

**Dreame Trading (Tianjin) Co.,Ltd.**

# **MPE ASSESSMENT REPORT**

**Report Type:**

FCC MPE assessment report

**Model:**

RLS5-WH1, RLS5-WH2

**REPORT NUMBER:**

200801009SHA-002

**ISSUE DATE:**

Oct 13, 2020

**DOCUMENT CONTROL NUMBER:**

TTRFFCCMPE-01\_V1 © 2018 Intertek



**Applicant:** Dreame Trading (Tianjin) Co.,Ltd.  
Room 2112-1-1, South District, Finance and Trade Center, No.6975  
Yazhou Road, Dongjiang Bonded Port Area, Tianjin Pilot Free Trade  
Zone, 300463 Tianjin, China

**Manufacturer:** Dreame Trading (Tianjin) Co.,Ltd.  
Room 2112-1-1, South District, Finance and Trade Center, No.6975  
Yazhou Road, Dongjiang Bonded Port Area, Tianjin Pilot Free Trade  
Zone, 300463 Tianjin, China

**Manufacturing site:** Suzhou Kaifa Electronics Co., Ltd.  
Comprehensive Free Zone, West Zone. No.200 Suhong Middle Rd.  
SIP, Suzhou, P.R. China

**FCC ID:** 2AXGD-RLS5

## SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06  
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

## PREPARED BY:

*Teddy Yin*

Project Engineer  
Teddy Yin

## REVIEWED BY:

*Daniel Zhao*

Reviewer  
Daniel Zhao

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.

## Revision History

Report No.	Version	Description	Issued Date
200801009SHA-002	Rev. 01	Initial issue of report	Oct 13, 2020

## 1 GENERAL INFORMATION

### 1.1 Description of Equipment Under Test (EUT)

Product name:	Robot vacuum cleaner
Type/Model:	RLS5-WH1, RLS5-WH2
Description of EUT:	The EUT is automatically battery-powered cleaner and dry pick up for household indoor use only. Both models contain the same WIFI modular and the same PCBs. The difference is the model name and some motors.
Rating:	14.4VDC Docking Station (RCS0) Input:100-240V~, 50/60Hz, 0.5A Output:19.8VDC, 1A
Category of EUT:	Class B
EUT type:	<input type="checkbox"/> Table top <input checked="" type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	Aug 12, 2020
Date of test:	Aug 12~Sep 3, 2020

### 1.2 Technical Specification

Frequency Range:	2412MHz ~ 2462MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 7 Channels for 802.11n(HT40)
Data Rate:	IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7
Channel Separation:	5 MHz
Antenna Information:	3.83dBi, Internal antenna

### 1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

## 2 MPE Assessment

Test result: Pass

### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density $S_{eq}$ (W/m <sup>2</sup> )
0-1 Hz	-	$3,2 \times 10^4$	$4 \times 10^4$	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4\ 000/f$	$5\ 000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq 1.0$**

## 2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm<sup>2</sup>

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 200801009SHA-001:

The maximum radiated power = 19.40dBm = 87.10 mW;

Here R is chosen to be 20cm,

$$S = PG / (4\pi R^2) = 87.10 / (4 * 3.14 * 20 * 20) = 0.0173\text{mW/cm}^2 < 1 \text{ mW/cm}^2$$

**Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

\*\*\*\*\* END \*\*\*\*\*