

**Puppy Electronic Appliances Internet Technology Beijing Co.,Ltd**

# **MPE ASSESSMENT REPORT**

**Report Type:**

FCC MPE assessment report

**Model:**

R6 Home

**REPORT NUMBER:**

190702274SHA-002

**ISSUE DATE:**

Aug 29, 2019

**DOCUMENT CONTROL NUMBER:**

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## TEST REPORT

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Report no.: 190702274SHA-002

**Applicant:** Puppy Electronic Appliances Internet Technology Beijing Co.,Ltd  
7-605, 6th floor, No. 1 Building, No. 8 Courtyard, Guanghua Road,  
Chaoyang District, Beijing, China

**Manufacturer:** Shenzhen Silver Star Intelligent Technology Co., Ltd.  
Building A1, Silver Star Hi-Tech Industrial Park, Guanguang Road,  
Guanlan Street, Longhua District, Shenzhen, Guangdong, China

**FCC ID:** 2AUJOR6-HOME

### 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:**

  
Project Engineer  
Stephanie Zhang

**REVIEWED BY:**

Reviewer  
Wakeyou Wang

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**TEST REPORT****Revision History**

Report No.	Version	Description	Issued Date
190702274SHA-002	Rev. 01	Initial issue of report	Aug 29, 2019

**TEST REPORT****1 GENERAL INFORMATION****1.1 Description of Equipment Under Test (EUT)**

Product name:	Robot Vacuum Cleaner
Type/Model:	R6 Home
Description of EUT:	The EUT is a vacuum cleaner which contains a WIFI 2.4GHz module. It has two types, the two types are electrically identical except for the main PCB board. This change would not influence the RF characters.
Rating:	14.8VDC 40W Charging station: Class II, Input:100-240VAC,50/60Hz, 1.2A; Output: 24VDC,2.0A
Category of EUT:	Class B
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	7/22/2019
Date of test:	7/22/2019 ~ 8/29/2019

**1.2 Technical Specification**

Frequency Range:	2400MHz ~ 2483.5MHz
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) 9 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:	1.9dBi, PCB Antenna

**TEST REPORT****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 Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0
	A2LA Accreditation Lab Certificate Number: 3309.02

**TEST REPORT****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 <sup>1/2</sup>	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  $\leq 1.0$**

**TEST REPORT****2.2 Assessment Results**

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

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

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 190702274SHA-001:

The maximum radiated power = 10.13dBm = 10.30mW;

Here R is chosen to be 20cm,

$$S = P / (4\pi R^2) = 10.30 / (4 * 3.14 * 20 * 20) = 0.00205 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

**TEST REPORT****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 \*\*\*\*\*