

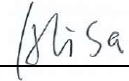
RF Exposure Evaluation Report

Report Reference No......: **MTWG22020112-H**

FCC ID..... : **2A2JA-SL-A321**

Compiled by

(position+printed name+signature)...: File administrators Alisa Luo



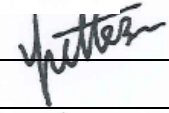
Supervised by

(position+printed name+signature)...: Test Engineer Sunny Deng



Approved by

(position+printed name+signature)...: Manager Yvette Zhou



Date of issue.....: **March 01, 2022**

Representative Laboratory Name.: **Shenzhen Most Technology Service Co., Ltd.**

Address.....: No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name.....: **Zhejiang Haozhonghao Health Product Co., Ltd.**

Address: No.18 Xinglong Road, Furniture Garden, Wanquan Industry Base,
Pingyang, Wenzhou, Zhejiang, China.

Test specification/ Standard: **47 CFR Part 1.1307**

47 CFR Part 1.1310

KDB447498D01 General RF Exposure Guidance v06

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

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Test item description: Massage Chair

Trade Mark: iRest

Manufacturer: **Zhejiang Haozhonghao Health Product Co., Ltd.**

Model/Type reference.....: SL-A321

Listed Models: A310, MD321, 321, SL-A321-1, SL-A321-2

Modulation Type: GFSK, $\pi/4$ DQPSK, 8DPSK

Operation Frequency.....: 2402MHz to 2480MHz

Hardware Version..... V1.1

Software Version V1.0

Rating: 110-120V~, 60Hz, 150W

Result.....: **PASS**

TEST REPORT

Equipment under Test : Massage Chair

Model /Type : SL-A321

Listed Models : A310, MD321, 321, SL-A321-1, SL-A321-2

Remark : Only with different model names.

Applicant : **Zhejiang Haozhonghao Health Product Co., Ltd.**

Address : No.18 Xinglong Road, Furniture Garden, Wanquan Industry Base, Pingyang, Wenzhou, Zhejiang, China.

Manufacturer : **Zhejiang Haozhonghao Health Product Co., Ltd.**

Address : No.18 Xinglong Road, Furniture Garden, Wanquan Industry Base, Pingyang, Wenzhou, Zhejiang, China.

| | |
|---------------------|-------------|
| Test Result: | PASS |
|---------------------|-------------|

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

| Revision | Issue Date | Revisions | Revised By |
|----------|------------|---------------|------------|
| 00 | 2022-03-01 | Initial Issue | Alisa Luo |
| | | | |
| | | | |

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. 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.

2.1.2 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures | | | | |
| 0.3–3.0 | 614 | 1.63 | *(100) | 6 |
| 3.0–30 | 1842/f | 4.89/f | *(900/f ²) | 6 |
| 30–300 | 61.4 | 0.163 | 1.0 | 6 |
| 300–1500 | | | f/300 | 6 |
| 1500–100,000 | | | 5 | 6 |
| (B) Limits for General Population/Uncontrolled Exposure | | | | |
| 0.3–1.34 | 614 | 1.63 | *(100) | 30 |
| 1.34–30 | 824/f | 2.19/f | *(180/f ²) | 30 |
| 30–300 | 27.5 | 0.073 | 0.2 | 30 |
| 300–1500 | | | f/1500 | 30 |
| 1500–100,000 | | | 1.0 | 30 |

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$ Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

Antenna Gain: -1.72dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.4 in linear scale. Output Power Into Antenna & RF Exposure Evaluation Distance:

BLE

| GFSK | | | |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
| | | | (dBm) |
| Lowest(2402 MHz) | 0.296 | 0.296 ± 1 | 1.296 |
| Middle(2440MHz) | 4.379 | 4.379 ± 1 | 5.379 |
| Highest(2480MHz) | 4.498 | 4.498 ± 1 | 5.498 |

BLE

| Worst case: GFSK | | | | | | |
|-------------------|---|--|--------------------|--|-------|--------|
| Channel | Maximum Peak Conducted Output Power (dBm) | Maximum Peak Conducted Output Power (MW) | Antenna Gain (dBi) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
| Highest(2480 MHz) | 5.498 | 3.55 | -1.72 | 0.0005 | 1.0 | Pass |

Note: 1) Refer to report **MTWG22020112-R2** for EUT test Max Conducted average Output Power value.Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (3.55 * 0.67) / (4 * 3.1416 * 20^2) = 0.0005$

EDR

| GFSK | | | |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
| | | | (dBm) |
| Lowest(2402 MHz) | 0.539 | 0.539 ± 1 | 1.539 |
| Middle(2441MHz) | 4.269 | 4.269 ± 1 | 5.269 |
| Highest(2480MHz) | 4.325 | 4.325 ± 1 | 5.325 |

| π/4DQPSK | | | |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
| | | | (dBm) |
| Lowest(2402 MHz) | -0.475 | -0.475 ± 1 | 0.525 |
| Middle(2441MHz) | 3.434 | 3.434 ± 1 | 4.434 |
| Highest(2480MHz) | 4.323 | 4.323 ± 1 | 5.323 |

| 8DPSK | | | |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
| | | | (dBm) |
| Lowest(2402 MHz) | -0.594 | -0.594 ± 1 | 0.406 |
| Middle(2441MHz) | 3.341 | 3.341 ± 1 | 4.341 |
| Highest(2480MHz) | 4.320 | 4.320 ± 1 | 5.320 |

EDR

| Worst case: GFSK | | | | | | |
|-------------------|---|--|--------------------|--|-------|--------|
| Channel | Maximum Peak Conducted Output Power (dBm) | Maximum Peak Conducted Output Power (MW) | Antenna Gain (dBi) | Power Density at R = 20 cm (mW/cm ²) | Limit | Result |
| Highest(2480 MHz) | 5.325 | 3.41 | -1.72 | 0.0005 | 1.0 | Pass |

Note: 1) Refer to report **MTWG22020112-R1** for EUT test Max Conducted average Output Power value.
 Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (3.41 * 0.67) / (4 * 3.1416 * 20^2) = 0.0005$

.....**THE END OF REPORT**.....