

RF Exposure Evaluation Report

Product : Keon by Kiiroo
Trade mark : Kiiroo
Model/Type reference : KEON
Serial Number : N/A
Report Number : EED32M80046004
FCC ID : 2AO5N-KEON
Date of Issue : Nov. 30, 2020
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Test result : PASS

Prepared for:

Feel Robotics B.V.
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Nov. 30, 2020



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2 Version

Version No.	Date	Description
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4 General Information

4.1 Client Information

Applicant:	Feel Robotics B.V.
Address of Applicant:	Amstelplein 62, 30th Floor, Amsterdam, 1096BC, Netherlands
Manufacturer:	Assembling Manufacturing & Sourcing Group B.V.
Address of Manufacturer:	Asterweg 20 S3 1031 HN Amsterdam, Netherlands
Factory:	AMS Product Assembly (Foshan) Co. LTD
Address of Factory:	North Chuangye Road Songxia Industry District - Nanhai Area 528234 Foshan PR China

4.2 General Description of EUT

Product Name:	Keon by Kiiroo
Model No.(EUT):	KEON
Trade Mark:	Kiiroo
EUT Supports Radios application:	BT 4.2 Double module 2402MHz to 2480MHz; WIFI: IEEE 802.11 b/g/n(HT20)(HT40): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	BT 4.2 Double module 2402MHz to 2480MHz; WIFI: IEEE 802.11 b/g/n(HT20)(HT40): 2412MHz to 2462MHz	
Modulation Type:	BT: GFSK, $\pi/4$ DQPSK, 8DPSK; WIFI: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM,QPSK,BPSK)	
Test Power Grade:	Default	
Test Software of EUT:	espRFTool.exe	
Antenna Type:	PCB Antenna	
Antenna Gain:	2 dBi	
Power Supply:	DC 5V	
	Li-ion battery	Model:SH553055-4S 14.8V 700mAh/10.36Wh
Max Conducted Peak Output Power:	BT Classic: 1.986dBm; BLE: 2.532dBm; WIFI:3.73dBm	
	The Max Conducted Peak Output Power data refer to the report EED32M80046001, EED32M80046002, EED32M80046003	
Sample Received Date:	Nov. 02, 2020	
Sample tested Date:	Nov. 02, 2020 to Nov. 14, 2020	
<p>Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.</p> <p>The products have two kinds of delivery way: One is with Stroker, The other is without Stroker. In addition, Stroker does not contain any electronic components.</p>		

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

Limits

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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where $f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

5.1.2 EUT RF Exposure

The Max Conducted Peak Output Power is 3.730 (2.36 mW) @ 2437 MHz

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.

So,

$$\left(\frac{2.36}{5\text{mm}} \right) * \left(2.437\text{GHz} \right)^{0.5} = 0.7$$

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] *

$$[\sqrt{f(\text{GHz})}] = 0.7 < 3.0$$

Therefore, standalone SAR measurements are not required for both head and body

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M80046001 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***