


RF EXPOSURE REPORT

FOR

Applicant	:	Beiang Air Tech Ltd
Address	:	BUILDING 1, NO.175 SONGBEI ROAD, INDUSTRIAL PARK, SUZHOU, JIANGSU, PROVINCE, CHINA
Equipment under Test	:	Foldable Fan
Model No.	:	F12, F12L, F12 Lite, F12H, F12P, F12 Pro, F12W
Trade Mark	:	 Airdog [®]
FCC ID	:	2AOF9-F12-2022
Manufacturer	:	Beiang Air Tech Ltd
Address	:	BUILDING 1, NO.175 SONGBEI ROAD, INDUSTRIAL PARK, SUZHOU, JIANGSU, PROVINCE, CHINA

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, <http://www.dgddt.com>

REPORT

Table of Contents

Test report declares.....	3
1. General Information	5
1.1. Description of equipment	5
1.2. Assess laboratory.....	5
2. RF Exposure Evaluation	6
2.1. Requirement.....	6
2.2. Calculation method.....	6
2.3. Estimation result.....	7

Test Report Declare

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Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No.:	DDT-R22042006-2E06		
Date of Receipt:	Apr. 27, 2022	Date of Test:	Apr. 27, 2022 ~ Jun. 22, 2022

Prepared By:

Sanvin Zheng

Sanvin Zheng/Engineer

Approved By:



Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jun. 22, 2022	

1. General Information

1.1. Description of equipment

EUT* Name	: Foldable Fan
Model Number	: F12, F12L, F12 Lite, F12H, F12P, F12 Pro, F12W
Model Difference	: All model circuits share the same electrical, mechanical and physical structure, with the only difference being the model name of the prototype. Therefore, the test model is F12.
EUT function description	: Please reference user manual of this device
Power Supply	: AC 100V-240V~50/60Hz
Radio Specification	: Bluetooth V4.2, IEEE 802.11b/g/n
Operation Frequency	: Bluetooth: 2402 MHz - 2480 MHz 2.4G WIFI: IEEE 802.11b: 2412 MHz - 2462 MHz IEEE 802.11g: 2412 MHz - 2462 MHz IEEE 802.11n HT20: 2412 MHz - 2462 MHz
Modulation	: Bluetooth: GFSK 2.4G WIFI: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)
Data rate	: Bluetooth: 1 Mbps 2.4G WIFI: IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: 6.5, 13, 19.5, 26, 39, 52, 58.5, 65 Mbps
Antenna Gain	: 2.54 dBi
Maximum tune-up tolerance	: 1 dB
Sample Type	: Series production
Serial Number	: S22042006-01

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

2. RF Exposure Evaluation

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

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

2.2. Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d= 0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation result

Mode	Maximum tune-up power (dBm)	Output power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
BLE Max power	7.40	5.50	2.54	1.79	0.00196	1
2.4G WIFI Max power	17.26	53.21	2.54	1.79	0.01895	1

Note: The estimation distance is 20 cm

Conclusion: The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

END OF REPORT