RF Exposure Evaluation TEST REPORT

for

Flextronics R&D (Shenzhen) Co., Ltd.

Charger

Model No.: WM-01

Brand Name: NIKE or

FCC ID: 2AQ5X-WM-01

Prepared for : Flextronics R&D (Shenzhen) Co., Ltd.
2F, 8 Blk Vision SZ Bus. Park, Gaoxin 9th S Rd.,
Hi-tech Ind. Park, NanShan 518057 Shenzhen China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
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Report Number	:	ACS-F18202
Date of Test	:	Sep.12, 2018
Date of Report	:	Sep.12, 2018

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REPORT VERIFICATION

Applicant	:	Flextronics R&D (Shenzhen) Co., Ltd.
Manufacturer	:	Flextronics R&D (Shenzhen) Co., Ltd.
Product	:	Charger
FCC ID	:	2AQ5X-WM-01

(A) Model No.	:	WM-01
(B) Brand Name	:	NIKE or
(C) Test Voltage	:	AC 120V/60Hz (USB: DC 5V)

Testing Based on:
KDB 680106 D01 RF Exposure Wireless Charging Apps v03

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd.. The measurement results were contained in this test report and Audix Technology (Shenzhen) Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC RF Exposure requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd..

Date of Test : Sep.12, 2018 Report of date: Sep.12, 2018

Prepared by : Monica Liu
Monica Liu /Assistant

Reviewed by : Sunny Lu
Sunny Lu / Deputy Manager

AUDIX® 信華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: David Jin

Approved & Authorized Signer :
David Jin / Manager

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

Product	:	Charger
Model No.	:	WM-01
Brand Name	:	NIKE or
FCC ID	:	2AQ5X-WM-01
Radio Frequency	:	Typical 220kHz (Min. 180kHz, Max. 280kHz)
Applicant	:	Flextronics R&D (Shenzhen) Co., Ltd. 2F, 8 Blk Vision SZ Bus. Park, Gaoxin 9th S Rd., Hi-tech Ind. Park, NanShan 518057 Shenzhen China
Manufacturer	:	Flextronics R&D (Shenzhen) Co., Ltd. 2F, 8 Blk Vision SZ Bus. Park, Gaoxin 9th S Rd., Hi-tech Ind. Park, NanShan 518057 Shenzhen China
Factory#1	:	Flextronics Manufacturing(Zhuhai) Co., Ltd. Xin Qing Science & Technology Industrial Park Jing AN, Doumen, Zhuhai, P.R. China 519180
Factory #2	:	Flextronics Power Systems (Dongguan) Co., Ltd. Mechanical Industrial Zone, Shida Road, Daling Shan, Dongguan, Guangdong 523817, P.R. China
Factory #3	:	FLEXTRONICS TECHNOLOGIES (INDIA) PRIVATE LIMITED Plot 3, Phase II, SEZ-SIPCOT Industrial Park, Sandavelur C Village, Sriperumpudur Taluk, Kanchipuram District, Tamil Nadu, 602106 India
Date of Test	:	Sep.12, 2018
Date of Receipt	:	Aug.10, 2018
Sample Type	:	Prototype production

1.2.Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Kefeng Road, Science & Technology Park, Nanshan District , Shenzhen, Guangdong, China
RF Anechoic Chamber	:	Dimensions are: [L]10m × [W]5.5m × [H]5m
EMC Lab.	:	Certificated by DAkkS, Germany Registration No: D-PL-12151-01-00 Valid Date: Dec.07, 2021
	:	Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2019
		Certificated by FCC, USA Designation No: CN5022 Valid Date: Mar.31, 2019

1.3.Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Radiated Spurious Emission test in RF chamber	3.6dB
Uncertainty for test site temperature and humidity	0.6℃
	3%

2. RF EXPOSURE REQUIREMENT

2.1.GENERAL INFORMATION

For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

This device meeting all of the following requirements, so the PGA is not required.

(1) Power transfer frequency is less than 1 MHz.
(2) Output power from each primary coil is less than or equal to 15 watts.
(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
(4) Client device is placed directly in contact with the transmitter.
(5) Mobile exposure conditions only
(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

