TEST REPORT

Reference No.	:	WTF25D01004486W002
FCC ID	:	2BAJD-KHANDLE
Applicant	:	Idea DC Motor & LED Co. Ltd
Address	:	No.26 Lianxingfa Street, Dongsheng Area, XiaoLan Town, Zhongshan, China
Manufacturer	:	Idea DC Motor & LED Co.Ltd
Address	:	MinXin Road, Dongsheng, Zhongshan, Guangdong, China
Product	:	Wireless remote control
Model(s)	:	K handle
Standards	:	FCC 47CFR Part 2 Subpart J Section 2.1093
Date of Receipt sample	:	2025-01-09
Date of Test	:	2025-01-09 to 2025-01-16
Date of Issue	:	2025-01-16
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF25D01004486W002	2025-01-09	2025-01-09 to 2025-01-16	2025-01-16	Original	-	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	Wireless remote control
Model(s):	K handle
Model Description:	N/A
Test Sample No.:	1-1/1
Hardware Version:	N/A
Software Version:	N/A

4.2. Details of E.U.T.

Operation Frequency:	433.92±0.5MHz
Transmitted Power:	80.32dBuV/m @3m distance
Technology:	ASK
Antenna installation:	PCB Printed Antenna
Antenna gain:	N/A

Note:
#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings:	DC 3V from AAA battery * 2

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	47 CFR Part 2 §2.1091	PASS

6. RF Exposure

Test Requirement: 47CFR Part 2 Subpart J Section 2.1093
47CFR Part 1 §1.1307
47CFR Part 1 §1.1310
Evaluation Method: 447498 D04 Interim General RF Exposure Guidance v01

6.1. Definitions

According to § 2.1093 (b), A portable 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 the RF source's radiating structure(s) is/are within 20 centimeters of the body of the user.

This device belongs to portable devices with single RF source.

6.2. Method of Evaluation

Determination of Exemption:
For single RF sources

Option A

Option A 1-mW Test Exemption
Applies to all frequencies and all distances

a) Could be considered SAR-based and MPE-based exclusions
b) P < 1mW
c) Limitation–when there are simultaneously operating transmitters this exclusion only applies when all simultaneously operating transmitters meet this exemption
d) Refer 1.1307(b)(3)(i)(A) and 1.1307(b)(3)(ii)(A)

Option B SAR-Based Exemption
Frequency range 300 MHz -6 GHz, 5mm≤distance ≤ 40cm

a) The maximum time-averaged power or effective radiated power (ERP), whichever is greater, ≤P_{th}.
b) P_{th} is calculated based on separation distance d cm from transmitter to person for the device operating at f GHz.

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

Where

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

and

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

d = the separation distance (cm);

Option C MPE-Based Exemption
1.1307(b)(3)(i)(C): ERP is below a threshold calculated based on the distance R between the person and the antenna / radiating structure, where R > λ/ 2π.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R^2.
1.34-30	3,450 R^2/f^2.
30-300	3.83 R^2.
300-1,500	0.0128 R^2f.
1,500-100,000	19.2R^2.
Note: R in meters, f in MHz	

For multiple RF sources
According to 47CFR 1.1307(b)(3)(ii), the calculation formula is as follow:

$$\sum_{i=1}^{a}\frac{P_i}{P_{th,i}}+\sum_{j=1}^{b}\frac{ERP_j}{ERP_{th,j}}+\sum_{k=1}^{c}\frac{Evaluated_k}{Exposure\ Limit_k}\leq 1$$

6.3. Calculation formula

According to ANSI C63.10,

$$\mathbf{EIRP=}E_{meas}\mathbf{+20log(}d_{meas}\mathbf{)-104.7}$$

where
EIRP is the equivalent isotropically radiated power, in dBm
E_{meas} is the field strength of the emission at the measurement distance, in dBμV/m
d_{meas} is the measurement distance, in m
NOTE—Because this equation yields the identical result whether the field strength is extrapolated using the default 20 dB/decade of distance extrapolation factor, or the field strength is not extrapolated for distance, this equation can generally be applied directly (with no further correction) to determine EIRP. In some cases, a different distance correction factor may be required

6.4. MPE Calculation Method

$$S=\frac{P\times G}{4\times\pi\times R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = output power to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

6.5. Evaluation Results

This device belongs to portable devices with single RF source.

Option A is applicable

Frequency (MHz)	E-Field Strength (dBuV/m)	Measurement Distance (m)	EIRP (dBm)	EIRP (mW)	Limit (mW)
434	80.32	3	-14.88	0.964	1.0

Conclusion:

RF Exposure is FCC compliant.

======End of Report======