

RF Exposure Report

Project Number: 4941479**Offer Number:** SUW-202204002740**Report Number:** 4941479EMC06**Revision Level:** 0**Client:** Adrich, Inc.**Equipment Under Test:** Adrich Replete Device**Model:** Gen3-FlexBatt**FCC ID:** 2A677G3FB01**Applicable Standards:** 47 CFR §§ 2.1093 (Portable)**FCC KDB 447498 D01 General RF Exposure Guidance v06****Report issued on:** 17 February 2023**Result:** Exempt from SAR evaluation

FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

Report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the Federal Government.

Prepared by:

A handwritten signature in blue ink that reads 'Martin Taylor'.

Martin Taylor, Project Engineer

Reviewed by:

A handwritten signature in blue ink that reads 'Stephen Whalen'.

Stephen Whalen, SAR/EMC Manager

Remarks: This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. And for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/terms-e-document.aspx>.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for a maximum of 30 days only.

TABLE OF CONTENTS

1	GENERAL INFORMATION.....	3
1.1	CLIENT INFORMATION.....	3
1.2	TEST LABORATORY	3
1.3	GENERAL INFORMATION OF EUT	3
1.4	SEPARATION DISTANCE.....	3
2	SAR EXCLUSION CALCULATIONS	4
3	REVISION HISTORY	5

1 General Information

1.1 Client Information

Name: Adrich, Inc.
Address: 100 South Commons Suite 102
City, State, Zip, Country: Pittsburgh, PA 15212, USA

1.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

1.3 General Information of EUT

Type of Product: Adrich Replete Device
Model Number: Gen3-FlexBatt
Serial Number: SUW_SP_20220702266

Frequency Ranges: 2402 – 2480 MHz (Bluetooth LE)
Antenna: Johanson Technology 2450AT42E0100E (Gain: -2.0 dBi*)
Max Conducted Output Power: 4.73 dBm

Sample Received Date: 25 July 2022
Dates of testing: 04-10 October 2022

**Data was not measured; therefore, the lab is not responsible for accuracy. Data obtained via customer, specification sheet, previous regulatory filing or other.*

1.4 Separation Distance

The closest exposure distance occurs when a user places a product containing the smart label (EUT) against his or her body.

2 SAR Exclusion Calculations

The highest output power in conjunction with the upper and lower frequency boundaries have been used to demonstrate compliance for all Bluetooth LE transmission modes.

Power levels were referenced from measurements captured in report number 4941479EMC01.

The EUT is considered a body application.

Bluetooth LE (Low Channel)

447498 D01 General RF Exposure Guidance v06

SAR test exclusion calculations

Section 4.3: General SAR test exclusion guidance / Section 4.3.1: Standalone SAR test exclusion considerations

	Input	Select Units
Max Power:	4.73	dBm
Duty Cycle:	100.0%	
Min separation distance:	5	mm
Frequency, f:	2402	MHz

<== Source based time average duty cycle

Value reference Number	Values used for Calculation	Reference number definition
v1	3.000 mW	[max. power of channel, including tune-up tolerance, mW] 'Rounded to nearest mW
v2	5 mm	[min. test separation distance, mm] 'Rounded to nearest mm
v3	1.550	[f(GHz)]

- a) 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:

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

Exclusion Calculation(1g):	0.9299	number	<== [v2 / v3] must be less than 3
Exclusion Calculation(10g):	0.9299	number	<== [v2 / v3] must be less than 7.5

Conclusions (Body):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Body applications
Conclusions (Extremity):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Extremity applications

Bluetooth LE (High Channel)

447498 D01 General RF Exposure Guidance v06

SAR test exclusion calculations

Section 4.3: General SAR test exclusion guidance / Section 4.3.1: Standalone SAR test exclusion considerations

	Input	Select Units
Max Power:	4.15	dBm
Duty Cycle:	100.0%	
Min separation distance:	5	mm
Frequency, f:	2480	MHz

<== Source based time average duty cycle

Value reference Number	Values used for Calculation	Reference number definition
v1	3.000 mW	[max. power of channel, including tune-up tolerance, mW] 'Rounded to nearest mW
v2	5 mm	[min. test separation distance, mm] 'Rounded to nearest mm
v3	1.575	[f(GHz)]

- a) 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:

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

Exclusion Calculation(1g):	0.9449	number	<== [v2 / v3] must be less than 3
Exclusion Calculation(10g):	0.9449	number	<== [v2 / v3] must be less than 7.5

Conclusions (Body):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Body applications
Conclusions (Extremity):	The EUT max power is BELOW the threshold. SAR Testing is NOT required for Extremity applications

3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	17 February 2023