2.2.LIMIT

Basic Restrictions Reference levels

Basic restrictions for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

3. ASSESS RESULTS

EUT: Charger					
M/N: WM-01					
Test date: 2018-09-12	Pressure: 101.8±1.0 kpa		Humidity: 53.7±3.0%		
Tested by: Lynn	Test site: RF Site		Temperature: 22.6±0.6℃		
Normal Operation (Charging mode)					
Frequency (MHz)	Position	Distance (CM)	E-Field Strength (V/m)	Limit (V/m)	Result
0.22	Front	15	1.256	614	PASS
	Back	15	1.204	614	PASS
	Left	15	1.213	614	PASS
	Right	15	1.215	614	PASS
	Top	15	1.305	614	PASS
	Bottom	15	1.243	614	PASS
Normal Operation (Charging mode)					
0.22	Position	Distance (CM)	H-Field Strength (A/m)	Limit (A/m)	Result
	Front	15	0.624	1.63	PASS
	Back	15	0.627	1.63	PASS
	Left	15	0.638	1.63	PASS
	Right	15	0.629	1.63	PASS
	Top	15	0.705	1.63	PASS
	Bottom	15	0.698	1.63	PASS

4. PHOTOGRAPHS

5. PHOTOS OF THE EUT

Figure 1
General Appearance of the EUT

Figure 2
General Appearance of the EUT

Figure 3
Inside of the EUT

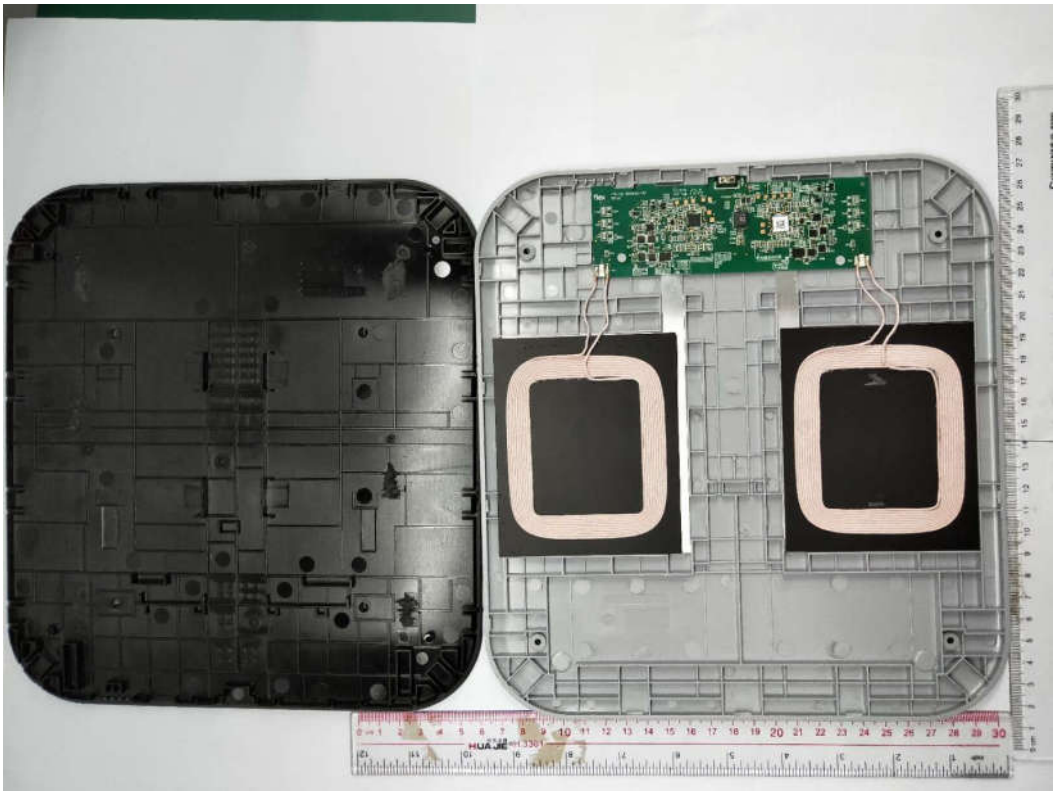

Figure 4
Component side of the PCB

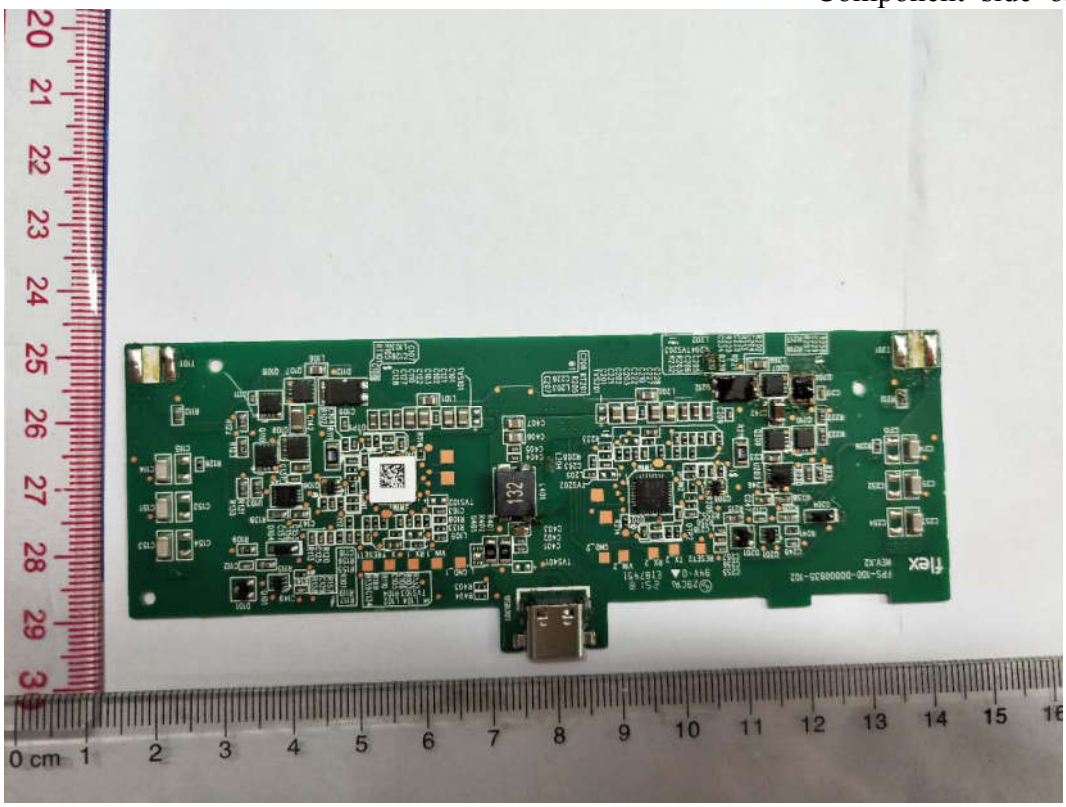
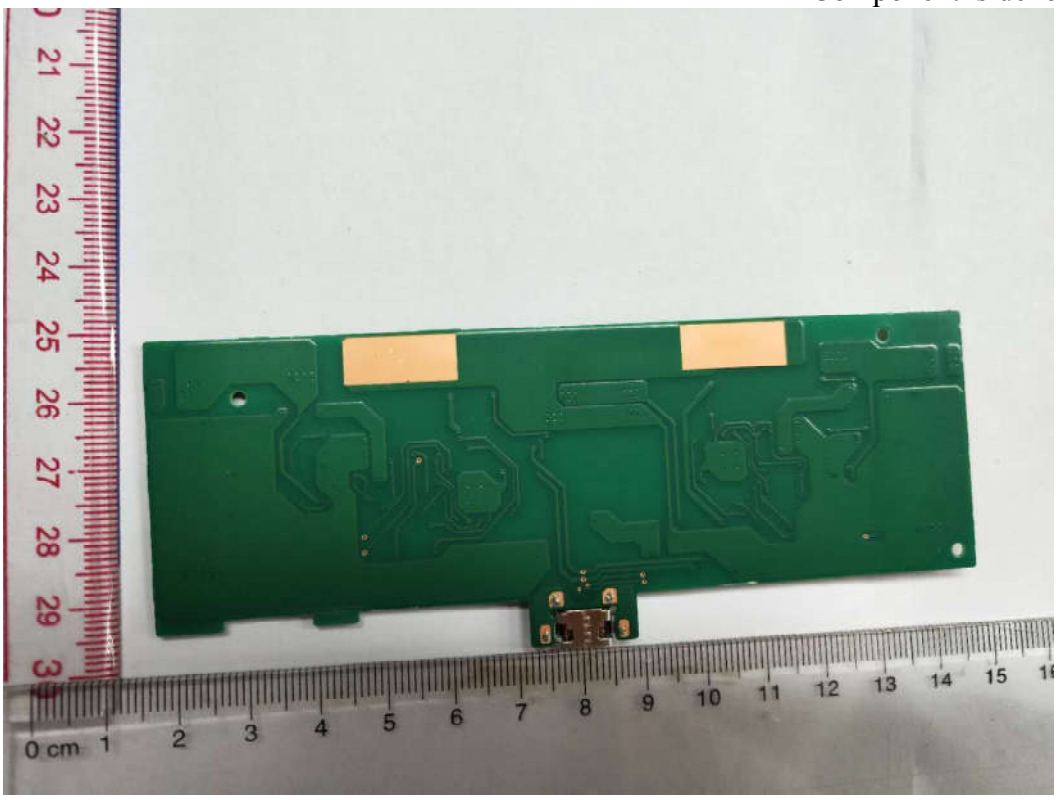
Figure 5
Component side of the PCB