RF Exposure Statement

Product / EUT:	*Exoskeleton*
Type designation:	*EXOACTIVE EXO 18*
Tested type:	*EXOACTIVE EXO 18*
Production level:	*2023-04*
S/N:	*40022970*
FCC ID:	*2BE7T-EXO18*
IC certification number:	*32110-EXO18*

Integrated RF-Modules

RF Standard	*BLE*
Antenna:	*Integral*
Module installation:	*n/a*
Manufacturer:	*exoIQ GmbH*
	Jaffestraße 12
	21109 Hamburg / Germany

Test remit: FCC Rules 47 CFR Part 1 Subpart I 09/13/2023 – §1.1307 (b)
KDB 447498 D04 Interim General RF Exposure Guidance v01

The requirements were: ⊠ kept
☐ not kept

Applicant:	exoIQ GmbH
	Jaffestraße 12
	21109 Hamburg / Germany
EUT-	
Date of arrival:	02/02/2024
Test ID:	23-0121PR05-015
Date(s) of test:	02/14/2024
Test laboratory:	EMCE GmbH
	Ingenieurbüro für EMV-Prüfungen und Schaltungsentwicklung
	Untere Wiesen 1 / 88483 Burgrieden / Germany
Project manager:	Mr. S. Vogelmann
Inspector:	Mr. S. Vogelmann
Approval:	Mr. Chr. Vogelmann

Determination of exemption:

Rules and specification   47 CFR Part 1 Section 1307 (b)(1)(i)(B)
                                 KDB 447498 D04 Interim General RF Exposure Guidance v01

According to FCC §1.1307(b), 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.

A single RF source is exempt if the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive).

Pth is given by:

$$P_{th}(mW) = ERP_{20cm}(d/20cm)^x \qquad d \leq 20 \text{ cm}$$
or
$$P_{th}(mW) = ERP_{20cm} \qquad 20 \text{ cm} < d \leq 40 \text{ cm}$$

where

$$x = -log_{10}\left\{\frac{60}{ERP_{20cm}\sqrt{f}}\right\} \qquad \text{f in GHz}$$

$$ERP_{20cm}(mW) = \begin{cases} 2040f & 0.3 \text{ } GHz \leq f < 1.5 \text{ } GHz \\ 3060 & 1.5 \text{ } GHz \leq f < 6 \text{ } GHz \end{cases}$$

d = separation distance (cm)

Example:

Test frequency   2450 MHz
d   0.5cm
ERP_{20cm}(mW)   3060

Calculated P_{th}(mW):

$$x = -log_{10}\left\{\frac{60}{3060\sqrt{2.45}}\right\} = 1.9022$$
$$P_{th}(mW) = 3060(0.5/20cm)^{1.9022} = 2.74 \text{ mW}$$

Records refer to Test report 23-0121RP11-007-C

Conducted test

Center Frequency / MHz	ERP / mW	Limit / mW	Margin / mW
2402	2.453	1000	997.5
2440	2.543	1000	997.5
2480	2.638	1000	997.4

Radiated test

Center Frequency / MHz	ERP / mW	Limit / mW	Margin / mW
2402	2.109	1000	997,9
2440	2.291	1000	997,7
2480	1.91	1000	998,1

Determination of exemption
The higher test results from the conducted test were used for the calculation.

Center Frequency	Maximum ERP		Pth (d= 0.65 cm)	Minimum separation distance	SAR test exclusion
(MHz)	(dBm)	(mW)	(mW)	(cm)	
2402	3.897	2.453	4.587	0.65*	Yes
2440	4.054	2.543	4.533	0.65*	Yes
2480	4.197	2.638	4.479	0.65*	Yes
* Minimum distance between antenna structure and surface of the handheld device.					

Test result

Maximum ERP ≤ Pth: ☒ kept
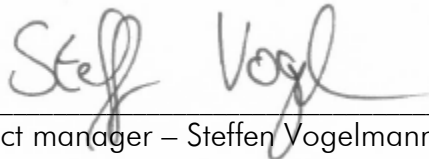   ☐ not kept

Summary

47 CFR Part 1 Subpart I

Requirement	Regulation section	Operating Band	Limits	Result	Remarks
Exemption pursuant	§ 1.1307 (b)(1)(i)(A)			n. r.	n/a
Evaluation of the human exposure to RF radiation	§ 1.1307 (b)(1)(i)(B)	BLE @2.4 GHz	General Population / Uncontrolled Exposure	Pass	No SAR required
Environmental Assessment	§ 1.1307 (b)(1)(i)(C)			n. r.	n/a

n. r. – not relevant

Burgrieden, 08/27/2024

Responsible inspector: _____

Project manager – Steffen Vogelmann

- End of Test Report -