DEKRA Testing and Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
FCC Designation Number: CN1199

Test report No:
2290864R-RF-US-P20V02

FCC Exposure TEST REPORT

Product Name	Electronic fence receiver
Trademark	CFMOTO
Model and /or type reference	CFEF-433AR
FCC ID	2A9ABCFEF-433AR
Applicant´s name / address	ZHEJIANG CFMOTO POWER CO.,LTD. No.116,Wuzhou Road,Yuhang Economic Development Zone,Hangzhou City,Zhejiang ,China.
Test method requested, standard	KDB 447498 D04V01 FCC Part1.1310
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao/ Project Engineer 
Approved by (name / position & signature)	Jack Zhang/ Manager 
Date of issue	2023-01-10
Report Version	V3.0
Report template No	Template_FCC MPE-RF-V1.0

INDEX

page

COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.
In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Aug. 27, 2022
Date (start test)	Aug. 30, 2022
Date (finish test)	Nov. 03, 2022

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 ˚C – 35 ˚C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT : Equipment Under Test
QP : Quasi-Peak
CAV : CISPR Average
AV : Average
CDN : Coupling Decoupling Network
SAC : Semi-Anechoic Chamber
OATS : Open Area Test Site
BW : Bandwidth
AM : Amplitude Modulation
PM : Pulse Modulation
HCP : Horizontal Coupling Plane
VCP : Vertical Coupling Plane
U_N : Nominal voltage
*T*x : Transmitter
*R*x : Receiver
N/A : Not Applicable
N/M : Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2290864R-RF-US-P20V02	V1.0	Initial issue of report.	2022-12-02
2290864R-RF-US-P20V02	V2.0	Update the applicant address, V1.0 has expired.	2022-12-03
2290864R-RF-US-P20V02	V2.1	Modify the version number on page P5,V2.0 has expired.	2022-12-14
2290864R-RF-US-P20V02	V2.2	Increased test distance assessment,V2.1 has expired.	2022-12-26
2290864R-RF-US-P20V02	V3.0	Change the company and address of applicant and manufacturer, V2.2 has expired.	2023-01-10

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with KDB 447498 and FCC Part 1.1310
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.

1. RF Exposure Evaluation

1.1. Limits

From KDB447498 D04 V01, Section 1.4.2 Exemption
No SAR Evaluation Required if power is below the following threshold:

The SAR-based exemption formula of $ 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

$$P_{\text{th}}\ (\text{mW}) = \begin{cases} ERP_{20\ \text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\ \text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \qquad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ \text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1).

$$P_{\text{th}}\ (\text{mW}) = ERP_{20\ \text{cm}}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \qquad \text{(B.1)}$$

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18℃and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	Electronic fence receiver
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

Antenna information

Antenna model / type number.....:	N/A			
Antenna serial number .....:	N/A			
Antenna Delivery .....:	☒	1TX + 1RX		
	☐	2TX + 2RX		
	☐	Others:……		
Antenna technology.....:	☒	SISO		
	☐	MIMO	☐	Basic
			☐	CDD
			☐	Sectorized
			☐	Beam-forming
Antenna Type.....:	☐	External	☐	Dipole
			☐	Sectorized
	☒	Internal	☒	PCB
			☒	Ceramic chip
			☐	Metal Antenna
Antenna Gain .....:	1.0dBi			

Note: The antenna information for the EUT in clause 1.3 are provided and confirmed by the client.

Power Density

The closest antenna distance from the human body is 18.4mm.

The product is a handheld device,The tune-up power factor is 0.5dB, so the maximum conducted we used to calculate RF exposure is 7.00 dBm for Bluetooth.

Wireless Configuration	Frequency (MHz)	Measuring Distance (mm)	Conducted Power (dBm)	Tune-Up Power (dBm)	Pout (mW)	Limit （mW）
BLE	2450	15	6.57	7.00	5.01	22

Note:Only the worst power mode is reflected.

limb-worn device limit: =22mW

Maximum TX Power= Conducted+Tune-up Factor

Maximum TX Power is 4.54mW Tune-Up Power 5.01mW.

Maximum TX Power is 5.01mW

Conclusion: No SAR evaluation required since maximum Transmitter Pout is below FCC threshold.

The End