



RF EXPOSURE EVALUATION REPORT

APPLICANT : Gudsen Technology Co., Ltd
PRODUCT NAME : MOZA iFocus Wireless Follow Focus Motor
MODEL NAME : MOZA iFocus Wireless Follow Focus Motor
BRAND NAME : MOZA
FCC ID : 2AMJR-IFOCUSMOTOR
STANDARD(S) : 47CFR 2.1091
KDB 447498
RECEIPT DATE : 2018-11-03
ISSUE DATE : 2018-12-06

Edited by : Liang Yumei
Liang Yumei(Rapporteur)

Approved by: Peng Huarui
Peng Huarui (Supervisor)

NOTE: This document is issued by MORLAB, the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.





DIRECTORY

- 1. Technical Information3
- 1.1 Applicant and Manufacturer Information3
- 1.2 Equipment Under Test (EUT) Description3
- 1.3 Photographs of the EUT4
- 1.4 Identification of all used EUT5
- 1.5 Applied Reference Documents5
- 2. Device Category and RF Exposure Limit6
- 3. Measurement of RF Output Power7
- 4. RF Exposure Evaluation8
- Annex A General Information9

Version	Date	Description
1.0	2018-12-06	Original



1. Technical Information

Note: Provide by manufacturer.

1.1 Applicant and Manufacturer Information

Applicant:	Gudsen Technology Co., Ltd
Applicant Address:	F\6,10th Building, Jiuxiang Ling Industrial Park, Ave Xili ,Nanshan District, Shenzhen, China
Manufacturer:	Gudsen Technology Co., Ltd
Manufacturer Address:	F\6,10th Building, Jiuxiang Ling Industrial Park, Ave Xili ,Nanshan District, Shenzhen, China

1.2 Equipment Under Test (EUT) Description

EUT Type:	MOZA iFocus Wireless Follow Focus Motor
Hardware Version:	V1.0
Software Version:	0.4.2
Operating Frequency Range:	Bluetooth: 2402MHz-2480MHz 2.4G ISM: 2440 MHz
Modulation Mode:	Bluetooth: GFSK 2.4G ISM: GFSK
Antenna Type:	DIOP Antenna
Antenna Gain:	Bluetooth: 2.26dBi 2.4G ISM: 2.56

1.3 Photographs of the EUT

1. EUT front view



2. EUT rear view





1.4 Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	V1.0	0.4.2

1.5 Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1091	Radio frequency Radiation Exposure Evaluation: mobile devices
2	KDB 447498 D01v06	General RF Exposure Guidance



2. Device Category and RF Exposure Limit

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term "fixed location" means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

GENERAL POPULATION / UNCONTROLLED EXPOSURE

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

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)
(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
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density



3. Measurement of RF Output Power

RF Output Power

Mode	Channel	Frequency (MHz)	Power (dBm)
			GFSK
LE	CH 00	2402	8.13
	CH 19	2440	8.25
	CH 39	2480	7.76
Tune-up Limit			8.50

Mode	Frequency (MHz)	Power (dBm)
2.4G ISM	2440	10.72
Tune-up Limit		11.00

Note: According to KDB 447498, maximum source-based time-average power will be used for calculating MPE.

4. RF Exposure Evaluation

Standalone transmission MPE evaluation

Bands	Frequency (MHz)	Maximum Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power density 2 (mW/cm ²)	Limit 2 for MPE (mW/cm ²)
2.4G LE	2440	8.50	2.26	11.91	0.002	1.0

Bands	Frequency (MHz)	Maximum Tune-up Limit (dBm)	Antenna Gain (dBi)	EIRP (mW)	Power density 2 (mW/cm ²)	Limit 2 for MPE (mW/cm ²)
2.4G ISM	2440	11.00	2.56	22.70	0.005	1.0

MPE transmit simultaneously evaluation:

Transmit Condition	Power density 1 (mW/cm ²)	Power density 2 (mW/cm ²)	Result	Limit
2.4G LE + 2.4G ISM	0.002	0.005	0.007	1.0

Note:

- MPE calculation method

$$\text{Power Density} = \text{EIRP}/4\pi R^2$$

Where: EIRP = P+G

P = Average Output Power (dBm)

G = Antenna Gain (dBi)

R = Separation Distance (20cm)

- Only the worst condition for Sub-1G+WLAN 2.4GHz was calculated for transmit simultaneously in this report.

Formula: $\text{Result} = \text{Power density 1} / \text{limit 1} + \text{Power density 2} / \text{limit 2} \leq 1$

- This device does not support MIMO mode, therefore simultaneous transmission of MPE is not required.



Annex A General Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Laboratory Address:	FL.3,Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3,Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

_____ END OF REPORT _____