Shenzhen Most Technology Service Co., Ltd.
No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.

RF Exposure Evaluation Report

Report Reference No.....:	**MTWG22060470-H**
FCC ID..... :	**2ASBG-YH-8320D**
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.....:	**FUJIAN YIHE ELECTRONICS CO., LTD**
Address .....:	JI'AN ROAD, QINXIYANG INDUSTRIAL PARK, FUAN, FUJIAN, 355000 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.

Test item description .....:	Massage Chair
Trade Mark .....:	ergotec
Manufacturer .....:	**FUJIAN YIHE ELECTRONICS CO., LTD**
Model/Type reference.....:	8320D-HY
Listed Models .....:	N/A
Modulation Type .....:	GFSK, π/4DQPSK, 8DPSK
Operation Frequency.....:	2402MHz to 2480MHz
Hardware Version.....	V1.1
Software Version	V1.0
Rating .....:	85-130V,50-60Hz,5A,120W
Result.....:	**PASS**

T E S T R E P O R T

Equipment under Test	:	Massage Chair
Model /Type	:	8320D-HY
Listed Models	:	N/A
Remark		N/A
Applicant	:	**FUJIAN YIHE ELECTRONICS CO., LTD**
Address	:	JI'AN ROAD, QINXIYANG INDUSTRIAL PARK, FUAN, FUJIAN, 355000 CHINA
Manufacturer	:	**FUJIAN YIHE ELECTRONICS CO., LTD**
Address	:	JI'AN ROAD, QINXIYANG INDUSTRIAL PARK, FUAN, FUJIAN, 355000 CHINA

Test Result:	**PASS**

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2022-07-07	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: Pd = (Pout*G)/(4* Pi * R 2) Where
Pd = power density in mW/cm2
Pout = 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
Pd id 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: -0.5dBi
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)	6.452	6.452±1	7.452
Middle(2440MHz)	6.946	6.946±1	7.946
Highest(2480MHz)	5.987	5.987±1	6.987

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/cm2)	Limit	Result
Highest(2480 MHz)	7.946	6.23	-0.5	0.001	1.0	Pass

Note: 1) Refer to report **MTWG22060470-R2 f**or EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(6.23*0.89)/(4*3.1416*20^2)=0.001
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

EDR

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402 MHz)	-0.418	-0.418±1	0.582
Middle(2441MHz)	0.704	0.704±1	1.704
Highest(2480MHz)	2.014	2.014±1	3.014

π/4DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402 MHz)	-0.385	-0.385±1	0.615
Middle(2441MHz)	0.677	0.677±1	1.677
Highest(2480MHz)	1.996	1.996±1	2.996

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402 MHz)	-0.374	-0.374±1	0.626
Middle(2441MHz)	0.663	0.663±1	1.663
Highest(2480MHz)	2.055	2.055±1	3.055

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/cm2)	Limit	Result
Highest(2441 MHz)	3.055	2.02	-0.5	0.0003	1.0	Pass

Note: 1) Refer to report **MTWG22060470-R1** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R2)=(2.02*0.89)/(4*3.1416*20^2)=0.0003
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

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