

## RF Exposure Evaluation Report

**Report Reference No.**.....: **MTWG22030120-H**

**FCC ID**.....: **2A5Z2-SLFTRD18**

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Date of issue.....: **March 22,2022**

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

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**Applicant's name**.....: **Ningbo Healthmate Health Technology CO., LTD**

Address .....: Dalu Industry Zone, Xidian Town, Ninghai County, Ningbo, 315613  
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** .....: Treadmill

Trade Mark .....: N/A

Manufacturer .....: **NINGBO HEALTHMATE SCIENCE AND TECHNOLOGY  
DEVELOPMENT CO., LTD**

Model/Type reference.....: SLFTRD18

Listed Models .....: HURTRD18, SLFTRD20, SLFTRD213, SLFTRD25, SLFTRD26BT,  
SLFTRD30, SLFTRD35, SLFTRD45, SLFTRD80, SLFTRD418,  
HSM-T07D, HSM-MT05A7

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

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

Hardware Version.....: HY-40R204PC

Software Version .....: /

Rating .....: AC 110V-120V, 50/60Hz, 500W

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

## TEST REPORT

Equipment under Test : Treadmill

Model /Type : SLFTRD18

Listed Models : HURTRD18, SLFTRD20, SLFTRD213, SLFTRD25,  
SLFTRD26BT, SLFTRD30, SLFTRD35, SLFTRD45, SLFTRD80,  
SLFTRD418, HSM-T07D, HSM-MT05A7

Remark : Only with different model names.

Applicant : **Ningbo Healthmate Health Technology CO., LTD**

Address : Dalu Industry Zone, Xidian Town, Ninghai County, Ningbo,  
315613 Zhejiang, China

Manufacturer : **NINGBO HEALTHMATE SCIENCE AND TECHNOLOGY  
DEVELOPMENT CO., LTD**

Address : Dalu Industry zone, Xidian Town, Ninghai County, Ningbo, 315613  
Zhejiang, China

<b>Test Result:</b>	<b>PASS</b>
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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	2022-03-22	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 <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	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:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$  Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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: -2.1dBi

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

**EDR**

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402 MHz)	-1.22	$-1.22 \pm 1$	-0.22
Middle(2441MHz)	-1.39	$-1.39 \pm 1$	-0.39
Highest(2480MHz)	-1.69	$-1.69 \pm 1$	-0.69

$\pi/4$ DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402 MHz)	0.64	$0.64 \pm 1$	1.64
Middle(2441MHz)	0.54	$0.54 \pm 1$	1.54
Highest(2480MHz)	0.26	$0.26 \pm 1$	1.26

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402 MHz)	0.90	$0.90 \pm 1$	1.90
Middle(2441MHz)	0.81	$0.81 \pm 1$	1.81
Highest(2480MHz)	0.53	$0.53 \pm 1$	1.53

**EDR**

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit	Result
Highest(2402 MHz)	1.9	1.55	-2.1	0.0002	1.0	Pass

Note: 1) Refer to report **MTWG22020120-R1** for EUT test Max Conducted average Output Power value.Note: 2)  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (1.55 \cdot 0.62) / (4 \cdot 3.1416 \cdot 20^2) = 0.0002$

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