






RF Exposure Evaluation Report

Report Reference No.:	MTEB23090272-H	
FCC ID :	YMX-EC6263E	
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.....:	September 27, 2023	
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 XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD		
Address	(5/F) NO.168, QIANPU ROAD, SIMING DISTRICT, XIAMEN, Fujian 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	N/A	
Manufacturer	XIAMEN HEALTHCARE ELECTRONIC CO.,LTD.	
Model/Type reference.....:	EC-6263E	
Listed Models	MC4100	
Modulation Type	GFSK, $\pi/4$ DQPSK, 8DPSK	
Operation Frequency.....:	From 2402MHz to 2480MHz	
Hardware Version.....	1.0	
Software Version	1.0	
Rating	110V-120V~, 60Hz	
Result.....:	PASS	

TEST REPORT

Equipment under Test : Massage Chair

Model /Type : EC-6263E

Listed Models MC4100

Remark Only the model name is different.

Applicant : **XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD**

Address : (5/F) NO.168, QIANPU ROAD, SIMING DISTRICT, XIAMEN, Fujian CHINA

Manufacturer : **XIAMEN HEALTHCARE ELECTRONIC CO.,LTD.**

Address : 65-66#, 62-63# BUILDING, SIMING ZONE, TONGAN INDUSTRIAL DISTRICT, XIAMEN CITY, FUJIAN PROVINCE, P.R.CHINA

Test Result:	PASS
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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	2023-09-27	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: 0dBi

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

BT classic

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	-0.024	-0.024 ± 1	0.976
Middle(2441MHz)	0.583	0.583 ± 1	1.583
Highest(2480MHz)	0.182	0.182 ± 1	1.182

$\pi/4$ DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	0.810	0.810 ± 1	1.810
Middle(2441MHz)	1.236	1.236 ± 1	1.236
Highest(2480MHz)	0.573	0.573 ± 1	1.573

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.090	1.090 ± 1	2.090
Middle(2441MHz)	1.579	1.579 ± 1	2.579
Highest(2480MHz)	0.898	0.898 ± 1	1.898

Worst case: $\pi/4$ DQPSK						
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)	2.579	1.81	0	0.0003	1.0	Pass

Note: 1) Refer to report **MTEB23090272-R** for EUT test Maximum tune-up Power.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (1.81 * 1) / (4 * 3.1416 * 20^2) = 0.0003$

Note: 3) EUT's Bluetooth module is more than 20cm away from the human body.

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