Tineco Intelligent Technology Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model:
FW110300US, FW110500US, FW11xxyyzz,
xx could be 00-99 or AA-ZZ, indicate for different accessories;
yy could be 00-99 indicate for different sales channels;
zz could be AA-ZZ indicate for different countries.

REPORT NUMBER:
230401890SHA-003

ISSUE DATE:
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Intertek Testing Services Shanghai
Building No.86, 1198 Qinzhou Road (North)
Caohejing Development Zone
Shanghai 200233, China

Telephone: 86 21 6127 8200
www.intertek.com

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TEST REPORT

Report no.: 230401890SHA-003

Applicant:	Tineco Intelligent Technology Co., Ltd. No. 108 Shihu Road West, Wuzhong Zone, Suzhou, 215168 P.R.China.
Manufacturer:	Tineco Intelligent Technology Co., Ltd. No. 108 Shihu Road West, Wuzhong Zone, Suzhou, 215168 P.R.China.
Factory:	Tineco Intelligent Technology Co., Ltd. No. 108 Shihu Road West, Wuzhong Zone, Suzhou, 215168 P.R.China.
FCC ID:	2AV7A-FW11

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:	**REVIEWED BY:**
	
Project Engineer Eric Li	Reviewer Wakeyou Wang

TEST REPORT

Revision History

Report No.	Version	Description	Issued Date
230401890SHA-003	Rev. 01	Initial issue of report	November 10, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Smart cordless floor washer
Type/Model:	FW110300US, FW110500US, FW11xxyyzz, XX could be 00-99 or AA-ZZ, indicate for different accessories; yy could be 00-99 indicate for different sales channels; zz could be AA-ZZ indicate for different countries.
Description of EUT:	The EUT is a Smart cordless floor washer, it supports WIFI function, all models are identical except the display, there are LCD display and LED display. we test the EUT with LED and LCD display and list the worst results in this report.
Rating:	DC 21.6V, 230W Adapter S030-1B260100HU: Input:100-240V~, 50-60Hz, 0.8A output: 26V dc, 1.0A. Adapter KL-WA260100-A3: Input:100-240V~, 50-60Hz, 1.2A output: 26V dc, 1.0A.
EUT type:	☐ Table top ☒ Floor standing
Software Version:	/
Hardware Version:	/
Sample Identification No.:	0230608-02-001
Sample received date:	2023.6.8
Date of test:	2023.6.10-2023.6.23

1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20)
Channel Separation:	5 MHz
Antenna:	PCB Antenna, 2.0dBi

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1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Member No: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m^2)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

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2.2 Assessment Results

Power density (S) is calculated according to the formula:

$S = PG / (4\pi R^2)$

Where S = power density in mW/cm^2

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 230401890SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm2)	(mW/cm2)
WIFI	2412-2462	17.47	2.0	20	0.0176	1

Note: 1 mW/cm2 from 1.310 Table 1

The MPE assessment value is 0.0176 < 1.0, therefore, the MPE requirement is deemed to be satisfied without test.

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Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

********** END **********