

RF Exposure Evaluation Report

Product : Sleep Tracker
Trade mark : N/A
Model/Type reference : Z400TWP, Z400TWP-X
(X is any data from 1-20 and letter from A-Z)
Serial Number : N/A
Report Number : EED32N80069303
FCC ID : 2ADIOZ400TWP-3
Date of Issue : Mar. 30, 2021
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

Shenzhen Medica Technology Development Co., Ltd
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2 Version

Version No.	Date	Description
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4 General Information

4.1 Client Information

Applicant:	Shenzhen Medica Technology Development Co., Ltd
Address of Applicant:	Floor 12, Block A, Building 7, Vanke Cloud city, XingKe 1st street, NanShan District, Shenzhen City.
Manufacturer:	Shenzhen Medica Technology Development Co., Ltd
Address of Manufacturer:	Floor 12, Block A, Building 7, Vanke Cloud city, XingKe 1st street, NanShan District, Shenzhen City.
Factory:	Shenzhen Medica Technology Development Co., Ltd
Address of Factory:	Floor 12, Block A, Building 7, Vanke Cloud city, XingKe 1st street, NanShan District, Shenzhen City.

4.2 General Description of EUT

Product Name:	Sleep Tracker
Model No.:	Z400TWP, Z400TWP-X (X is any data from 1-20 and letter from A-Z)
Test model:	Z400TWP
Trade Mark:	N/A
EUT Supports Radios application:	BT 4.2 Single module 2402MHz to 2480MHz; WIFI: IEEE 802.11 b/g/n(HT20): 2412MHz to 2462MHz

4.3 Product Specification subjective to this standard

Frequency Range:	BT 4.2 Single module 2402MHz to 2480MHz; WIFI: IEEE 802.11 b/g/n(HT20): 2412MHz to 2462MHz	
Modulation Type:	BT: GFSK; WIFI: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM,QPSK,BPSK)	
Test Power Grade:	Default	
Test Software of EUT:	ESP_RF_test_tool_v2.5	
Antenna Type:	PCB antenna	
Antenna Gain:	0.5dBi	
Power Supply:	AC/DC ADAPTER	MODEL:SK01G-0500100U INPUT:100-240V~,50/60Hz ,02A OUTPUT:5V --- 1A
Max Conducted Peak Output Power:	BLE:1.59dBm; WIFI:9.08dBm	
	The Max Conducted Peak Output Power data refer to the report EED32N80069301, EED32N80069302	
Sample Received Date:	Feb. 20, 2021	
Sample tested Date:	Feb. 20, 2021 to Mar. 08, 2021	
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. Model No.: Z400TWP, Z400TWP-X (X is any data from 1-20 and letter from A-Z) Only the model Z400TWP was tested, Z400TWP-X compared with Z400TWP, all parts of the product, Their electrical circuit design, layout, components used and internal wiring are identical,, except only the model name different.		

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$ 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 9.080 (8.09 mW) @ 2412 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,

$$\left(\frac{8.09}{5\text{mm}} \right) * \left(2.412\text{GHz}^{0.5} \right) = 2.5$$

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] * \sqrt{f(\text{GHz})} = 2.5 < 3.0$$

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

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N80069301 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 ***