

FCC SAR Exclusion Report

Report No. : SFBHWP-WTW-P22120944

Applicant : FORM Athletica Inc.

Address : 1090 Homer Street, Suite 200, Vancouver, BC V6B2W9, CANADA

Product : SMART SWIMMING TRACKER W/ BLUETOOTH CONNECTIVITY

Brand : FORM

FCC ID : 2ASL3-FSG300

Model No. : FSG3

Standards : FCC 47 CFR Part 2 (2.1093), IEEE C95.1:1992, IEEE Std 1528:2013
KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, KDB 447498 D01 v06

Sample Received Date : Dec. 29, 2022

Date of Evaluation : Jan. 16, 2023

Lab Address : No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location : No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City, Taiwan

CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch – Lin Kou Laboratories**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

Prepared By :


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FCC Accredited No.: TW0003

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Table of Contents

Release Control Record	3
1. Summary of Maximum SAR Value	4
2. Description of Equipment Under Test	5
3. SAR Measurement Evaluation.....	6
3.1 Maximum Output Power.....	6
3.2 Time-Avg. Power calculation.....	6
3.3 SAR Testing Exclusions	7
4. Information on the Testing Laboratories.....	8



Release Control Record

Issue No.	Reason for Change	Date Issued
SFBHWP-WTW-P22120944	Initial release	Sep. 13, 2023

FCC SAR Exclusion Report

1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest Reported SAR _{1g} (W/kg)
DTS	Bluetooth	Not Required

Note:

1. The SAR limit (**Head & Body: SAR_{1g} 1.6 W/kg**) for general population / uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.

FCC SAR Exclusion Report

2. Description of Equipment Under Test

EUT Type	SMART SWIMMING TRACKER W/ BLUETOOTH CONNECTIVITY
Brand Name	FORM
FCC ID	2ASL3-FSG300
Model Name	FSG3
Tx Frequency Bands (Unit: MHz)	2402 ~ 2480
Uplink Modulations	GFSK
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 3.1 of this report
Antenna Type	Ceramic SMT Antenna (Peak Antenna Gain : 2.7 dBi)
EUT Stage	Engineering Sample

Note:

- The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

List of Accessory:

Battery	Brand Name	SYNergy
	Model Name	AHB601218PR
	Power Rating	3.7Vdc, 90mAh
	Type	Li-ion

3. SAR Measurement Evaluation

3.1 Maximum Output Power

The maximum conducted power (Unit: dBm) including tune-up tolerance is shown as below.

Bluetooth			
Mode	Channel	Frequency	Ant. 0 Max Tune-up
LE	0	2402	5
	19	2440	5
	39	2480	5

3.2 Time-Avg. Power calculation.

The calculation of time-avg. power (Unit: dBm) Including duty cycle.

<The calculated average power with duty cycle>

Mode	Max Tune-up Power (Not include Duty Cycle)	Duty Cycle (%)	Calculated Time-Avg. Power (Include Duty Cycle)
BT LE	5	72.2	3.6

FCC SAR Exclusion Report

3.3 SAR Testing Exclusions

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

1. For the test separation distance ≤ 50 mm

$$\frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \sqrt{f_{(\text{GHz})}} \leq 3.0$$

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2. For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times \left(\frac{f_{(\text{MHz})}}{150} \right) \right]_{(\text{mW})}$$

3. For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times 10]_{(\text{mW})}$$

Mode	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Ant. to Surface (mm)	Exclusion	Require SAR Testing?
BT	2.48	3.6	2.29	18	0.2	No

Note:

1. When separation distance ≤ 50 mm and the calculated result shown in above table is ≤ 3.0 , the SAR testing exclusion is applied.
2. When separation distance > 50 mm and the device output power is less than the calculated result (power threshold, mW) shown in above table, the SAR testing exclusion is applied.

Summary:

Since the SAR testing for all device orientations apply SAR test exclusion per KDB 447498, SAR testing for this device is not required.

4. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The road map of all our labs can be found in our web site also.

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