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FCC SAR Exclusion Report

Product name : Launch

Applicant : Feel Robotics

FCC ID : 2AO5N-LCHD18

Test report No.: 180300416 FCC RF exposure Ver 1.00

laboratory certification approvals



Laboratory information

Documentation

The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 10 years at Telefication Netherland

Testing Location

Test Site	Telefication BV
Test Site location	Edisonstraat 12a
	6902 PK Zevenaar
	The Netherlands
	Tel. +31889983600
	Fax. +31316583189



Revision History

Version	Date	Remarks	Ву
v1.00	17-08-2018	Release version	PvW



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1 General Description

1.1 Applicant

Client name: Feel Robotics

Address Amstelplein 62, Amsterdam, the Netherlands

Zip code: 1096 BC

Telephone:(0)20 737 1194E-mail:maurice@kiiroo.comContact name:Maurice op de Beek

1.2 Manufacturer

Manufacturer name: Feel Robotics

Address: Amstelplein 62, Amsterdam, the Netherlands

Zip code: 1096 BC

Telephone:(0)20 737 1194E-mail:maurice@kiiroo.comContact name:Maurice op de Beek

1.3 Tested Equipment Under Test (EUT)

Product name: Launch
Brand name: Kiiroo

Product type:Interactive StrokerFCC ID:2AO5N-LCHD18IC ID:23801-LCHD18

Model(s): Launch

Software version: --

Hardware version: Launch V2

1.4 SAR Measurement Evaluation

1.4.1 Maximum Output Power

The maximum radiated power including tune-up tolerance is shown as below.

Mode	2.4G Bluetooth	
Bluetooth LE	-10.0 dBm*	

^{*} from Telefication report 180300416 002 v1.00.

1.4.2 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

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

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

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

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

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

Mode	Max. Tune- up Power (dBm)	Max. Tune- up Power (mW)	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?
Bluetooth LE	-10.0	0.1	5	0.031	No

Note:

- 1. When separation distance <= 50 mm and the calculated result shown in above table is <= 3.0, the SARtesting 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.

1.5 Summary

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