

RF EXPOSURE REPORT

FOR

Applicant	:	Formovie (Chongqing) Innovative Technology Co., Ltd.
Address	:	4-401, #2 Longgang Road, Guojiatuo Area, Jiangbei District, Chongqing, China
Equipment under Test	:	Laser Projector
Model No.	:	L065FGE, L065***** (*=0-9, a-z, A-Z, - or blank, indicates for different market purposes)
Trade Mark	:	WEMAX, FORMOVIE
FCC ID	:	2AZNP-L065FGE
Manufacturer	:	Formovie (Chongqing) Innovative Technology Co., Ltd.
Address	:	4-401, #2 Longgang Road, Guojiatuo Area, Jiangbei District, Chongqing, China

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

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
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REPORT

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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-R22011701-2E05		
Date of Receipt:	Jan. 18, 2022	Date of Test:	Jan. 18, 2022 ~ Feb. 24, 2022

Prepared By:

Johnny Wang

Johnny Wang/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	Feb. 25, 2022	

1. General Information

1.1. Description of equipment

EUT* Name	: Laser Projector
Model Number	: L065FGE, L065***** (*=0-9, a-z, A-Z, - or blank, indicates for different market purposes)
Difference of models	: Above models are identical in schematic and structure, only the model name is different for different market purposes, therefore the test performed on the model L065FGE.
EUT function description	: Please reference user manual of this device
Power Supply	: Input: 100-240V ~ 50/60Hz 1.5A
Radio Specification	: Bluetooth V5.0 IEEE 802.11b/g/n IEEE 802.11a/n/ac
Operation Frequency	: BT: 2402 MHz - 2480 MHz 2.4G WIFI: IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz IEEE 802.11n HT40: 2422MHz-2452MHz 5G WIFI: IEEE 802.11a: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5755MHz IEEE 802.11ac HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11ac HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5755MHz IEEE 802.11ac HT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5775MHz
Antenna Gain	: BT: 1.54 2.4G WIFI: Antenna 1: Maximum PK gain: 1.82 dBi Antenna 2: Maximum PK gain: 2.09 dBi 5G WIFI: Antenna 1: maximum PK gain: 5.18 dBi Antenna 2: maximum PK gain: 3.78 dBi
Serial Number	: N/A

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	PK Output power (dBm)	Output power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
BT Max power	5.32	3.40	1.54	1.43	0.00097	1
BLE Max power	3.41	2.19	1.54	1.43	0.00062	1
2.4GWIFI ANT1 Max power	17.78	59.98	1.82	1.52	0.01814	1
5GWIFI ANT1 Max power	15.80	38.02	5.18	3.30	0.02493	1
2.4GWIFI ANN1 MIMO Max power	16.61	45.81	1.82	1.52	0.01386	1
2.4GWIFI ANN2 MIMO Max power	16.40	43.65	2.09	1.62	0.01405	1
5GWIFI ANN1 MIMO Max power	15.44	34.99	5.18	3.30	0.02295	1
5GWIFI ANN2 MIMO Max power	15.25	33.50	3.78	2.39	0.01591	1

Simultaneous:

BT+ WIFI: $0.00097/1+0.02295/1+0.01591/1=0.03983<1$

2.4GWIFI ANN1+2.4GWIFI ANN2= $0.01386/1+0.01405/1=0.02791<1$

5GWIFI ANN1+5GWIFI ANN2= $0.02295/1+0.01591/1=0.03886<1$

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