

Hunter Fan Company

RF Exposure Exhibit

SCOPE OF WORK

EMC TESTING – Ceiling Fan Remote Model: K6019-01, K6266-02

REPORT NUMBER

104058883MPK-002

ISSUE DATE

February 8, 2024

REVISED DATE

N/A

PAGES

9

DOCUMENT CONTROL NUMBER

Non-Specific Radio Report Shell Rev. December 2017 MPK
© 2017 INTERTEK



**RF Exposure Exhibit
(Portable devices)**

Report Number: 104058883MPK-002

Project Number: G104058883

Report Issue Date: February 8, 2024

Product Designation: Ceiling Fan Remote

Model Tested: K6019-01, K6266-02

FCC ID: IN2TX45

IC: 3558A-TX45

to

47CFR 2.1093

RSS-102 Issue 6

for

Hunter Fan Company

Tested by:

Intertek
1365 Adams Court
Menlo Park, CA 94025 USA

Client:

Hunter Fan Company
545 E. Algonquin Road
Arlington Heights, Illinois 60005 USA

Report prepared by:



Aaron Chang / EMC Team Lead

Report reviewed by:



Minh Ly / EMC Team Lead

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Report No. 104058883MPK-002	
Equipment Under Test:	Ceiling Fan Remote
Trade Name:	Hunter Fan Company
Model(s) Tested:	K6019-01, K6266-02
Applicant:	Hunter Fan Company
Contact:	Julian Martin
Address:	Hunter Fan Company 545 E. Algonquin Road Arlington Heights, Illinois 60005
Country:	USA
Tel. Number:	(901) 248-2810
Email:	jmartin@hunterfan.com
Applicable Regulation:	47CFR 2.1093 RSS-102 Issue 6

TABLE OF CONTENTS

Hunter Fan Company..... **1**
1.0 RF Exposure Summary..... **5**
2.0 RF Exposure Limits **5**
3.0 Test Results (Portable Configuration) **7**
4.0 Document History **9**

1.0 RF Exposure Summary

Test	Reference FCC	Reference Industry Canada	Result
Radio frequency Radiation Exposure Evaluation	47 CFR§2.1093	RSS-102 Issue 6	Complies

2.0 RF Exposure Limits

2.1 FCC Limits

According to 447498 D04 Interim General RF Exposure Guidance v01 and 47 CFR 1.1307(b)(3)(i)(B), the limit for SAR exemption is as follows:

Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

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

Where

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

and

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

d = the separation distance (cm);

2.2 Industry Canada Limits

According to RSS-102 sec. 6.3, at frequency 450 MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 32 mW.

3.0 Test Results (Portable Configuration)

3.1 Classification

For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

3.2 EIRP calculations

The Ceiling Fan Remote, Model: K6019-01, K6266-02 consists of a single radio.

3.3 Maximum RF Power

Frequency Range (MHz)	RF Field Strength @3m (dBuV/m)	Note
433.9	62.64	Field strength measurements were taken from Report # 104058883MPK-001

3.4 RF Exposure Calculation

3.4.1 RF Exposure calculation

Calculations for this report are based on highest power measured.

Limit P_{th} (mW) is as follows:

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} * (d/20 \text{ cm})^x = \mathbf{23.13 \text{ mW}}$$

$$\text{Where } x = -\log_{10}(60/ERP_{20 \text{ cm}} * \sqrt{f}) = 0.988$$

$$ERP_{20 \text{ cm}} \text{ (mW)} = 2040 * f = 885.156 \text{ mW}$$

$$d = 0.5 \text{ cm}$$

$$f = 0.4339 \text{ GHz}$$

At 433.9MHz, the highest field strength measured was 62.64 dV_uV/m at 3m. This equates to an ERP of 0.00033595 mW.

Results: SAR evaluation is not required since the higher of the maximum conducted or equivalent radiated power (ERP) source-based, time averaged output power is below the exemption limit for both FCC 2.1093 and RSS-102.

4.0 Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
01/ G104058883	AC	ML	February 8, 2024	Original document