, Gyeonggi-do, 16690,
Korea (the Republic of).**Test Site :**

Nemko Korea Co., Ltd.

FCC ID :**RPJ-01CG10****Applicant :****SD Biosensor, Inc.****Brand Name :****Model:****01CG10****Additional Model(s):** -**EUT Type:****Continuous Glucose Monitoring System****Classification:****FCC Part 15 Digital Transmission System (DTS)****Date of Test:****April 7, 2025 ~ May 27, 2025****Applied Standard:****FCC 47 CFR Part 1.1307**

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1. INTRODUCTION

1.1 Test facility

The measurement procedure described in American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (ANSI C63.4-2014), the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013) was used in determining radiated and conducted emissions emanating.

These measurement tests were conducted at **Nemko Korea Co., Ltd.**

The site address 165-51, Yurim-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, 17042, Rep. of Korea.

1.2 Accreditation and listing

Accreditation type		Accreditation number
	CAB Accreditation for DOC	Designation No. KR0026
	KOLAS Accredited Lab. (Korea Laboratory Accreditation Scheme)	Registration No. KT155
	Canada IC Registered site	Site No. 29506
	VCCI registration site(RE/CE/Telecom CE)	Member No. 2118
	EMC CBTL	TL124
	KCC(RRL)Designated Lab.	Registration No. KR0026

2. EUT INFORMATION & TEST CONDITIONS

2.1 EUT Information

2.1.1 Specifications

EUT Type	Continuous Glucose Monitoring System
Model Name	01CG10
Frequency of Operation	2 402 MHz ~ 2 480 MHz
Peak Output Power (Conducted)	-1.13 dBm
Number of Channels	40 CH
Modulations	GFSK (Bluetooth LE 1Mbps)
Antenna Gain (peak)	0.7 dBi
Antenna Setup	1TX / 1RX
EUT Rated Voltage	DC 1.55 Vdc (Battery)
EUT Test Voltage	DC 1.55 Vdc
Remarks	-

2.2 Operation During Test

The EUT is the transceiver which is Bluetooth LE mode.

The Laptop PC was used to control the EUT to transmit the wanted TX channel continuously (duty cycle < 98%) by the testing program.

The operating voltage of EUT was 1.55 Vdc supplied from jig board connected to USB port on Laptop PC.

The EUT was tested at the lowest, middle and the highest channels with the maximum output power in accordance with the manufacturer's specifications. The worst data were recorded in the report.

2.2.1 Table of Test power setting

Frequency	Mode	Modulation	Power setting Level
2 402 MHz ~ 2 480 MHz	BLE 1Mbps	GFSK	0

2.2.2 Table of Test frequency

Frequency band	Modulation	Test Channel (CH)	Frequency (MHz)
2.4 GHz	GFSK	0	2 402
		19	2 440
		39	2 480

2.2.3 Average Output Power

Mode	Frequency	Average Output Power (dBm)	Antenna Gain (dBi)	e.i.r.p (dBm)
Bluetooth LE 1Mbps	2 402	-1.55	0.7	-0.85
	2 440	-1.42		-0.72
	2 480	-1.59		-0.89

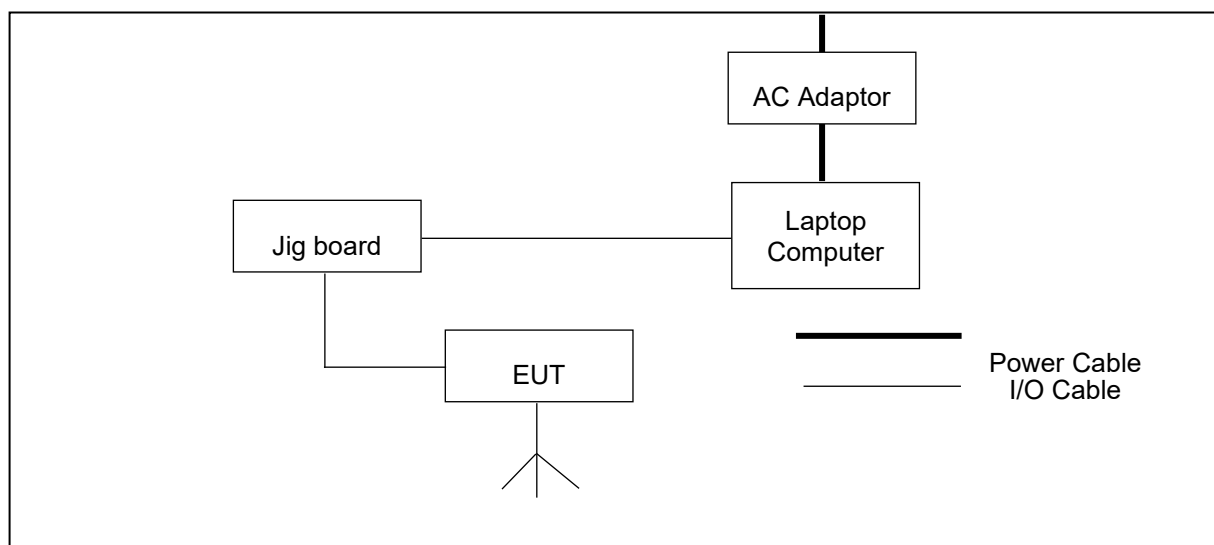
2.2.4 Antenna Information

Frequency band	Modulation	Antenna TX mode	Support CDD	Support MIMO
2.4 GHz	GFSK	■ 1TX, □ 2TX	□ Yes, ■ No	□ Yes, ■ No

2.3 Support Equipment

EUT	SD Biosensor, Inc. Model : 01CG10	S/N: N/A Identical Proto-type
Laptop Computer	LG Model : LG15U47	FCC DOC S/N : 709QCTB565737
AC Adapter	CHICONY POWER TECHNOLOGY (Chongqing) CO., LTD. Model : A13-040N3A	FCC DOC S/N : A040R066L

2.4 Setup Drawing



3. Maximum Permissible Exposure

RF Exposure Limit

According to KDB 447498D01 v06:

The 1g and 10g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})]}{[\sqrt{f(\text{GHz})}]} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- $f(\text{GHz})$ 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 is applied to determine SAR test exclusion.

Device category	: Portable device
Transmitting mode	: Single transmitting
Max. transmitting frequency	: 2 480 MHz
Min. test separation distance	: 5 mm
Max. Antenna Gain	: 0.7 dBi
Max. Average power	: -1.13 dBm
	0 dBm
Max. power with turn-up tolerance	: 1.0 mW

For this device:

$$1.0 \text{ mW}[\text{maximum average output power}]/5 \text{ mm}[\text{minimum separation distance}] \times \sqrt{2.48 \text{ GHz}} = 0.4$$

Note. The calculation result was rounded to one decimal place for comparison.

Test Result :

This is less than 3.0 for 1-g SAR.

SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.