

RF Exposure Evaluation Rep Ort

Report Reference No.....: MTEB23020129-H

FCC ID.....: 2BAA5-MNX6

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

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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.....: AcoustMax International Corporation

Address Room 501,Lingyun Building ,HongLang North 2 Road,
Baoan District, ShenZhen, China

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

47 CFR Part 2.1093

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

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Test item description: X6

Trade Mark: Monster

Manufacturer: AcoustMax International Corporation

Model/Type reference.....: MNX6

Listed Models: MNX6 PLUS,MNX6+,MNX6-2,MNPAX-600,MNPAX- 650,MNPAX-
700,MNPAX-600-C,MNPAX-650-C,MNPAX-700-C,MNPAX-
600LED,MNPAX-650LED,MNPAX-700LED,MNPAX-600LED-C,
MNPAX-650LED-C,MNPAX-700LED-C

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

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

Hardware Version.....: V01

Software Version: V1.0

Rating: AC 100-240V,50/60Hz,200W

Result.....: PASS

TEST REPORT

Equipment under Test : X6

Model /Type : MNX6

Listed Models : MNX6 PLUS,MNX6+,MNX6-2,MNPAX-600,MNPAX-650,
MNPAX-700,MNPAX-600-C,MNPAX-650-C,MNPAX-700-C,MNPAX-
600LED,MNPAX-650LED,MNPAX-700LED,MNPAX-600LED-C,
MNPAX-650LED-C,MNPAX-700LED-C

Remark : Only models are different.

Applicant : AcoustMax International Corporation

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Manufacturer : AcoustMax International Corporation

Address : Room 501,Lingyun Building ,HongLang North 2 Road, Baoan District,
ShenZhen, 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	2023.02.28	Initial Issue	Alisa Luo

2. SAR Evaluation

RF Exposure Compliance Requirement

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.

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.

EUT RF Exposure

BT classic

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.223	1.223 ± 1	2.223
Middle(2441MHz)	0.858	0.858 ± 1	1.858
Highest(2480MHz)	0.598	0.598 ± 1	1.598

π /4DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.025	1.025 ± 1	2.025
Middle(2441MHz)	0.895	0.895 ± 1	1.895
Highest(2480MHz)	1.000	1.000 ± 1	2.000

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.023	1.023 ± 1	2.023
Middle(2441MHz)	0.747	0.747 ± 1	1.747
Highest(2480MHz)	1.569	1.569 ± 1	2.569

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(2441 MHz)	2.569	1.80	0	0.0003	1.0	Pass

Note: 1) Refer to report **MTEB23020129-R2** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (1.80 * 1.0) / (4 * 3.1416 * 20^2) = 0.0003$

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

BLE

GFSK				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.110	1.110 ± 1	2.110	1.62
Middle(2440MHz)	0.632	0.632 ± 1	1.632	1.45
Highest(2480MHz)	-0.103	-0.103 ± 1	0.897	1.23

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(2402MHz)	2.110	1.62	0	0.0003	1.0	Pass

Note: 1) Refer to report **MTEB23020129-R1** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (1.62 * 1.0) / (4 * 3.1416 * 20^2) = 0.0003$

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

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