Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V04
Report Template Revision Date: 2018-07-06

RF Exposure Evaluation Report

Report No.:	CQASZ20210400531E-02
Applicant:	Medeli Electronics Co., Ltd.
Address of Applicant:	120/F., Cheung Lee Industrial Building, 9 Cheung Lee Street, Chai Wan, Hongkong
Equipment Under Test (EUT):	
EUT Name:	Electronic Keyboard
Model No.:	AKX10, AK1000, DX1749
Test Model No.:	AKX10
Brand Name:	MEDELI
FCC ID:	2AZ6J-GC321493
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2021-4-23 to 2021-5-20
Date of Issue:	2021-5-20
Test Result:	**PASS***

***In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou

(Lewis Zhou)

Reviewed By: Jun Li

(Jun Li)

Approved By: Sheek.luo

(Sheek luo)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO.,LTD 华夏准测 APPROVED

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20210400531E-02	Rev.01	Initial report	2021-5-20

2 Contents

3 General Information

3.1 Client Information

Applicant:	Medeli Electronics Co., Ltd.
Address of Applicant:	120/F., Cheung Lee Industrial Building, 9 Cheung Lee Street, Chai Wan, Hongkong
Manufacturer:	Medeli Musical Instrument（Zhu Hai）Co.,Ltd
Address of Manufacturer:	Medeli Industrial Park,2 Shuang Lin East Road,Dalinshan Area, Liangang Industrial Zone, Jinwan District, Zhuhai, China.
Factory	MEDELI MUSICAL INSTRUMENT (ZHUHAI)CO.,LTD.
Factory of Manufacturer:	Medeli Industrial Park,2 Shuang Lin East Road,Dalinshan Area, Liangang Industrial Zone, Jinwan District, Zhuhai, China.

3.2 General Description of EUT

Product Name:	Electronic Keyboard
Model No.:	AKX10, AK1000, DX1749
Test Model No.:	AKX10
Trade Mark:	MEDELI
Hardware Version:	V02
Software Version:	V01.01.03
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, π/4DQPSK, 8DPSK
Transfer Rate:	1Mbps/2Mbps/3Mbps
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Product Type:	☐ Mobile ☐ Portable ☒ Fix Location
Antenna Type:	Ceramic antenna
Antenna Gain:	2.5dBi
EUT Power Supply:	SWITCHING ADAPTER: ModeGQ48-150250-E2 INPUT: 100-240V~ 50/60Hz 1.5A MAX OUT PUT: 15V 2.5A 37.5W

Note:

All model:AKX10, AKX1000, DX1749

Only the model AKX10 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color of appearance and model name.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 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.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

1) For BT

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	0.170	-1±1	0	1.000
Middle(2441MHz)	1.460	0.5±1	1.5	1.413
Highest(2480MHz)	1.930	1±1	2	1.585
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	0.990	0±1	1	1.259
Middle(2441MHz)	2.420	1.5±1	2.5	1.778
Highest(2480MHz)	3.020	2±1	3	1.995
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.170	0±1	1	1.259
Middle(2441MHz)	2.560	1.5±1	2.5	1.778
Highest(2480MHz)	3.210	2±1	3	1.995

Worst case: 8DPSK mode						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	1.170	0±1	1	1.259	0.390	3.0
Middle (2441MHz)	2.560	1.5±1	2.5	1.778	0.556	
Highest (2480MHz)	3.210	2±1	3	1.995	0.628	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20210400531E-01