

RF Exposure Evaluation Report

Report No.: 2405S57095C

Applicant: Kontakt Micro-Location Sp. z o.o.

Address: ul.Stoczniewcow 3, 30-709 Krakow, Poland

Product Name: Smart Badge 3

Product Model: KHWBC303F001

Multiple Models: N/A

Trade Mark: Kontakt.io

FCC ID: 2ADAO-KHWBC303F001

Standards: 47 CFR §1.1310
KDB 447498 D01 General RF Exposure Guidance v06

Test Date: 2024-04-08

Test Result: Complied

Report Date: 2024-04-19

Reviewed by:

Frank Yin

Approved by:

Jacob Kong

Frank Yin
Project Engineer

Jacob Kong
Manager

Prepared by:

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen,
Guangdong, People's Republic of China



This report may contain data that are not covered by the NVLAP accreditation and shall be marked with an asterisk “★”

Announcement

1. This test report shall not be reproduced in full or partial, without the written approval of World Alliance Testing & Certification (Shenzhen) Co., Ltd
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.
5. The information marked “#” is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

Revision History

Version No.	Issued Date	Description
00	2024-04-19	Original

Contents

1	General Information	4
1.1	Client Information	4
1.2	Product Description of EUT	4
1.3	Laboratory Location	4
2	RF Exposure Evaluation	5
2.1	Standard	5
2.2	Result.....	5

1 General Information

1.1 Client Information

Applicant:	Kontakt Micro-Location Sp. z o.o.
Address:	ul.Stoczniewcow 3, 30-709 Krakow, Poland
Manufacturer:	Kontakt Micro-Location Sp. z o.o.
Address:	ul.Stoczniewcow 3, 30-709 Krakow, Poland

1.2 Product Description of EUT

The EUT is Smart Badge 3 that contains BLE(1M/2M) radio.

Sample Serial Number	2JJU-2 (assigned by WATC)
Sample Received Date	2024-04-07
Sample Status	Good Condition
Frequency Range	2402MHz - 2480MHz(BLE1M/2M)
Maximum Conducted Output Power	3.72dBm
Modulation Technology	GFSK
Antenna Gain [#]	6.28dBi
Spatial Streams	SISO (1TX, 1RX)
Power Supply	DC3.0V from battery
Operating temperature [#]	0 deg.C to +50 deg.C
Adapter Information	N/A
Modification	Sample No Modification by the test lab

1.3 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

2 RF Exposure Evaluation

2.1 Standard

According to §1.1310, radio frequency devices 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 KDB447498 D01 General RF Exposure Guidance v06:

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ 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
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

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 5) in section 4.1 is applied to determine SAR test exclusion.

2.2 Result

Radio	Frequency (MHz)	Maximum Conducted Power including Tune-up Tolerance		Min. test separation distance (mm)	Result (1-g SAR)	Exclusion Limit (1-g SAR)	Verdict
		(dBm)	(mW)				
BLE	2402-2480	4.0	2.51	5	0.8	3.0	Pass

Note: The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

Result: Complied, No need standalone SAR test.

---End of Report---